

Sugar tax:

The fiscalisation of childhood obesity?



Viktor Werner

S1778188

1. August 2017

Master Thesis

MSc. Public Administration

Supervision:

1st Dr. Peter Stegmaier

2nd Dr. Martin Rosema

Acknowledgements

This is a final work as partial fulfilment for the degree of Master of Science in Public Administration in Faculty Behavioural, Management and Social Sciences at University of Twente, titled: “Sugar tax: the fiscalisation of childhood obesity?”

I want to express my gratitude to all the wonderful people that supported me throughout the writing process. I am very thankful for the great support of Dr. Peter Stegmaier who empowered me to make this project a success. He helped me to see the broader picture and taught me a lot about being more reflexive. Next to this, I want to thank Dr. Martin Rosema who supported this project right from the start and helped me to ask the right questions.

A special thank you goes out to Hannah, your loving support helped me to keep my spirits high, even in those moments where things were not going well. You kept on reminding me that the sunshine always comes after the rain. To my parents and sister, I want to say thank you for being there all along the way. You may were far away geographically but it felt like you always were there when I needed you. To all my friends, thank you for cheering me up when progress was stalling. Especially, Maximilian thank you for all those inspiring conversations.

I hope, any of my readers will enjoy reading this thesis. Sincerely,

Viktor Werner

Abstract

This project offers new insights into the way that sugar sweetened beverage taxation, a real innovation in policy making, rose to the political agenda and was shaped by the interaction of industry, civil society, medical experts, public administrators, and members of parliament. The study builds on key policy documents and their analysis with an emphasis on problem frames and reconstruction of argumentation (Toulmin-model based analysis). The text contributes a clear picture of the political arena surrounding this health policy innovation. It maps the problem processing underlying the decision in favour of this sugar tax. The project is the first academic contribution examining the political process in detail. The aim of the study is to analyse the richness of argumentation, the rationales policy makers followed and to reconstruct part of the policy making process. The key take home messages are threefold. Firstly, that sugar sweetened beverage taxation is a manifestation of the understanding that obesity is a public concern, which constitutes a shift away from the notion of relying on self-responsibility for obesity prevention. Secondly, that its advocates see the sugar levy not only as a revenue generator but hope for direct impacts on public health. Thirdly, that there was a considerable silence on the socio-technological implications of the sugar tax in the literature and the policy debate. In respect thereof, this project hopefully encourages more research on the matter.

Key words: sugar sweetened beverage taxation, policy analysis, public health, problem processing, and political argumentation

List of abbreviations

ADPH = Association of Directors of Public Health

AMRC = Academy of Medical Royal Colleges

AOS = Action on Sugar

BBPA = British Beer and Pub Association

BDA = British Dental Association

BMA = British Medical Association

BMI = Body Mass Index

BSDA = British Soft Drinks Association

CFC = Children's Food Campaign

FDF = Food and Drink Federation

HC = Health Committee (House of Commons)

HCH = House of Commons Hansard

HMT = Her Majesty's Treasury

IEA = Institute for Economic Affairs

IFS = Institute for Fiscal Studies

MP = Member of Parliament

NCD = Non-Communal Disease

NGO = Non-governmental Organisation

NHS = National Health Service

NNS = Non-Nutritive Sweetened beverages

PHE = Public Health England

RCPCH = Royal College of Paediatrics and Child Health

RPA = Rhetorical Policy Analysis

SACN = Scientific Advisory Committee on Nutrition (House of Lords)

SSB = Sugar Sweetened Beverages

SSBT = Sugar Sweetened Beverage Taxation

WHO = World Health Organisation

Table of Contents

1. INTRODUCTION	1
1.1 BACKGROUND AND RESEARCH QUESTION.....	1
1.2 OUTLINE.....	2
1.3 LITERATURE REVIEW	3
2. CHRONOLOGY	7
3. THEORY.....	10
3.1 THEORY AND THE RATIONALES OF THE PROJECT.....	10
3.2 SUB-QUESTIONS AND THEORETICAL TOOL BOXES	11
4. METHODOLOGY	17
5. ANALYSIS	24
5.1 THE POLITICAL ARENA: INFLUENTIAL ACTORS AND THE SOCIO-TECHNOLOGICAL SURROUNDINGS.....	24
5.2 LEGITIMISATION AND THE CHOICE OF A POLICY TOOL.....	33
5.3 PROBLEMATISATION AND CONFLICTING VIEWS: THE WAY TO THE TOP THE POLITICAL AGENDA.....	39
5.3.1 <i>Problem frames used by politicians in support of SSBT</i>	40
5.3.2 <i>Problem frames used by politicians in opposition to SSBT</i>	41
5.3.3 <i>Frames from stakeholder consultations</i>	42
5.3.4 <i>Problem framings: putting it all into perspective</i>	46
6. CONCLUSION.....	50
6.1 SUMMARY	50
6.2 LIMITATIONS AND OUTLOOK	52
7. REFERENCES	53
8. APPENDICES	60
APPENDIX A (EXPLANATION OF TIMELINE MILESTONES).....	60
APPENDIX B (SOURCES FOR TABLE 2.1. AND 2.2.)	61
APPENDIX C (GOOGLE UK SEARCH TERM DEVELOPMENT)	64
APPENDIX D (SOURCE FRONT PICTURE)	65

1. Introduction

1.1 Background and research question

Decision makers across the world are called upon by the World Health Organisation (WHO) to find valuable strategies to address what they describe as a steadily advancing “obesity epidemic” (James, 2008, p.120). This can be understood as indication of a general trend to perceive obesity not as a private concern, but a problematic phenomenon with implications for public health on a population level. These concerns manifested in warnings that national health care systems could be overburdened. The high number of obese citizens is approximated to drive up health care costs worldwide (Dee et al., 2016). In the UK, for instance, it was estimated that in 1998 throughout the healthcare system £500 million were spent on the direct costs of obesity (NAO, 2001). In 2007, a tenfold higher number of £5.1 billion was reported within the national health service (NHS) (Scarborough et al., 2011). Estimates for the year 2007 including indirect costs are higher and range from £6.4 billion (McCormick & Stone, 2007) up to £15.8 billion (PHE, 2017). Once more the cost increase appears considerable as the figures for indirect costs from 1998 stood at £2 billion (NAO, 2001). Outgoing from their observation that obesity costs have risen substantially various public health scholars arrived at a common conclusion. They concluded that the UK's society carries a heavy burden that places considerable pressure on its health care system (Allender & Rayner, 2007).

To address obesity as public health issue, various policy options were discussed in the UK's national assembly, among them, levying a content tax on sugar-sweetened beverages (SSB). The government decided to stop just talking about sugar-sweetened beverage taxation (SSBT) and announced plans for an introduction by 2018 (Hawkes, 2016). This project zooms in on the political process that preceded this decision. Up to this point, there is no scientific literature discussing the policy making process paving the way for the introduction of a sugar levy. With this focus on the political aspects, this paper offers a new perspective.

The focus on the UK is justified by the severity of obesity in the country (high prevalence and a sharp rise in obesity-related costs) and the novelty of the policy measures proposed. To revert to SSBT is a unique response that few countries considered as an option so far, making it an interesting case study (Jou & Techakehakij, 2012). The UK's choice is quite puzzling as there is only a narrow scientific evidence base allowing to conclude that SSBT is a valuable tool. The extent to which scientific evidence is robust and generalisable is questioned by several scholars (Fletcher, Frisvold & Tefft, 2011; Mytton et al., 2012; Fletcher, 2013; Fletcher, Frisvold & Tefft, 2015; Lopez & Fantuzzi, 2012). This is considered striking by the author, as many researchers argue that health policy needs to be evidence based (Dobrow et al., 2004; Fox, 2005; Brownstone et al., 2009). The question arises whether SSBT is not predominantly the response to scientific evidence but an exemplary case of a shift away from anti-obesity policy placing personal responsibility at the centre.

Therefore, the central question of this thesis is: How did SSBT, in this particular form, make it to the agenda of UK policy makers? To answer this question and provide a clear structure three sub-questions are

used. They are: Who was pushing for change and which (socio-technological) influences possibly enabled such change?; How did elected officials explain the shape of the policy tool proposed and legitimised their decision to support taxation?; How was SSBT enabled, through problematisation, to move to the top of the political agenda? The full conceptualisation of these three sub-questions can best be explained based on the theory that informed this project and is discussed in chapter three.

What this study provides is a policy analysis of two stages of the policy making process, namely, the “agenda setting” and “policy formulation”, as described by Versluis, Keulen & Stephenson (2011, p.21). This leads to the question of method selection, as policy analysis requires elective method selection “anew for each individual setting” (Crabbé & Leroy, 2008, p.2). The theories used are selected predominantly for their explanatory power of the two stages of the process. To be more precise the project works towards a better understanding of two aspects. First, why policy makers started to see SSBT as a viable policy option that deserved a spot on their agenda. Reasons for this choice are identified along three routes. To begin with, a stakeholder search is conducted and offers clues about actors who pushed SSBT onto the political agenda. Next to this, an analysis of the way politicians were legitimising the measure with political argumentation allows a reconstruction of their rationales. Information on their rationales is hinting at what possibly convinced them to rank SSBT as agenda worthy policy. Moreover, examining the development of problem frames used by involved actors helps to explain how the problem solution SSBT advanced onto the agenda. Second, the research question inquires what influenced the policy-shaping process. Answers stem from an investigation of socio-technological aspects that knowingly influenced involved policy makers. Once more, the catalogued decision makers’ acts of arguing contained promising answers.

Overall the study sheds some light onto decision makers’ rationales that could be summarised under the title of fiscalisation. In this study, the term fiscalisation is used to highlight alternative rationales behind taxation that do not relate to revenue generation per se. The argument is developed that SSBT arguably was assigned to various contesting rationales throughout the policy making process. Arguably the rational that survived this contestation is the fiscalisation of childhood obesity. It is pointing at the government’s decision to proclaim that SSBT helps to counteract childhood obesity. What this study offers in simple terms is mapping the development of SSBT from an innovative policy loosely attached to various potential rationales to a defined anti-childhood obesity measure in the government’s policy toolbox. In the next section, the attention turns towards the general outline of this project.

1.2 Outline

Section 1.3 discusses existing scientific literature on SSBT, thus allowing the identification of the contours and the way the issue is framed so far. Chapter 2 offers an overview of the examined policy making process in a chronology. In chapter 3 the theoretical underpinnings of this study are lined out. It is discussed what it entails to approach this case study with the tools of policy analysis. Moreover, the theory chapter scrutinises the toolkit used to analyse the case at hand. Chapter 4 shifts the focus to methodological considerations. Points of discussion are the data used, the approach to analyse this data and the answers expected. At chapter 5 readers arrive at the analysis which is divided into the three central stages of: a) how the arena shaped up focusing on actors and some socio-technological aspects, b) the way decision

makers legitimised their support for SSBT and described the shape the policy tool should take, and finally c) what kind of problem framings are connected to the policy debate. Chapter 6 summarises the findings. Moreover, a presentation of limitations and a possible outlook for further pursuing this subject of investigation are given.

1.3 Literature review

This section elaborates on the way sugar-sweetened beverage taxation (SSBT) and the interrelated subject of obesity are discussed within the literature. Next to this, it is highlighted which gaps remain and what this paper contributes. The literature on the SSBT debate is dominated by research focusing on questions of effectiveness from a public health perspective. Most scholars motivate their interest in SSBT with the considerable burden on public health triggered by obesity and overweight. Estimates are that in the UK's population overweight and obesity stand at around 68 percent of men and 58 percent of women (NHS Digital, 2017). Looking at obesity alone, the numbers are approximated to range between 24-27 percent of the adult population (Jou & Techakehakij, 2012) and around 16 percent in children (NHS Digital, 2017). It should be kept in mind that these numbers are based solely on BMI standards. These are criticised as measurement unit, especially for children and adolescents, as body-fat concentrations and distribution are left aside (McCarthy et al., 2005; Livingstone, 2001).

Regardless of these shortcomings, due to a clear increase in high BMI values, public health scholars speak of an “obesity epidemic” in the UK (Datta, 2016). This wording is also used by the WHO to describe the global situation (James, 2008, p.120). Hilton, Patterson & Teyhan (2012) report that framing it as an “obesity epidemic” has steadily increased. They claim this framing is used to shift the focus away from the individual's problems and rather portraying obesity as a societal concern. The scholars even argue that there is a growing public discourse calling for regulatory change, aimed at tackling the obesogenic environment (*ibid.*). Lawrence (2004) reports that this shift went hand in hand with an increase of public and political discussions about intervention with tax measures. The conclusion that sugar-sweetened beverages (SSB) are increasingly seen as health risk requiring policy intervention is confirmed by Elliott-Green et al. (2016) studying UK newspaper reports from 2014. They, however, also pointed out that some reports questioned if SSB consumption is rather a private concern and to reduce sugar consumption a personal responsibility.

There is a wide array of scientific literature on sugar-sweetened beverages (SSB), a short overview is provided here. For more extensive reviews please revert to Powell et al. (2013), Thow (2010) or Backholer et al. (2016). Only two other studies (discussing SSB) were identified with a political science-based focus. In their study of the political agenda, Thow et al. (2011) focused on the policy makers on pacific islands and conducted semi-structured interviews to understand their policy goals. What is more, one study was identified comparing frames used in media coverage of the SSBT debate and the tobacco taxation debate in the state Vermont (USA). In their study, Watts and his colleagues (2014) found that these debates mainly circled around the contest between those that see a need for state intervention to protect public health, while the opposing side warned of the negative economic consequences of “big government” (p.192).

Thus, to this day the political process around sugar taxation remains a blind spot for political science research. Overall, the existing body of literature can be categorised in three broad categories.

First, links between SSB consumption and health problems are discussed extensively in the literature. Regular and excessive SSB consumption are claimed to be associated with developing gouty arthritis, non-alcoholic steatohepatitis, caries, overweight, obesity and presented as independent risk factors for coronary heart disease, high glycaemic load triggered inflammation and type II diabetes (Johnson et al., 2007; Underwood, 2008; van Baak & Astrup, 2009; Malik et al., 2010; Popkin, 2012; Gibson & Shirreffs, 2013). Woodward-Lopez, Koa & Ritchie (2010) even argue that SSB's are the food item that drives weight gain the most. Especially in children strong impact is reported (Malik, Schulze & Hu, 2006; Gibson, 2008; Monasta et al., 2010). This effect on children is also shown in experimental studies with intervention to alter children's behaviour (Mrdjenovic & Levitsky, 2003; Welsh et al., 2005; de Ruyter, Olthof, Seidell & Katan, 2012; James, Thomas & Cavan, 2004). However, it should be kept in mind that the influence of SSB's on the direct satiety mechanism are not fully understood, making it hard to grasp the role they play for obesity (Butland et al., 2007; Popkin, 2012; Gibson & Shirreffs, 2013). Yet, studies report heightened dopamine release in the brain when SSB's are consumed (Kessler, 2009), suggesting that they cause addiction, and thus making them a long-term risk factor for obesity (Swencionis & Rendell, 2012).

Second, much attention is given to the effectiveness of SSBT and the potential health impact. Case studies from countries that implemented SSBT find little or no real health effects. The only reported direct effects are on SSB sales figures without offering clues about health impact. No clear effects are found in the US (federal level) (Powell et al., 2013; Mytton et al., 2012; Fletcher, Frisvold & Tefft, 2013), in Ireland a tax scheme was tested in the 1980's and price increases by 10 percent led to 11 percent less consumption but health impacts are unknown (Bahl, Bird & Walker, 2003). The Hungarian sugar tax reportedly decreased SSB consumption, yet as its introduction coincided with a general economic crisis, results are difficult to rely on as only one year was studied (Landon & Graff, 2012). Moreover, the recently introduced tax schemes in Mexico, Norway, Finland and France have not been analysed yet in published journal contributions, therefore little empirical evidence exists (PHE, 2015a). Experimental studies show that price increases of SSB's and unhealthy food items in general impacts consumer choices (Block et al. 2010; Nederkoorn, 2011; Epstein et al., 2012). Yet, those studies are criticised for conditions not being realistic (Mytton et al., 2012). Most scholars discussing effectiveness rely on modelling studies. Giving attention to price elasticity (Powell et al., 2013; Chouinard et al. 2007; Sturm et al. 2010), caloric intake (Andreyeva, Chaloupka & Brownell, 2011) impact on individual's health condition (Lin et al., 2011; Hall et al., 2011; Wang et al., 2012; Dharmasena & Capps, 2012; Thow, Leeder & Swinburn, 2010; Marlow & Shiers, 2010; Fletcher et al., 2010; Lopez & Fantuzzi, 2012) and the prediction of consumption effects (Andreyeva, Long & Brownwell, 2010, Ng et al., 2011). In short, the main findings are that cross-price elasticity matters greatly (especially due to substitution effects) and that tax rates' of 1-8 percent make obesity reduction and positive health effects unlikely (Marlow & Shiers, 2010; Fletcher et al., 2010; Lopez & Fantuzzi, 2012). Effects on health are only expectable with tax rates of 10-20 percent (Lin et al., 2011; Hall et al., 2011; Powell et al., 2013). Such rates are higher than any fiscal measure implemented and analysed to date (Mytton et al., 2012).

Third, a variety of studies comments on the way a sugar levy should be designed. It is shown that a wide array of factors makes people consume SSB's (Butland et al, 2007). Among them are habits often established within adolescence (Al-Nakeeb et al., 2012), the degree of awareness for health risks (Kalavana, Maes & de Guht, 2010), the availability of SSB in the food environment (Butland et al., 2007; Pomeranz, 2012; Khan et al., 2012), marketing of SSB's (Ng et al. 2011; Caprio, 2012), especially when targeting children (Lobstein & Dobb, 2005), and income levels, as consumption tends to be higher among poor individuals (Deshmukh-Taskar et al., 2007; Sustain, 2013, Macdonald, Cummins & Macintyre, 2007; McNeill et al., 2010).

The existing literature on SSBT in the United Kingdom is predominantly concerned with predicting which effects fiscal measures may have or mapping prevailing obesity and consumption patterns. The existing studies are based on an understanding of humans as rational beings that only require sufficient information to take informed choices. It leaves little room to reflect on the assumptions that are underlying the way obesity is problematised. To clarify what this implies, it is helpful to use the conceptual model of policy analysis forwarded by Mayer, Daalen & Bots (2004). They argue that policy analysis can be undertaken in six main styles connected to six clusters of activities. When categorizing existing studies on SSBT based on this conceptual model, one finds that arguably only one style is covered (ibid.). This paper is designed with this insight in mind and also includes aspects from the "argumentative style" not only the "rational style" (ibid., p.180) (Figure. 1). This study adds new insights into the decision-making process. These insights can lay the foundations for later policy evaluation projects (for value based policy evaluation) and allows a deeper understanding of policy makers motives. Next, to this, the made insights increase the knowledge of policymakers worldwide of what benefits SSB can possibly bring for a society.

What is more, while researchers have looked at the general development of marketing in the US soda market (Barney, 1995), studied the historical development of attitude towards artificial sweeteners in the USA (De la Peña, 2010; Warner, 2011), or the declining popularity of control and command policy tools to altering food environments in America (Frohlich, 2017). Surprisingly little attention is paid to the socio-technological aspects that play a role in the UK policy debate. Arguably, that some scholars discuss the WHO guideline changes on free sugar consumption suggests that the role this specific social factor played in the debate is considered (James et al., 2004; Capewell, 2014). One exception appears to be the study of Aguirre, Myton & Monasivias (2015) who point at the sugar price decrease that results from EU CAP reforms, which they use to justify SSBT. That the industries' possible response to a sugar levy is under-researched was acknowledged by Briggles et al. (2017) who make predictions about the health effects sugar reduction in sodas could have. Regardless of their focus on potential industry responses, what role technological considerations played in the policy making process is not covered well and marks a clear gap

in the literature. Therefore, this paper promises invaluable new insights as it includes some clues on socio-technological elements that played a role in the policy making process.¹

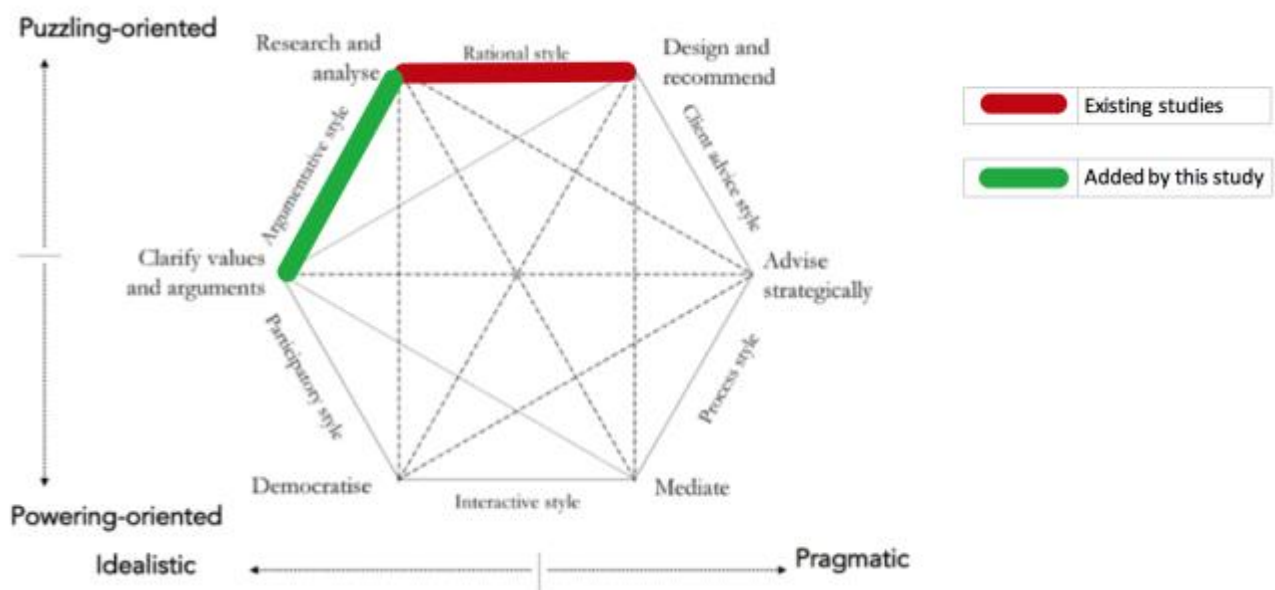


Figure 1. Styles of policy analysis: Comparing focus of existing studies and this project (adaptation of the model of Mayer, Daalen & Bots 2004)

¹ Please note that no complete analysis of all socio-technological factors is offered in this study. For this reason, the author only refers to socio-technological aspects or elements to underline that only the most apparent connections are accounted for.

2. Chronology

In this section, a brief overview of the policy debate is provided. This paper is the first detailed examination of the political process preceding the decision in favour of SSBT in Britain. Consequentially The reconstruction of events relied not only on scientific articles, but also UK broadsheet newspapers and policy documents. The chronology portrayed is not an exact representation of the process that led to the levy establishing causal relationships between the steps. The considerations are based on the understanding of Kingdon (2011) that policies, in the form of solutions, are “floating” around looking for fitting “policy problems” (p.179). It is challenging to determine the first time when the notion developed that taxing food items can help combating obesity. Arguably, the first time this idea gained considerable attention worldwide was in 2003. That year the WHO proposed that governments should consider taxing unhealthy foods to address obesity (WHO, 2003; Caraher & Cowburn, 2005). Notably the WHO decision to portray food taxation as a valuable option was not reached in a vacuum. On the contrary it marked the end of a long-termed transition of attention from policies to curb under-nutrition towards a broader understanding of ill-nutrition that also includes over nutrition (Caraher & Cowburn, 2005). Building on these foundations, in 2004 a think-tank proposed a “fat tax” on processed foods, this appears to be the first call for a food tax in the UK (Leicester & Windmeijer, 2004, p.1)². This proposal, however, remained the only advance into such a direction for a long time, which could be explained by the UK government’s decision to scrap the idea from their obesity strategy in 2004 (Caraher & Cowburn, 2005).

Five years later the first article (published in a major public health journal) concluded that SSBT is effective when high enough (Jou & Techakehakij, 2012), to address the “public health crisis of obesity” (Powell & Chaloupka, 2009, p.223). The conclusion that SSBT is effective was repeated in the following years (see Mytton et al., 2012; Eyles et al., 2012). The non-governmental organisation (NGO) Sustain (Sustain, 2013) and the public health experts from the Academy of Medical Royal Colleges (AMRC, 2013) used these research findings to back their call for SSBT as anti-obesity strategy. Briggs (2013) claims due to these two reports 2013 became the year that sugar taxation entered the political discussion in Britain. One year later, PHE reportedly began working on an evidence review on SSBT in preparation for the development of the new obesity strategy (Knapton, 2015). The idea was nevertheless still publicly opposed by Health Secretary Jeremy Hunt (ibid.). The next year (2015) turned out to be very decisive. In 2015, the first cabinet member George Freeman spoke out in support of SSBT to address rising obesity rates (Johnston, 2015). David Cameron himself, however, after meeting with prominent chef Jamie Oliver (outspoken supporter of a tax) ruled out a levy on sodas (Holehouse & Riley-Smith, 2015). Arguably the petition developed by Jamie Oliver in cooperation with Sustain in September 2015 was a reaction to the prime ministers’

² It was decided to begin the presented timeline with the WHO decision from 2003 because this decision was cited as the primary motivation for the proposal of a fat tax by Leicester & Windmeijer (2004). Since the search for literature on food taxes in the United Kingdom resulted in Leicester & Windmeijer work being identified as the oldest publication calling for a food tax, this choice appeared sensible.

opposition (Boseley, 2015). The petition quickly reached more than the needed 100,000 signatures to trigger a debate in the House of Commons.

This debate was held in November among representatives from the Health Committee (HC), the petition committee, and a cabinet representative (HCH, 2015). Already the month before in the consultation phase of the committee work on childhood obesity, chairwomen Dr. Sarah Wollaston showed great interest in a fiscal measure (HC, 2015a-c). In an article for the *Telegraph*, she voiced open criticism of Health Secretary Hunt for not disclosing the already finished PHE evidence report on SSBT (Wollaston, 2015). On the morning of the debate, a select committee report on the childhood obesity strategy was published calling for SSBT (HC, 2015d). The report was directly citing the PHE report that claimed that there was sufficient evidence base for an SSB levy. It is difficult to determine in how far these events motivated Cameron to state in January 2016 that SSBT was not among his preferred, nevertheless among the possible policy tools, to address childhood obesity (Dathan, 2016). It can be assumed however that without the promotion of the idea by Wollaston, Jamie Oliver, PHE and Sustain the government would not have had an incentive to change their course. The *Guardian* reports that it came as a notable surprise to many that the budget speech of Cameron's Treasurer contained the promise that in April 2018 a sugar levy would be introduced (Campbell, Smithers & Butler, 2016).

This speech by George Osborne marked the end of the agenda setting process of SSBT. This conclusion is supported by the inclusion of the SSBT one day later in the speech from the Throne 2016, when accepting the conclusion of John & Jennings (2010) that the Queen's Speech reflects the government agenda. In what follows, more attention is given to mapping how SSBT made it to the heights of the policy makers' agenda. An overview of milestones ([Figure. 2](#)) in the policy debate summarises the aspects discussed in this section³.

³ Comprehensive explanation for the selection of events included in the timeline is offered in Appendix A.

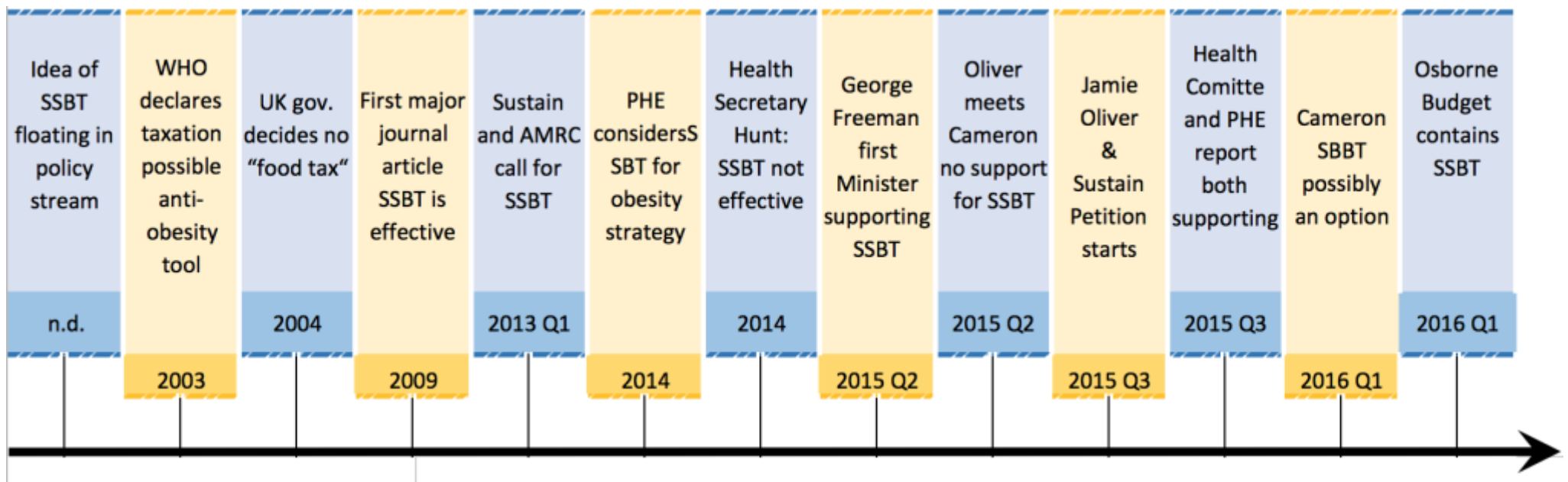


Figure 2. Timeline of SSBT debate in the UK

3. Theory

3.1 Theory and the rationales of the project

The literature review showed two significant gaps in the literature. This informed the overarching logic used to structure this paper. It became apparent that to this point the policy making process was scarcely analysed. Policy making processes are complex, studying them in entirety is barely possible. Therefore, Versluis, Keulen & Stephenson (2011) advise researchers to narrow down their considerations by using a basic policy-making model named “policy cycle” (p.20). This advice is followed. The policy cycle model portrays policy making as a five-step process: “agenda setting”, “shaping”, “decision”, “implementation” and “evaluation” (ibid, p.21). This simplistic model permitted to understand that in the case of SSBT legislation, the “agenda-setting” and “policy shaping” steps are the ones that were concluded so far (Versluis, Keulen & Stephenson 2011, p.29). Therefore, the choice is made to declare the analysis of these two stages the predominant goal of this research. In this way, it is possible to make an important contribution to the scientific communities understanding of the political debate around SSBT.

Next, to this, the studies which addressed policy so far, were predominantly conducted from scholars with public health backgrounds and restrict themselves to a very narrow understanding of rationality. Thus, a broadening of perspectives and a discussion of the richness of the argumentation in the policy making process appears desirable. The overarching rationale of the project, starting from these considerations, is to examine how SSBT made it to the top of the political agenda, which aspects influenced the shape of the measure and how rich the considerations were. The rationale behind the project, however, is also influenced by the puzzling observation that SSBT was advocated as a public health policy tool despite the contested evidence base. The conceptualisation of the research question moves the understanding of the agenda setting and policy shaping into the spotlight. This does not imply, however, that the other two notions are less relevant for this project. They remain in the background but inform the research design substantially. Their influence is elaborated on for those incidences where they directly impacted the choice of theoretical tools.

For now, attention is shifted towards the theoretical tools selected to answer the research question: How did SSBT, in this particular form, make it to the agenda of UK policy makers? This question can be separated into two parts. On the one hand, the agenda setting and on the other hand the shaping process. The study at hand is based on elective method selection. Therefore, those theoretical tools are selected that promise the most explanatory power. To offer sufficient structure for the text, three sub-questions are identified. This choice is explained best by discussing two academic contributions that inspired such a design.

First, the work of Borrás & Edler (2012) provided a starting point to understand which components need to be considered to understand “change” within a socio-technological environment (p.23). As the soda market can be understood as result of social forces and technological elements, I assume that a socio-technological regime is involved. Borrás & Edler’s work offers invaluable building blocks for the conceptualisation of two sub-questions. They argue that to understand “change” within a socio-

technological regime it is necessary to cover “three pillars” (ibid. p.23). Their account of these pillars is, however, so comprehensive that there was a need to be selective. Thus, only elements appearing essential for this project are selected. In total three important aspects that are inspired by Borrás & Edler in this project. Firstly, that the potential for change and the actors and surrounding technological elements are interconnected (delimiting their room for manoeuvre). This explains the first sub-question: Who was pushing for change and which (socio-technological) influences possibly enabled such change? Secondly, the other two pillars, which can be summarised as legitimisation and instrumentation of change, are combined in the second sub-question: How did elected officials explain the shape of the policy tool proposed and legitimised their decision to support taxation? Thirdly, and this relates to the other two points, it needs to be lined out that many aspects of what Borrás & Edler discuss have not been included due to the resource constraints attached to this project. Consequentially this study should not be understood as an attempt to fully uncover every element that led to this change, but offering first clues in an under-researched domain.

Second, the book “The Governance of Problems” by Hoppe (2011) resulted in the insight that a third sub-question should be added. The first two questions are valuable to explain which forces helped SSBT to be perceived as a solution; yet, they do not cover which problem SSBT is supposed to address. Hoppe reminds us that “problem processing”, which policy making is often argued to be, has more to it than decision makers’ beliefs of what the right policy solution is (p.17), particularly since “problem framing” involves various actors across society (ibid.). This is connected to this projects’ rationale to offer a broader perspective which includes examining the richness of argumentation. Hoppe’s theory of problem framing enables elaborating on the roles of more than just the classical policy makers in form of elected officials. The sub-question his work inspired is: How was SSBT enabled, through problematisation, to move to the top of the political agenda?

How all three sub-questions help to address the second part of the overarching rationale of the project, namely explaining the agenda setting and policy shaping, is discussed in more detail in the next chapter. The remainder of this chapter summarises the theories used for the three sections of the analysis, each corresponding to one of the sub-questions. This summary also features a discussion of the implications of this choice of theory, and whenever possible, offers explanations why theories are preferred over others.

3.2 Sub-questions and theoretical tool boxes

The first sub-question is designed outgoing from the claim made by Borrás & Edler (2012) that actors and their socio-technological environments play a crucial role in policy innovation. Unfortunately, they leave open which theories allow to study actors and their role in the policy-making process. To gain a good overview of actors involved a list was compiled, based on newspaper articles and policy documents. Following this, the heuristic of “multi-actor innovation policy arenas” presented by Kuhlmann (2001, pp.961-962) is used to organise the actors according to their societal role. This choice is made as Kuhlmann's work offers a clear and systematic representation of actor constellations involved in policy making. Kuhlmann examined the policy debates around the steering of innovations via policies that are influenced by a multitude of actors. This explains why this theory is so valuable, as the policy debate

around SSBT includes a broad spectrum of actors over a considerable time span as well. While the policy field studied here may be different, it is found that the four clusters of actors, that play a role in the policy arena Kuhlmann describes, also appeared in the case of SSBT. The four different groups are: actors from political institutions (regional and national level), commercial interests (represented directly and indirectly), research-based institutions (universities for instance) and civil society representatives. Astonishingly even the labels of precise actor groups within the four clusters show close fit. This once more underlines high explanatory power and thus indicates that the correct method was selected for this policy analysis project.

Following this first step, two other theories are used to understand the socio-technological aspects. One is the notion of the “landscape” established by Geels (2002). According to his understanding, the landscape encompasses major forces that influence transitions within socio-technological regimes. Geels (2002) studied energy transitions and found that what he called “niches” (home to innovative and radically new ideas) are only able to become part of what is believed to be normalised (forming a new regime) when they are facilitated through a shift in overarching beliefs or rules within a society (landscape).⁴ This theory is applied to the case of SSBT and leads to the following consideration. SSBT is perceived as an innovative new idea that is not part of the established policy responses to obesity, thus forming a niche. As this innovative idea, of using sugar taxes, was added to the accepted policies, there assumingly was shifts on the landscape level to enable this transition. The innovation in policy making (enacting a sugar levy) is treated as enabled by the technological and societal changes that pre-shaped the arena. This important insight is what the theory of Geels contributes and justifies its usage.

An example of such a landscape development is the change in WHO recommendations on the consumption of free sugars. This alteration arguably send out a shockwave that changed the considerations within the regime of policies to address obesity, as now sugars became a new focal point for those in charge of obesity policies worldwide. Conceptually speaking this is rather challenging, as the question arises how can it be confirmed that certain socio-technological changes impacted the policy debate. The answer was found in the data collected through the author's application of the Toulmin-model in chapter 5.2.⁵ The explanation of this model follows in the next paragraph. What matters for considerations right now is that this approach enables the cataloguing of arguments of various policy makers. If a certain socio-technological aspect resembles what Geels describes as landscape level element and was discussed by a directly involved actor, it is assumed to play a role.

⁴ What is important to highlight that this is exactly the biggest difference to the understanding of Geels (2002). For him the “niche” (p.1261) is characterized by its hypothetical ability to replace the dominant technology (for example electrical cars replacing fuel powered vehicles). As obesity can be understood as a “wicked health promotion problem” (Signal et al., 2013, p.85) the assumption that one singular tool could replace all other dominant obesity strategies was dismissed as unrealistic, especially as the dominant strategy is already made up of several tools.

⁵ Chapter 5.2 is the part of the analysis covering the second-sub question where this model was used.

Returning to the example of the changed WHO guidelines helps to explain what this implies. The shift in the WHO doctrine is identified as one reason for the government's consideration of SSBT. This becomes apparent in the analysis of the act of arguing of a cabinet spokesperson. To ensure that knowledge is available about the argumentation of societal actors from various societal backgrounds, the arena model of Kuhlmann is used again. The reconstructed policy arena made it possible to select policy documents for the analysis that included policy makers from all four clusters. In conclusion, the theoretical tools used in this section enable to map the actors involved in the policy arena and to identify socio-technological aspects that impacted their manoeuvrability within the policy debate. It is important to highlight that the discussed tools allow pointing at actors who pushed for SSBT to get on the government's agenda and provide clues on some aspects impacting the shape of SSBT legislation.

The second sub-question requires examining the way decision-makers legitimised their choice to back SSBT and how they explained the instrumentalities of the scheme. Considerations start from the observation of Versluis et al. (2011) that policy making is a game of taking decisions about action and inaction. In the case at hand, the decision faced by decision makers was to act and actively back SSBT or refrain from any such action. Accepting the insight from Martin (2013), that any decision taken by politicians is subject to a complex system of political argumentation, one can conclude that studying argumentation promises understanding better why policy makers took certain choices. Martin (2013) argues that politicians are strategic beings as they are context aware. To him, this implies that they wish to show that their decisions are an “aesthetic representation” of the publics’ expectations, or in other words seen as legitimate (p.39). This conveying of messages relies on language to transport messages about the value of policies (ibid.). Martin (2013) shows how promising studying argumentation is to make legitimisation understandable.

The question arises, however, to what extent this also implies that his variation of rhetorical policy analysis (RPA) is helpful for this project. The problem very much lies in the assumption that is made about argumentation by classical rhetorical analysts. They claim that the persuasiveness of arguments is what needs to be measured (Charteris-Black, 2013). Tindale (2000) shows remarkably well how difficult it is to make sense of a political discourse looking at the persuasiveness of language alone. He reaches the conclusion that what is necessary is the use of dialectic to generate a hypothetical universal audience to reach conclusions about the persuasiveness of language.

The argument is made here that such an approach can generate interesting insights, yet misses the point of what is needed from a theoretical framework that allows meaningful support to this policy analysis project. Available data on policy makers’ decisions also include policy documents which cannot be approached with the classical rhetorical analysis methods (Luppold, 2015). Second, to better understand agenda setting and policy shaping requires the ability to find the rationale behind discussed policy tools. What is not needed though, is the evaluation of the precise value of the presented arguments (Charteris-Black, 2013). In other words, the information that is sought is narrower and only consists of identifying the argument presented in favour of the policy tool. Luppold (2015) lines out that to identify the rationale

behind political actions, it is sufficient to make use of simple models allowing the identification of separate arguments.

Luppold (2015) proposes the Toulmin model, a piece of advice embraced in this study. The basic traits of the Toulmin model are the following. An act of arguing is understood as a collection of words in a sentence or multiple sentences (Erduran, Simon & Osborne, 2004). It has at least two components and up to six. The two components that are always present are a “claim” and at least one “datum” (ibid. p.961). The claim is a statement about a condition that is unknown and not obvious from the context. It rests on the proof of the datum, which is assumed to be a known aspect.⁶ The connection between the two can be made explicit by the speaker or left to the audience and is called “warrant” (ibid.). In addition, arguments can contain “qualifiers” (limiting the claim), “backings” (further elaboration on a datum) and “rebuttals” (defeating alternative claims) (ibid.). Luppold (2015) has demonstrated that the rational of speakers can be abstracted from the claims, the data and warrants. This theory is considered valuable as the Toulmin-model allows processing multiple documents and not just one single speech, as it requires less time than classical rhetorical policy analysis. It nevertheless allows covering the full bandwidth of political argumentation ((bid). In simple terms, policy makers need to make a case for the decisions taken using political argumentation, thus studying this argumentation allows the reconstruction of the possible motivations for the decision taken.

Keeping in mind the three pillars of Borrás & Edler (2012) it appears short-sighted however to only consider how decision makers have justified their choice. Emphasis also needs to be placed on the choice of policy tools advocated. Taking the claim serious that policy makers are strategic beings it is assumed that they are also highly selective when it comes to the policy instrumentation they advocate. Thus, it is argued that policy makers cannot be expected to propose policy tools that only offer acceptability but are not promising to drive change. The acts of arguing that the Toulmin-model allowed to identify (in the corpus texts) also feature explanations by politicians which design traits of the sugar levy they valued. This is used to point at the reasons why SSBT was given the form that it has been given. In other words, it allows grasping how policy makers explained the shape of the policy tool. In combination with the explanations offered on the legitimisation, the sub-question is addressed neatly.

Considerations on the third sub-question started out-going from a notion of Versluis et al. (2011). They claim that the political agenda is a contest of a variety of issues that all compete for the attention of decision

⁶ For instance, the claim sugar leads to obesity would only be a mere statement. When it is backed with the evidence from the datum that obesity figures correlate with sugar consumption (fact that could be known due to a scientific study for instance), it is assumed a claim. The connection of the datum and claim in this example is made possible by the implicit warrant that the reader adds automatically. The warrant could have been made explicit as well. There is a correlation between overweight and sugar consumption (datum), because this was proven by scientists, we know that (warrant) sugar consumption leads to obesity (claim).

makers. This let the question arise how the issue SSBT was able to attract so much attention. The third sub-question approaches this question from the following perspective, to understand how a policy reaches the agenda, it not only has to be asked why it was seen as valuable policy solution and by whom. However, it also is a question of how it is established what the problem is considered to be. Hoppe (2011) proposed that to study the agenda, attention needs to be given to the "problem framings" that were established to avoid this "trap of solution thinking" (p.26). The rationale here is that humans are treated as "homo respondents" and not just "homo cogitans" (p.7). In a nutshell, this implies that decision makers are not getting up in the morning and just think of an absolutely rational policy. On the contrary, they are influenced by their environments, and they pay tribute to their interwovenness with their surroundings. Consequentially, they are to be understood as bounded rational beings, not perfectly rational calculating machines.

Following Hoppe's logic further decision makers' preference for certain policies is the consequence of the process of "problem structuring" that occurred around them. In this process, a broad range of societal actors are involved, and it needs to be understood as a contest of "competing problem representations" (p.27). These representations are assumed to be so widely distributed throughout the network of involved actors that for this study some sort of selection mechanism is needed. Luppold's work (2015) bases on the same understanding of humans as bounded rational beings and is selected as guiding aid. The theory based approach that is developed here contains three elements. Starting from the data that already is collected (in chapters 5.1 and 5.2) on politicians' argumentation the underlying framings of where the problem lies is examined. Consecutively, to allow to account for Hoppe's understanding of problem structuring, policy documents were identified that contain the argumentation of a wide constellation of actors involved. That a wide constellation was involved was safeguarded by ensuring that all four clusters of the policy arena scheme of Kuhlmann are covered. These arguments are identified with the same adaptation of the Toulmin-model used before not to jeopardise consistency in the data collection. Within these arguments, the problem framings once more are collected. This allows a third step of monitoring how various problem framings (from a diverse group of actors) changed during the studied period.

This last process step is connected to a further theoretical tool that Hoppe's contribution contains. Hoppe claims that obesity is a "moderately structured problem" (2011, p. 74), because there is agreement on the future state of affairs desirable (less obesity), yet there is a contest of which means should be used to achieve this desirable situation. Following this logic the question arises: Is SSBT an expression of a state where there is also agreement on which "means" (ibid. p 74) are needed? This would imply that used problem framings point at the conclusion that allows the portrayal of obesity as "structured problem" that points at SSBT as the solution. Chapter 5.3 discusses this question exhaustively. This discussion provides the answer to the third sub-question, by granting a view of the way problematisation possibly influenced the political agenda. What is more, discussing the problematisation offers a better understanding of the richness of the SSBT debate. Therefore, it appears invaluable for this project. Before moving to the methodology chapter a summary of the points raised in this section is offered on the next page ([Figure. 3](#)).

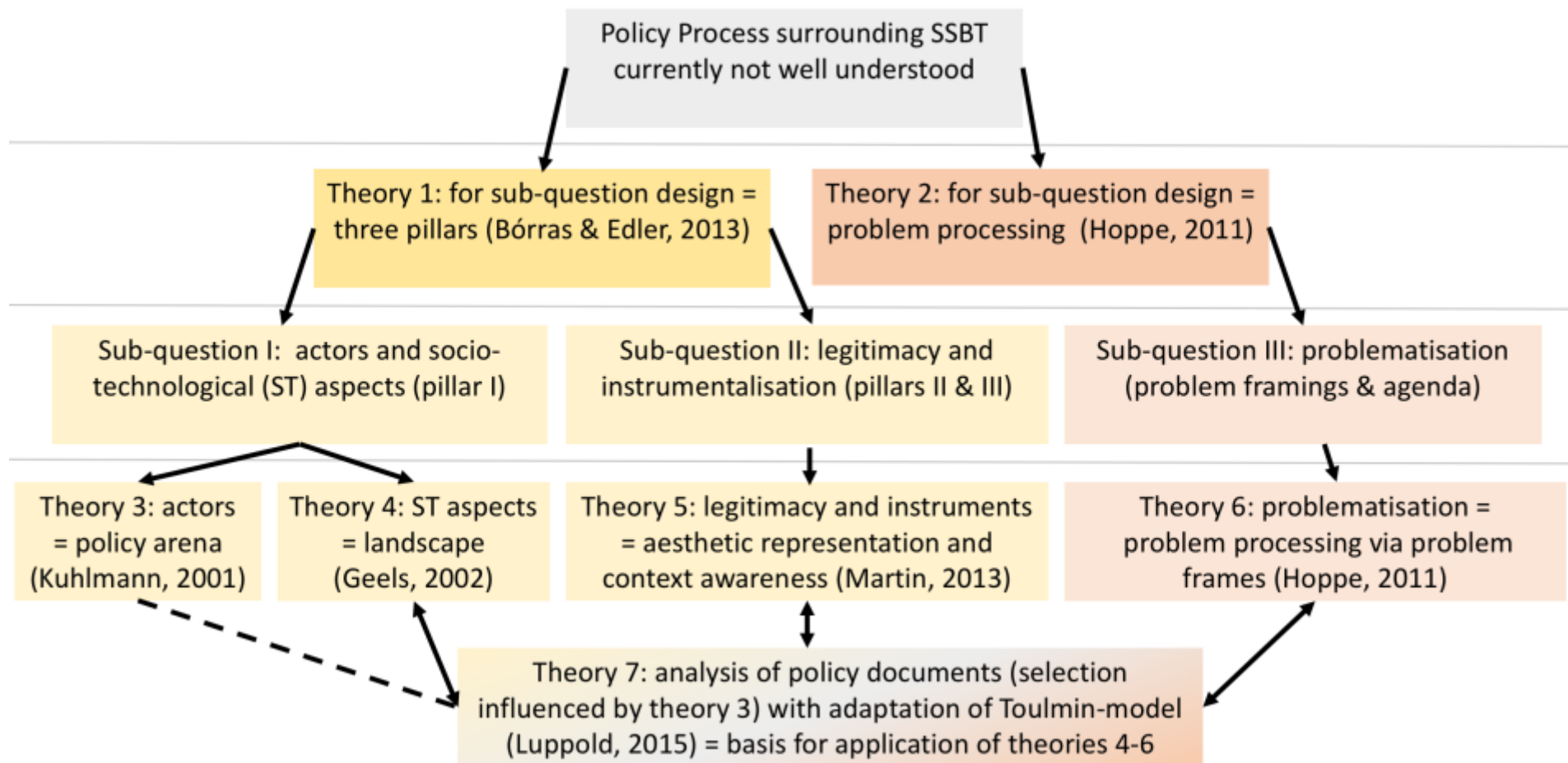


Figure 3. Interrelation between sub-questions and theoretical tool-kit

4. Methodology

Since this thesis is a policy analysis study, elective method selection is used. This implies that the methodological toolbox is tailored to offer great explanatory power and answer the posted questions. Thus, the methodology is explained best by lining out how the three sub-questions are addressed. The sub-questions contribute to a better understanding of how the policy innovation SSBT entered the policy mainstream of anti-obesity policies in the UK and how its form was influenced. To refresh the readers' memory the sub-questions and their rationales are briefly repeated.

Who was pushing for change and which (socio-technological) influences possibly enabled such change? This first question focuses on actors that supposedly played a role in the policy making sequence considered. Next to the actors also the socio-technological aspects, that added context to their interaction, are of interest here. The overarching rationale behind the question is that actors and their surroundings (delimiting their manoeuvrability) are one of three pillars that underlie policy change (Borrás & Edlers, 2012). Consequentially, if one wants to understand a policy change, in this case, the introduction of a regulatory innovation, actors and socio-technological environments require consideration.

The second question also harks back to Borrás & Edlers' (2012) three pillars, it reads: How did elected officials explain the shape of the policy tool proposed and legitimised their decision to support taxation? Conceptually speaking the difference is however that this question covers two of the supporting pillars of policy change. On the one hand, it questions how the policy was legitimised by decision makers, on the other hand, how the policies instrumentalisation unfolded. The two pillars are merged into one question because a similar theoretical tool is used to analyse both dimensions. Important to highlight here, instrumentalities and legitimacy are only studied in elected officials due to the availability of data for the analysis. Moreover, from a theoretical perspective, it is established that elected officials play a central role in the legitimisation of policy, while the roles of other actors are less clear (Martin, 2013).

The third sub-question is added due to the realisation that understanding how a policy reaches the top of the agenda and how it was shaped, is not only a question of why it is seen as valuable policy solution and by whom, but also of how it is established what the problem is considered to be. More specifically, a problematisation that implies that the solution SSBT is the correct choice. Therefore, the question is put forward: How was SSBT enabled, through problematisation, to move to the top of the political agenda? What is more, discussing the problematisation offers a better understanding of the richness of the SSBT debate, therefore it appeared invaluable. To examine the richness of argumentation matters to this study as it is dedicated to broadening academic considerations beyond what is described as "rational style" of policy analysis by Mayer, Daalen & Bots (2004, p.180).

Figure 4. provides a summary of the most important dimensions of this projects' methodological set up. It displays the three rationales of the study (roof of temple), contains the three sub questions (top of the three pillars), informs about the most essential steps in the analysis chapters that correspond to each sub question (lighter shaded section in middle of pillars), and places the expected findings into context by showing how they relate to rationales of this study (bottom of pillars).

In what follows, the methods used to answer each sub-question are described in detail. To answer the first sub-question, actors that knowingly positioned themselves towards the sugar levy needed to be found. Actors are considered as having positioned themselves knowingly based on two criteria. First, when UK broadsheet newspapers discuss the position of a stakeholder, it is considered known. This, however, is only done when it was explicit on what evidence journalists based their assessments of the actors' conscience. Thus, only when direct quotations were offered or reports are cited that the author can check for their content, the actors are included. Due to the limited amount of scientific literature available, newspaper coverage (discussing policy making) was used to identify important actors. Please note, the search for newspaper articles is confined to the time between August 2015 and May 2016. This timeframe is selected for the rather pragmatic reason of data manageability. Because the Health Committee reported that 60 actors in total had an interest in the matter, the time frame studied is limited to where elected officials discussed SSBT actively. Unfortunately, the link provided by the HC that is supposed to lead to a list of stakeholders, leads to a deactivated webpage. Moreover, the Google search trends indicate that it was in this period that the term 'sugar tax', that SSBT is referred to in the media, was searched the most by Google users in the UK (see Appendix C). Second, actors were included, when they are mentioned in policy documents that are included as corpus texts in the analysis conducted in later parts of the fifth chapter. Once actors are identified, they are assigned to one of three categories: supportive of tax, opposing tax, and neutral or unclear status towards tax. This categorisation bases on a content analysis of the source that led to the actors' inclusion. In cases where information was not sufficient to categorise actors, the web pages of stakeholders were searched for grey literature indicating their stance. Moreover, it is distinguished if actors have directly been involved (invited to stakeholder hearings in parliament) or only been discussed in newspaper articles.

This approach allows an overview of actors involved. Yet to not keep the list unnecessarily confusing, the heuristic of the "policy arena" by Kuhlmann (2001, p.961) is used to sort actors systematically. The heuristic inspired the assignment of categories to actors and sorting them into one of four clusters depending on their societal position. Interestingly, the arena and the described actor categories used by Kuhlmann only had to be slightly adjusted to show fit to the involved actors. The adaptation of the arena notion also enables to safeguard that the policy documents used in the text corpus feature actors with various societal backgrounds. Moreover, it also allows seeing what type of actors have not been granted an active role in the policy debate. These considerations, however, leave the issue of socio-technological aspects almost entirely untouched.

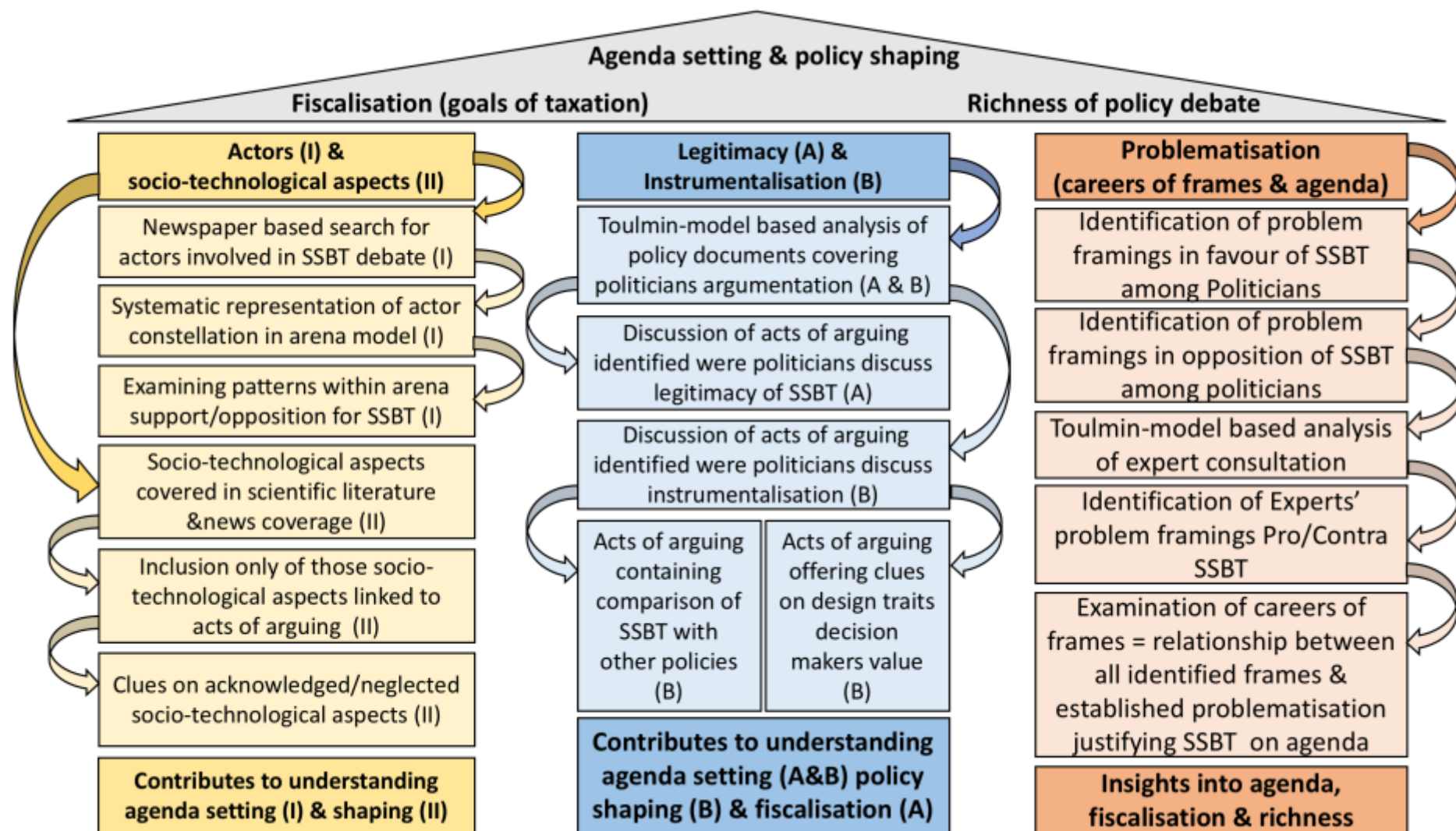


Figure 4. Most important dimensions of methodology (rationales, sub questions, major steps of analysis and expected results)

Information on the matter is abstracted from two sources: (1) articles identified during the literature search hinting at impacting socio-technological aspects, and (2) news articles from English-speaking newspapers in the LexisNexis database covering societal or technological implications of SSBT between 2012 and 2015. To make sure that these aspects influenced the debate, only those four are included that appeared in the corpus texts that are analysed in detail in the later sections of the analysis chapter. Please note that this is not a fully-fledged analysis of all socio-technological aspects that possibly played a role. The goal is much more to gain first insights on the presence or absence of the socio-technological elements that are interconnected to the societal debate on SSBT. In other words, it is not possible for this project to really trace socio-technological factors down, this study rather highlights some anchoring points for future work.

To answer the second question clues on how decision makers legitimised their choice to support a fiscal measure and how they described which shape a sugar tax should have are needed. The search for answers is approached with an adaptation of the Toulmin-model based analysis developed by Luppold (2015). The search for acts of arguing was done manually by the author. All policy documents analysed been coded with a colour based system (6 colours) to reveal the presence of the 2 to 6 traits of arguments distinguished in the Toulmin scheme. To be more elaborate, all texts that are analysed with this approach are searched for potential claims by the author. Only when found claims rely on a datum, they are added to the catalogue of acts of arguing, as only then they fulfil the Toulmin criteria. In cases where warrants remain implicit, they are reconstructed by the author, as proposed by Luppold (2015). Next to this, when present, rebuttals, backings and qualifier are noted down additionally. Each act of argument was transferred to an overview table and each identified trait is summarized and referenced. This led to a full list of all acts of arguing (304 in total) that are included in all eight corpus texts analysed, to answer the sub-questions. The categorisation of acts of arguing that followed at a later stage of the analysis is entirely based on the overview table and was conducted manually. Consequentially, the analysis chapter only covers a selection of arguments. To enable readers nevertheless to access each argument, when desired, they are numerated and made accessible by the author on request.

For the second sub-question, only the three speech occasions linking to public representatives are included. These documents are regarded core policy documents, as they are an important representation of the political discussion. The HC report (HC, 2015d) was selected as it allows insights into the politicians' response to the expert opinions they were confronted with. The petition debate (HCH, 2015) is included, as it is the only publicly accessible account of a political discussion among decision makers on SSBT. The 2016 budget speech (HMT, 2016) is selected as it marks the end of the agenda setting process and is the only instance where a cabinet member explained why the government decided to start implementation of SSBT. Moreover, these documents were published within the time frame between October 2015 and March 2016, which was identified as the primary phase of the political discussion. The attention is directed towards politicians as they can be assumed to use political argumentation to legitimise their decisions. Next to this, being context aware and working towards aesthetic representation, politicians are believed to explain what benefits they see in SSBT, as they desire persuasiveness (Martin, 2013).

The analysis of the corpus texts rests on a three step-procedure. As rhetorical policy analysis theory suggests that all political messages are transported in the form of arguments, the starting point of the analysis is the identification of all acts of arguing, based on the method forwarded by Luppold (2015). This approach led to the identification of 114 acts of arguing, from 21 orators, within the three corpus texts. In the second step, among all arguments identified those are filtered out that contained claims or warrants that speakers forwarded to justify their support for SSBT, or called on their audience to accept the measure as valuable. This approach, however, results in such a flood of information that a third conceptual step is added to enhance clarity. The arguments identified are assigned to clusters based on their claims, warrants and data. The rationale behind this is found in Luppold's (2015) claim that these parts of an argument carry the message from the orator to the audience. Outgoing from this assumption, the consequence of collating arguments with similar claims, warrants and data, is that similar messages are grouped together. In total ten clusters containing similar messages were identified. This adds valuable insights into the way elected officials sought to legitimise their decisions.

The provision of information on politicians' explanations of their preferred policy shape was approached with a two-tier strategy. This means information (about the shaping process of the sugar levy) is found in those acts of arguing that highlighted the advantages of specific design features a sugar levy could incorporate, and in those argumentations that offered direct comparisons to alternative policy choices. To focus on these two elements is motivated by the observation of rhetoric theorists, that policy makers are context aware beings (Martin, 2013; Luppold, 2015). The assumption is that when politicians are accepted to be context aware they would only propose a policy tool that offers the potential to trigger societal change into the direction they desire. Consequentially, the question arises what parliamentarians assumed the desired direction to be. Answering this question is deemed possible by studying the explicit references to traits of SSBT promoters in parliament. The search process of these references started with assessing those arguments that explicitly underline a beneficial trait of SSBT. The selected arguments then are summarised and described in the corresponding section of the analysis. After this, emphasis is placed on direct comparisons of policy alternatives that politicians pointed at. These are searched for with the same approach. These two elements combined help to understand the shaping process of the regulatory innovation SSBT better. Overall, the strategy discussed in this paragraph helps to address the instrumentalisation pillar, while the analysis in the first part of the section addressed the legitimacy pillar.

The first two sub-questions cover predominantly those aspects that explain why the policy innovation SSBT was a promising solution for decision makers and who forwarded it to be so. The third sub-question pays tribute to the role problematisation plays in policy innovation. The necessity to consider both aspects in the analysis of policy shaping and agenda setting is abstracted from Hoope's (2011) work. Based on his findings the expectation is that the manufacturing of a particular policy problem should show the movement towards the portrayal of an ever more "structured problem" (p.79). In other words, it is expected that the narrowing of the problematisation helped the solution SSBT onto the agenda. To assess how the problematisation changed, the problem frames and their evolution across the policy process are studied.

Starting from the already analysed arguments that decision makers used to legitimise SSBT, the most dominant policy frames within the arguments are identified. It is difficult to establish which problem frame decision makers used to structure their own reality due to a lack of clear division lines. Especially delimiting where one frame ends and another begins is difficult to establish with full certainty (Rein & Schön, 1993). Therefore, the only report those frames that are apparent and underlie some arguments forwarded, not to attempt assigning a specific frame to each argument. Nevertheless, this allows seeing basic patterns within the argumentation representatives reverted to on the three speech occasions considered. Studying these basic patterns allows discussing the scope of the argumentation and the process of problematisation interwoven with the movement of SSBT onto the agenda. The sub-question cannot be sufficiently answered, however, by only considering the arguments of those representatives in favour of the policy. It also needs to include those attempts of establishing different problematisation that cannot be connected to SBB taxation as the solution. To also identify these frames the previously found arguments are revisited.

It would be very interesting to understand where the arguments parliamentarians used originated from. Looking at the policy debate one could assume that parliamentarians were influenced by those stakeholders that actively participated in the policy debate. It appears nonsensical however, to suggest a causal relationship between points stakeholders raised and arguments public representatives used. Nevertheless, looking at those incidences where politicians had publicly accessible discussions with stakeholders provides valuable insights into the agenda setting that occurred. It offers the opportunity not only to see which actors publicly supported/opposed SSBT, but also allows evaluating how used policy frames correspond to the wider policy debate.

The implication here is that when the political agenda indeed is a contest of various framings of where the problem lies (Hoppe, 2011), alternative options must have been excluded over time. The difficulty lies in delimiting considerations to a manageable scope, as alternative framings can be assumed to be plenty and highly distributed along the policy process. Therefore, attention was given to revealing the bandwidth of arguments that policy makers could have been choosing from in the three consultations with stakeholders and within policy advice given through PHE. These policy documents are included due to their assumingly important role in the policy making process. To guarantee consistency, they are also approached with the same search strategy based on the Toulmin-Model. This promises to answer the sub-question of this chapter as it allows to monitor in what way the problematisation underlying the presented argumentation changed.

To monitor how problematisation changed over the course of the policy debate, it is separated into four timeslots. The first slot covers the time from 13 October 2015 when stakeholder consultations started until the end of October where the PHE policy advice became accessible⁷. These policy documents were

⁷ This includes the information provided during parliamentary consultations of the Health Committee as well as the policy advice forwarded by PHE accessible before the debate.

all grouped into one timeslot, as they contain the positions of those actors that are not decision makers. Moreover, they all only had one speaking opportunity, and no change in framings is expectable. As there is change to be expected between the three speech occasions involving politicians each is assigned a separate timeslot. The second timeslot covers the day the HC report was published. The petition debate on the 30 of November is assigned to the third timeslot⁸. The fourth timeslot was assigned to Osborne's budget speech on 16 May, his address of Westminster Parliament arguably concluded the agenda setting of the SSBT as it here officially added to the government's agenda. Discussing how the framings changed across these timeslots and how many framings prevailed allows discussing if policy problems became more structured. Next to this, the claim is made that the discussion of the changes in the bandwidth of problem framings carries the potential to explain how problematisation enabled SSBT to secure a spot on the political agenda.

Overall, the three sub-questions all help to answer the overarching research question. The first section of the analysis reveals which actors pushed for SSBT to be on the political agenda. Moreover, it hints at socio-technological aspects that influenced the shape of the policy tool. The second section offers to understand the shaping process by highlighting why decision makers saw SSBT as a valuable policy tool, as it covers why they felt it was legitimate and why they valued it as an instrument. The last section helps to understand better how SSBT made it to the top of the political agenda via problematisation.

⁸ The petition debate was attended by various parliamentarians including a cabinet representative.

5. Analysis

5.1 The political arena: Influential actors and the socio-technological surroundings

This section discusses the actor constellation and those technological aspects that knowingly influenced the individuals involved in the policy making process. The aim is to answer the sub-question: Who was pushing for change and which (socio-technological) influences possibly enabled such change? The discussion begins with an overview of all actors that knowingly positioned themselves towards the issue. Actors are considered as having positioned themselves knowingly based on the two criteria discussed previously. [Table 2](#) (pp.27-28) visualises which actors were identified as stakeholders in the policy debate, and hints at the actors' supportiveness or opposition to SSBT. The third column is used to indicate the stance of the identified actors. The used colour system indicates support with a plus sign on green background, opposition with a minus sign on red background, and stakeholders that cannot be sorted into one of the two groups were assigned a yellow tilde sign. This categorisation is based on the opinion they were reported to hold in broadsheet newspaper articles and/or stances expressed during the policy discussions in parliament. More information for each actor is offered in the last column where the term indirect indicates the former way of categorisation. The latter categorisation procedure is expressed by the word direct. For an overview of sources linked to each actor, see Appendix B. To increase the readability, all actors named in the second column are assigned to certain arena category in the first column. These categories are inspired by the work of Kuhlmann (2001) who used the heuristic of the "policy arena" (p.961), to ease the mapping of policy making procedures that include a wide range of actors. Looking at these categories in more detail some striking patterns become apparent.

For instance, none of the actors placed into the realm of cooperate interests or business friendly NGO's (Multinational companies, SME associations or libertarian think tanks) supported the sugar levy. This arguably is not surprising as the price hikes cannot be expected to be in the best business interest. Yet, interestingly Tesco was reported to hold a neutral stance on the matter, which as the *Guardian* reports is explainable with the company's decision to reformulate their sodas drastically (Boseley, 2015). Even more interesting is the position of the British Retail Consortium (BRC), who's spokesperson during parliamentary consultations claimed to be "neutral" on the matter of taxation (HC, 2015a, p.23). This possibly can be explained with the fact that the BRC represents multiple companies like Tesco that need to appeal more to customers as trustworthy brands that enable their customers to take healthier food choices should they desire. What is more, retailers are less dependent on a single product category compared to soda manufactures.

At the other end of the spectrum, actors are found that are directly involved in the UK healthcare sector. Among public health interest groups, national hospitals and medical associations, not a single actor did not show support for the SSBT plans. One actor in this group deserves some more attention, as it appears to not fit in well. Jamie Oliver and his Food Foundation are difficult to position. While the Food Foundation as a public health NGO fits well in the scheme, Jamie Oliver does not. The reason for this is that, while Jamie Oliver was directly participating in the policy debate, he was not invited to the HC in any representing function of one of his various initiatives, but as a private person (HC, 2015b). The reasons

for this choice by the HC are difficult to establish. What appears clear however is that he was a relevant actor for three main reasons.

Firstly, he backed the campaign for the petition considerably by contributing some 170,000 pounds to Sustain (NGO) efforts to promote it (Bloomberg, Baker, 2016). Moreover, his fame helped to mobilise citizens to support the petition. For instance, Jamie Oliver mobilised successfully through the social media channels with the popular twitter hashtag #foodrevolution and the related online campaign with more than 700,000 supporters. It is difficult to measure what impact these efforts had on the policy debate, as merely counting followers provides little information on the potential influence of an actor (Chan et al., 2010). Connecting it with work Cottle (1998) is more fruitful. He hints at the impact such mobilisation has on policy debates. Cottle (1998) argued that when we accept Beck's notion of the "risk society" (p.7), the role of the very fora in which these risks are socially constructed is not to be underestimated. The role of modern mass media is "identified as a key arena in which such social contests over definitions, knowledge and risk consequences are played out" (p.8)⁹. What this discussion brings to the fore is that Jamie Oliver potentially has created a powerful forum around the understanding that SSB consumption is a societal risk, which could explain the attention his petition received in public (suggested by the many signatories of his petition). Secondly, Jamie Oliver established the SmartCity project that led not only over 170 restaurants to impose own sugar levies but even won over relevant societal institutions (sport teams, hospitals, schools) and even an entire city council (BBC, 2015). Thirdly, Jamie Oliver was invited by David Cameron to private consultations and as the *Telegraph* reports and "consulted David Cameron on the obesity strategy" (Holehouse & Riley-Smith, 2015).

An interesting pattern is also found among the research institutions involved. While the support of cancer research UK and the national health forum arguably is not astonishing, due to their close links to the UK's medical practitioner community, things become more interesting when considering the work of the two involved consultancy firms. While the McKinsey Global Institute concluded that a sugar tax is not the most effective policy option, it was not all negative about a tax as it saw value in the potential cost savings for hospitals (Dobbes et al., 2014). Oxford Economics painted a different picture and warned of over 4000 job losses should a tax be implemented (Butler, 2016). This once more could suggest the pattern that the entire policy debate was mainly a contest between business considerations and public health concerns.

Furthermore, the strong support for SSBT by universities was remarkable, due to its explicitness. Not only did researchers publish academic contributions suggesting taxation is valuable, but publicly accused food manufactures in interviews with the *Telegraph* (Donnelly & Hughes, 2015). Moreover, two other examples indicate the dedication of universities to the promotion of SSBT. Firstly, the University of Brighton implemented a sugar tax in their own institution to send a signal to 10 Downing street, as the *Telegraph*

⁹ Please note that Cottle (1998) has not offered a definition of what he includes in the concept of mass media. The made considerations rest on the authors assumption that internet website and social networks are mass media.

reports (Sawer, 2016). Secondly, the scholars from Oxford and Liverpool university, invited to the consultations by the HC, unanimously stood in full support behind the calls for a 20% sugar levy (HC, 2015c).

Moreover, an interesting finding was made among involved policy makers (of UK ministries, the national parliament and regional governments). The role of local governments during the negotiations was rather indirect with the City Hall of London and the Welsh Government expressing their support for a sugar levy. Due to their lack of the necessary taxation rights, they were unable to impose own SSBT though (HCH, 2015). The city council of Brighton and Hove however went one step further by cooperating with Jamie Oliver's "SugarSmart" project, that included the introduction of voluntary sugar levy in local shops across the city, as the Guardian reports (Topping, 2015). The Evening Standard noted that also Boris Johnson introduced a sugar levy in London's city hall café to send a signal (Crerar, 2016).

Next to these regional policy makers, those on the national level played a more central and direct role. Among them the response was not always positive. While PHE advised their funding institution to use SSBT as one policy tool in their obesity strategy (PHE, 2015a), Health Minister Jeremy Hunt nevertheless opposed the idea. He expressed his fear over the regressiveness of the tax (Wollaston, 2015). Here the pattern of the conflict between health and business interests re-emerges. In the parliamentary debate the health ministry's representative expressed her discontent with the calls for a sugar levy and pointed out that the final decision had to be taken by HM Treasury. Next to this she lined out that the Treasury shared her assessment of the tax being undesirable (HCH, 2015). Therefore, the position of the Treasury is considered volatile, as the Budget speech of George Osborne in the following year became a turning point and SSBT was elevated to the top of the agenda. Also in the House of Commons there was no unified position on the matter. While the members of the HC all supported the idea of SSBT, other MPs, especially petition committee members from the conservative party, questioned the value of the policy measure (HCH, 2015). For this reason, the yellow tile is assigned. Before moving along a summary of the most interesting patterns found among the arena actors is offered in [Table 1](#).

Table 1. Summary striking patterns within the policy arena

Nr.	Pattern in policy arena	Description of pattern
1	Actors with corporate interests opposed or neutral on SSBT	Most corporate actors opposed to SSBT, interesting exception in Tesco and British Retail Consortium (claiming to be "neutral")
2	Involved actors from health sector in favour of SSBT, special role for Jamie Oliver	Jamie Oliver shares the goal of actors from health sector to foster public health via SSBT. His fame helped mobilising the public by offering a forum around claim that SSB are harmful
3	Research institutions mirror division between business and health interests	Consultancy firms warn of impact on business and question effectiveness. Involved universities outspokenly supported call for SSBT for health reasons
4	Active support from some local and regional governments	Welsh government expresses support and city administrators in London and Brighton and Hove used symbolic voluntary SSBT to forward health argument
5	National policy makers divided along the business and health frontier	Best example: PHE advised Health Ministry to endorse SSBT in the name of health while they publicly opposed the idea due to concerns over regressiveness

Table 2.1. Overview of actors involved in the policy debate (June 2015- June 2016)

Arena Category	Actors	Position	Involvement in public discussion
Multinational companies	Coca Cola	-	Indirect
	Unilever	-	Indirect
	Tesco	~	Indirect
	Wetherspoon	-	Indirect
	AG Barr	-	Indirect
	Britvic (Pepsi Corp.)	-	Indirect
	AB Foods (British Sugar, Primark)	-	Indirect
Libertarian think tanks	IEA	-	Direct
	Taxpayers Alliance	-	Indirect
SME associations	BBPA	-	Indirect
	BRC	~	Direct
	Federation of Wholesale Distributors	-	Indirect
	Automatic Vending Association	-	Indirect
	National Federation of Retail Newsagents	-	Indirect
Industrial associations	BSDA	-	Indirect
	FDF	-	Direct
	National Farmers Union	-	Indirect
National research centers	Cancer Research UK	+	Indirect
	UK Health Forum	+	Indirect
Universities	City University of London	+	Indirect
	University of Bristol	+	Indirect
	University of Oxford	+	Direct
	University of Liverpool	+	Direct
Consultancy firms	McKinsey Global Institute	~	Indirect
	Oxford Economics	-	Indirect

Table 2.2. Overview of actors involved in the policy debate (June 2015- June 2016)

Arena Category	Actors	Position	Involvement in public discussion
Public health interest groups	Jamie Oliver (Food Foundation)	+	Direct
	Royal Society of Public Health	+	Indirect
	Children's Health Fund	+	Indirect
	Obesity Stakeholder Group (renamed to Obesity Health Alliance in 2016)	+	Indirect (some members direct)
	CFC (Sustain)	+	Direct
	AoS	+	Direct
	National obesity Forum	+	Indirect
	British Dietetic Association	+	Indirect
	Faculty of Public Health	+	Direct
	Association of Directors of Public Health	+	Direct
National hospitals	NHS	+	Indirect
Medical associations	British Dental Association	+	Indirect
	BMA	+	Direct
	Royal College of Pediatrics and Child Health	+	Direct
	Obesity Stakeholder Group (renamed to Obesity Health Alliance in 2016)	+	Indirect (some members direct)
National Parliament	HC	+	Direct
	Petition Committee	~	Direct
Health Ministry	PHE	+	Direct
	Department of Health	-	Direct
Other ministries	HM Treasury	~	Direct
Regional government	City of London	+	Indirect
	Brighton and Hove	+	Indirect
	Welsh Government	+	Indirect

Moving into the second part of the chapter, emphasis shifts towards the bigger picture of the policy arena and its contextualisation. Actors are not interacting in a vacuum or arena that is detached from outside influences (Kuhlmann, 2001). On the contrary, societal change influenced the process by shifts in the socio-technological landscape as Geels (2002) established. Therefore, it is scrutinised which major shifts occurred that potentially influenced the shape of the policy making arena. In total, four elements were identified that influenced the discussion.

First, the WHO decision to declare that a healthy diet should not contain more than five percent of free sugars as nutrient source, was cutting the recommended amount by half. This recommendation was accepted by the Scientific Advisory Committee on Nutrition (SACN), and the government declared this target as basis for their new obesity strategy (Siddique, 2015). That the SACN's support of the five percent target was motivating the government to reconsider their anti-obesity policies is confirmed by Jane Ellison, representing the health ministry in the petition debate (HCH, 2015). This is considered so important, as it is part of a wider phenomenon in the obesity policy debate. While for long time attention was given to fat and salt reduction, gradually sugar moved into the spot-light (Capewell, 2014).

Second, in the last years the demand for healthier drinks on the soda market grew (Prakash et al., 2008). This new demand promoted SSB manufactures to invest in new product lines and reformulate their drinks. It was noted by the *New York Times* that there was an increase from around 400 soda drinks being on offer in 2004 to more than 700 in 2015 (Sanger-Katz, 2015). This also becomes apparent in interview responses from manufactures. In the *Business Insider* Pepsi CEO Indra Nooyi stated that the focus on SSB as cash cow is a “thing of the past”. The response of the industry mainly needs to rest on the diversification of their product lines. According to consultancy firm Crimson&Co this opinion is widely shared across the industry (Crimson& Co, 2016). This fits into the account of a FDF spokesman that noted that many soda makers already set internal profit targets from NNS of over 50% (HC, 2015a). This development is assumed to matter greatly as MPs in support of a sugar levy argued that manufactures have alternative products already available. The HC chairwomen Dr. Wollaston for instance pointed out that NNS are a healthy alternative offered by the same manufactures to soda costumers (HCH, 2015).

The diversification of the industry also played a major role in Jamie Oliver's argumentation. He justified his calls for a sugar levy by pointing out that many soda companies are also invested in dairy based products and bottled water companies and thus would stay profitable even if SSBT is implemented (HC, 2015b). That Coca Cola and Pepsi Co. have invested in such products is no secret as the *New York Times* reports that in recent years both have secured their access to the dairy market, the juice and water market (Sanger-Katz, 2015). That Coca Cola and Pepsi diversified their portfolio to establish new markets is however no new trend. Barney (1995) concluded that the two companies were “moving towards exploiting *different* resources” (p.58). He noted that they diversified by investing into alternative products ranging from fast food chains (Pepsi) to diet sodas (Coca Cola). That reformulation has its limits however, was highlighted by Ian Wright defending the interests of the Food and Drink Federation (FDF) in parliament. This is also visible in the new strategy of manufactures to market their drinks in smaller packages to keep their SSB profitable, as the *Washington Post* reports (Ferdman, 2016).

Third, the producers of SSB's in Europe used to face higher sugar prices when compared to the USA. Aguirre, Myton & Monasivias (2015) linked this to import restrictions included in the Common Agricultural Policy (CAP) that kept corn syrup based sugars off the EU markets. In the USA, these are widely used since 1983 to lower SSB production costs (ibid.). According to them, this explains why sugar consumption in America increased by 15% over the past 30 years while it fell in the UK (ibid.). This mattered to the SSBT debate, as public health lobbyist Malcom Clark, among others, warned of the consequences that could result from the EU's reforms (HC, 2015a). Aguirre, Myton & Monasivias (2015) explained that the reforms of sugar pricing that began in 2013 and were completed this year lift restrictions on the import of high fructose corn syrup and consequentially lead to a price reduction of some 40% in sugars.

Fourth the industries concern over changes to soft drink labelling requirements can be considered a socio-technological aspect influencing the policy making process. Two witnesses discussed the breakdown of negotiation around altered product labelling in the EU (HC, 2015a). Ian Wright from the FDF warned MPs from attempting to change product labelling in the UK, only because new traffic light labels or labels including tea spoons of sugar were not agreed upon in Brussels. The broken-down negotiations also were used by a supportive actor in form of CFC's spokesperson, claiming that since new product labels have not been agreed on, the government should revert to a fiscal measure to make SSB less appealing (ibid.). Thus, the technological challenge of cheap production of sodas played into the debate as changing labelling requirements in the UK appeared economically undesirable (ibid.).

Having discussed the context of the policy arena, an overview of the identified policy arena is given. Actors are categorised into groups to allow a better overview in a simple graphic ([Figure 5](#)). The graphic displays four segments of actors that played their role in the policy making process. To the left one finds all the business and business friendly actors. To the right, all those with direct public health backgrounds and involvement in the medical community are located. These two groupings are in strong opposition, with some few exceptions. Generally, it appears that these actors are divided by their understanding of what role the state should play. This fits the discussion of Dewy (1954) on the "demarcation line" between the public and private domain and attempts to change behaviour (p.65) remarkably well. The discussion centres around the question if SSB consumption is a public concern or not. Dewy (1954) explains that the demarcation line is to be constantly looked for by competing societal actors, as assuming it as pre-given is "absurd" (p.65). Arguably, this struggle for influence is exactly what becomes evident. While the members of the public health community feel that the government should step in to curb the overconsumption of SSB, this is opposed by the other actors that are concerned about too much state intervention. The research oriented actors (north) and the classical policy makers (south) are much less homogenous when it comes to their attitudes towards taxation, and they are not placed into one of the camps easily. Thus, to better understand how especially parliamentarians positioned themselves, a more detailed analysis follows in the next chapter. Noticeably some text boxes are coloured-in, visualising actor groups containing actors that are categorised as directly active in the policy making procedure by having participated in Parliament. This indicates two main aspects. It shows a constellation that allowed actors from all four segments to

contribute. Next to this, it shows the value of this project, because the analysis of arguments can be expected to cover many different actors with diverse perspectives.

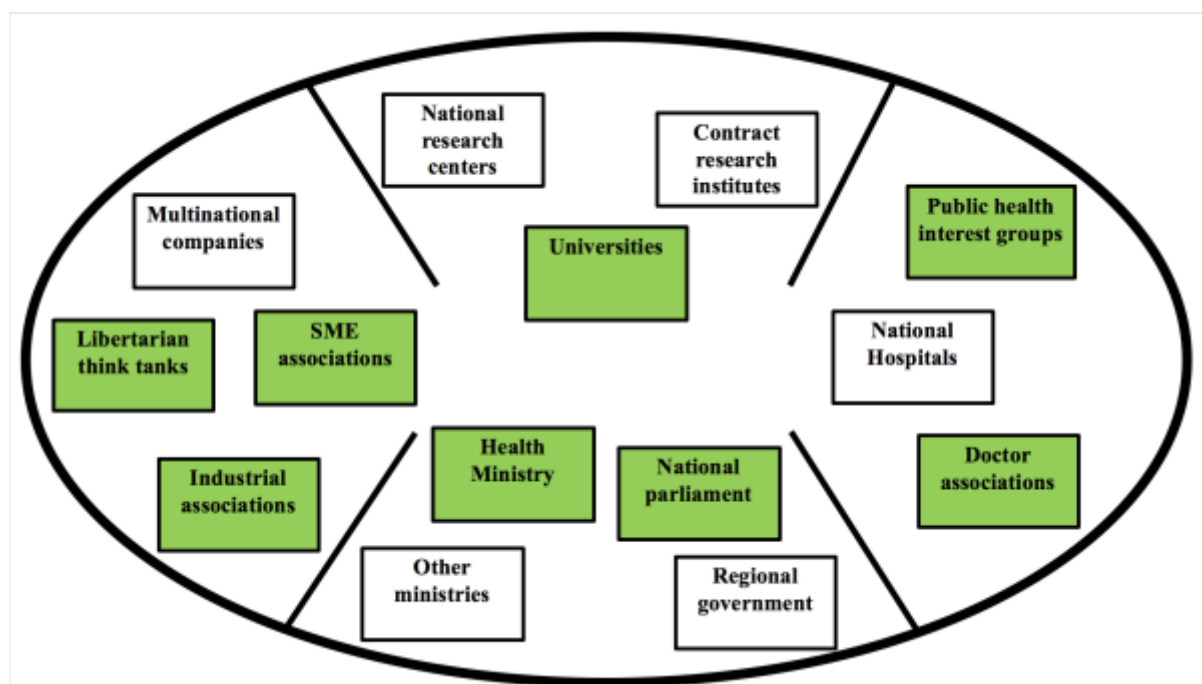


Figure 5. Overview of the policy arena (adaptation by author based on Kuhlmann (2001))

Looking back over this section, two interesting findings are made relating to the sub-question posed¹⁰. On the one hand side, multiple actors are identified that pushed for change by supporting SSBT (see column 3 of Table 2). Especially the university scholars, the members of public health interest groups and doctor associations, the members of the HC committee and the chancellor of the exchequer with their direct participation in the policy debate, appear to be among the most important actors. One actor appears specifically important, Jamie Oliver who mobilised citizens by establishing a forum in which an image of sugar as a considerable risk for society could form, one of such magnitude that the state should address with a fiscal measure. Seen holistically, it appears that the struggle around the question whether SSB consumption is a public concern was won by those who felt that intervention in the name of public health was necessary. This is one of the reasons why it is suggested that SSBT needs to be understood as part of a process of fiscalisation. Especially the public health dimension is strongly present in form of alternative goals next to raising tax revenue. What is more, at least four socio-technological aspects been identified contributed to the pro taxation outcome: (1) The focus in the public health policy domain on sugar as key nutrient in obesity prevention, (2) the soda industries efforts of diversification and reformulation leading to a strong NNS market, (3) public health's advocates anticipation of falling sugar prices on the EU market,

¹⁰ Who was pushing for change and which (socio-technological) influences possibly enabled such change?

(4) the disagreement in the EU when it comes to new product labelling requirements. It should be stressed that this is not a complete list of all socio-technological factors that played a role. It was not possible to trace many socio-technological aspects in the policy debate. Nevertheless, first valuable insights are offered into some socio-technical aspects that were an influencing force. The small amount of socio-technical considerations that became visible could suggest that there was a considerable silence on socio-technological aspects.

5.2 Legitimation and the choice of a policy tool

This section scrutinises, how elected officials explained the shape of the policy tool proposed and legitimised their decision to support taxation. To account for the considerations politicians made an overview of argumentations regarding SSBT is presented. The identification of the arguments is based on the Toulmin-model and has led to the identification of 114 acts of arguing, from 21 orators, within 3 corpus texts. Consequentially, it is not possible to discuss each argument individually. Instead, arguments are sorted into categories, to avoid repetition. Similar arguments are grouped based on the claim they entail and data and warrants are collated and summarised. The resulting overview consists of two elements. First, a discussion of politicians' arguments that relate to the justifications for supporting SSBT. Focus lies on lining out the link of evidence and claim. According to Luppold (2015) this allows to identify the messages politicians wish to convey. Second, from the same documents the argumentation that relates to the desirable traits of the policy tool are summarised. Once the arguments were presented, reflections are made on the answers offered to the relating sub-question¹¹.

In the petition debate on SSBT a wide range of arguments was used to legitimise the decision of most MPs to back the call of Jamie Oliver. Looking at all arguments that were identified, it becomes visible that many are reoccurring (HCH, 2015). Arguments are grouped according to a three-layered strategy, described in the methods section. This strategy led to the revelation of ten distinguishable categories of acts of argument geared towards justifying the support for SSBT. These categories are summarised in [Table 3](#).

It is worthwhile to take a closer look at these argument categories, especially at the type of data that they rely on. The data¹² used provides information on the depth of the made arguments, this is not to be understood as a proxy for the convincingness of arguments, yet it gives clues about the richness of argumentation. This information is crucial for the discussion that follows in the third section of this chapter. Next to these considerations, also the number of speakers that raised claims from a certain

¹¹ How did elected officials explain the shape of the policy tool proposed and legitimised their decision to support taxation?

¹² Terms Data and Datum used in reference to the Toulmin-Model throughout this chapter.

category and the number of incidences of arguments falling into each category are reported. The categories are sorted by frequency (as in the table) to encourage readability.

Table 3. Argument categories legitimising sugar tax presented in petition debate.

Nr.	Argument Category	Incidences of arguments (n)	Speakers using argument category (n)
1	Policy failure of current Gov. prevails	12	6
2	Obesity linked to grave societal consequences (costs justify action)	7	5
3	SSBT is a proportionate and targeted measure	6	4
4	Tooth decay in children linked to SSB consumption	4	4
5	Industry incentivisation is needed (leveling the playing field for reformulated SSB)	4	4
6	Childhood obesity counteracted	4	3
7	Evidence base given, that a tax reduces SSB consumption	3	2
8	Health risks raising due to obesity (tax reducing this)	2	2
9	Current food environment is encouraging unhealthy behavior	2	2
10	Public support for SSBT visible in petition	1	1

The most prominent category (C1) contains claims that the current government approach is a policy failure. This claim rests on the data: that voluntary frameworks did not trigger a significant response by the sugar processing food industry, the suspicion that the government was heavily influenced by industrial lobbies and remained passive, health experts considered the government policy insufficient, and that the food environment is not encouraging healthy diets.

The second most commonly (C2) used argumentation relates to the claim that there is high urgency due to grave societal consequences, indicated by strong wordings like “obesity epidemic” (HCH, 2015, p.15) or “ticking health time bomb” (HCH, 2015, p.18). The evidence (data) for the claim consists of: the prognosis that life expectancy in children are declining, high obesity prevalence in children and adults, increasing NHS costs, indirect costs of obesity, and the past successes of anti-smoking/drinking legislation in containing public health crises.

Moving on, six incidences where arguments related to claims of SSBT being proportionate or at least sufficiently targeted (C3) were found. The claims within this category rest on data pointing to: the addictive

potential of sugary drinks, their contribution to diet requirements being surpassed, lifestyle transformation making SSB's widely available, changes in the metabolism of regular SSB consumers leading to higher fat intake, the link of consumption of sugar rich food items and disease and the role that changing habits of children's SSB consumption can have on preventing lifelong obesity.

In the fourth position are claims from three categories (C4-C6) justifying SSBT, namely: (C4) the link of SSB consumption and tooth decay, (C5) the possibility to incentivise the industry to change their products and (c) the opportunity to reduce childhood obesity (C6). For the first group (C4) evidence is solely found in datum that the main reason for young children being treated in hospital is tooth abstraction. Claims from group (C5) build on the data: that heavy marketing of unhealthy products prevents companies from being able to stay competitive with reformulated products, that industry functionaries reported the lack of a level playing field for healthier SSB, and that SSB producers are currently only concerned with maximising shareholder profits. The last category (C6) in the group is linked to data: that SSB are the main sugar source in children's diet, that local authorities lack resources, that SSB consumption is linked to weight gain, that Jamie Oliver made a convincing case for a sugar tax, and the high numbers of obese children making any counteracting measure welcome.

These categories are followed by the thrice appearing claim that there is a clear evidence base that SSBT is effective (C7), backed by the data: that multiple public health experts see SSB as beneficial, and that Mexico experienced a reduction in SSB consumption in after taxation was introduced.

Two categories were linked to two arguments each. On the one hand the claim, that SSBT can help reducing long-term health risks and thus disease (C8), linked to the evidence that a tax could reduce sugar intake by changing unhealthy habits and thus prevent various diseases (CVD, Diabetes type II, various cancer types). On the other hand, that there is the presence of a food environment encouraging unhealthy food choices (C9), connected to evidence that SSB's are more available than before, are marketed heavily and are often lower priced than bottled water.

The remaining argument (C10) is not included in any grouping, due to its combination of evidence, warrant and claim. The claim is that there is public support for a sugar levy, backed by the datum that the petition attracted many signatures. These ten categories of claims are used to justify SSBT in the petition triggered debate, yet two more incidents need to be discussed and the question arises if the argumentation did differ.

In the analysis of the HC report on childhood obesity the same strategy was applied as with the petition. Due to a much smaller number of arguments only two categories with one claim each were identified (Table 4). The categories identified showed only limited degrees of overlap to the categories discussed above. While one act of arguing can be assigned to category four, with the claim being made that taxation was proportionate, the linked datum was different. Here the fact is highlighted that public health institutions, namely PHE and SACN, are calling for the reduction of SSB consumption across the UK. The second claim made was that SSBT is legitimised by the need of a swift introduction of a policy to counteract childhood obesity. This claim is supported by the datum that the reduction of sugar intake of

around 50% (formulated as policy recommendation by the SACN) is going to be a tedious process. Within the scheme of categories, this claim can be sorted into the third category.

Table 4. Argument categories legitimising sugar taxation presented in HC report.

Nr.	Argument Category	Incidences of arguments (n)	Speakers using argument category (n)
3	SSBT is a proportionate and targeted measure	1	1
6	Childhood obesity counteracted	1	1

Osborne's budget speech (HMT, 2016) included three acts of arguing that attempted to legitimise his decision to draft a sugar levy. The claims made within these three arguments on the first look use much more emotional appeals, yet studying the evidence and warrants attached, they each fall into one of the ten categories already established (Table 5). First, the claim that a plan for the long term needs to consider children's health connected to data that the high sugar consumption in children drives obesity prevalence higher, costs of obesity already extent £27 billion, and findings that SSB consumption is interwoven with childhood obesity. Consequentially category six shows fit.

The claim that the industry already recognised that there is a problem is backed by evidence that multiple SSB producers already reformulated their drinks. Nevertheless, the explicit warrant that the industry only needs incentivising through a sugar levy justifies the classification as a category five argument. The justification for a sugar tax for Osborne is rooted in his feeling of responsibility towards children in his function as representative. This claim once more is unparalleled, yet the implied warrant resulting from the used datum of SSB's role in the development of serious disease allows a clear assignment to the seventh category. This concludes the summary of politicians' argumentation aiming at the legitimisation of their decision to back SSBT.

Table 5. Argument categories legitimising sugar tax presented in HC report.

Nr.	Argument Category	Incidences of arguments (n)	Speakers using argument category (n)
5	Industry incentivisation is needed (leveling the playing field for reformulated SSB)	1	1
6	Childhood obesity counteracted	1	1
7	Evidence base given, that a tax reduces SSB consumption	1	1

Next to the attempts to legitimise their support for SSBT, politicians value the instrumentality SSBT for certain qualities they assigned to the tool. The analysis of those acts of arguing that allow insights into the

shaping process of the policy tool, also receive attention in this chapter. The identification of such arguments relied on two steps, as explained in chapter 4. This two-step strategy resulted in the identification of thirteen arguments (i-xiii) that relate to those elements of a sugar tax that decision makers valued.

Across the three corpus texts, nine arguments (i-ix) are concerned with beneficial design features SSBT could or should entail in the eyes of decision makers. In the petition debate (HCH, 2015) Helen Jones argued (i) that a sugar taxation scheme could contain reduction targets and a time line for the industry. Next to this (ii), she claimed that the final design of the sugar tax should feature a tax rate between 10-20%, something she supported with the datum that PHE advised this range. Her colleague Dr. Sarah Wollaston also spoke out for a tax rate of at least 10%. This was included in her datum that the HC report concluded at least 10% price increase is necessary, backing her claim that SSBT is valuable due to its ability to create a price differential that nudges consumers to choose NNS's over SSB's (iii). Moreover, Wollaston argued that especially the revenue potential of £300 million to one billion pounds makes the introduction of a sugar levy a promising opportunity (iv). The revenue generation potential also was central to the argumentation of Maggie Throup (v) who claimed that the possibility of ring-fencing the tax revenue is promising to make SSBT a valuable policy tool. This conclusion was building on the evidence that ring-fenced revenue would enable investments into lifestyle education for children, which is to be considered the most effective way to address obesity.

Moving on to the HC final report (HC, 2015d), once more the benefit of raising revenue is highlighted (vi). The claim that this makes SSBT desirable, was underlined with datum that local government budgets are drained and thus new revenue sources could finance better lifestyle education for children. George Osborne in his budget speech (HMT, 2016) also stressed certain design features that made SSBT desirable. He claimed that SSB producers would be incentivised to reformulate their SSB's (vii), based on the datum that the soda manufactures would be the ones targeted. The design feature of being able to target the soda manufactures for Osborne once more was defensible by its ability of encouraging SSB manufactures to promote their low and no sugar soft drinks (viii). Interestingly, Osborne showed consistency with the view present in the other two corpus texts that the revenue potential was a desirable design trait of SSBT (ix). Once more this claim was linked to the data that tax incomes could finance lifestyle education for children.

Looking at the nine arguments (i-ix) discussed, it becomes visible that they cover three main aspects. First, the potential to incentivise the industry to change behaviour is highlighted in two out of three corpus texts. Two speakers see the value of SSBT manifested in design features that have the potential to incentivise the industry to reduce SSB's sugar content. Second, a specific tax range is promoted by MPs. According to two outspoken SSB promoters in the House of Commons, SSBT should feature a tax rate of at least 10%. Third, the revenue a sugar levy generates could be invested in lifestyle education for children to prevent obesity, which was included in two corpus texts.

Moreover, four acts of arguing in the corpus texts analysed (HMT, 2016; HC, 2015d; HCH, 2015) offered direct comparisons between SSBT and other policy options. In the petition debate (HCH, 2015) Emma Reynolds (x) claimed that SSBT would offer to send a clear signal to parents from all social classes that

they do harm their children when tolerating high SSB consumption. She bases this claim on the evidence that working class parents are often not reached by conventional education policies aimed at improving the populations diet. She claimed this became visible to her when looking at the differences of soda consumption of the most and the least deprived children. For her colleague Maggie Throup (xi), SSBT has an edge over other policy options for being easy to implement without delays. The comparison made by John McNally (xii) is slightly different to the previous two, as it is more indirect. He compares the situation of just using conventional education measures to one where a fiscal measure is added to the existing stock pile of policies. He claims that the second option is offering a much better opportunity to “achieve the reduction that we need” (HCH, 2015, p.16). The final HC report featured a quite similar indirect comparison. The claim was made that a new package including a sugar tax is more promising for addressing childhood obesity than the policy package currently in place (xiii). This conclusion was backed by the datum that during the consultation many speakers have highlighted the need for a broad childhood obesity strategy. This last point concluded the summary of the made findings of the analysis when it comes to the ways decision makers justified their belief in the desirability of SSBT and their explanations of the design features (shape of policy) they value (i-xiii). What needs to be scrutinised is what answers the findings offer to the sub-question of this chapter¹³. The two elements legitimisation and instrumentalities are to be discussed separately.

First regarding legitimisation, it is not possible to reach any final conclusions on how legitimate SSBT is seen by the British population. Yet, the overview presented allows to understand how public representatives appealed to their electorate through the means of political argumentation. What becomes particularly clear is that three rationales dominated the attempts to justify political support for a sugar levy. Firstly, the rationale that SSBT is to be understood as an answer to concerns of deteriorating public health. Arguments from categories two, four, six and eight all seek to establish such a conclusion directly. In all these argument categories traces are found of fiscalisation, as the main goal appears to be increasing public health with the tax.

Secondly, the rationale became apparent that the free market functions appear insufficient or arguably so disrupted that a sugar tax would be justifiable. This conclusion was implied in acts of arguing from categories five and nine. Even arguments from category seven could be associated to this rationale. Because presenting SSBT as a reasonable policy option, due to its ability to reduce SSB consumption, contains the implication that in the current soda market individuals overconsume SSB's. Taking a step back, one arguably finds that such an understanding of the soda market hints at the tendencies in the soda debate to see SSB as a public rather than a private concern.

¹³ How did elected officials explain the shape of the policy tool proposed and legitimised their decision to support taxation?

Thirdly, the rationale became visible that due to policy failures prevailing correction through a sugar levy is required. That category one is linked to this logic is very apparent, yet in a more indirect fashion also category three can be linked to this rational. The claims from category three all stress how proportionate and targeted a sugar tax would be, which can be understood as attempt to highlight how this policy tool could fix the flawed government approach. With some more abstraction, even category ten can be linked to this policy failure logic, as the claim that public support prevails for SSBT can be interpreted almost as a warning that further policy failure lies ahead if SSBT is not introduced, as public demands would have been ignored by their legislators. Therefore, the short answer to the question how elected representatives did legitimise SSBT is: (1) by pointing at the need for intervention in the name of public health, (2) the need to intervene in the soda market (incentivising behaviour change on demand and supply side), and (3) the need to correct prevailing policy failure.

Second, the identification of politicians' explanations of the preferable policy shape was analysed. It became clear that policy makers valued three potential impacts of a sugar levy: (1) motivating soda producers to change their products and marketing practices by increasing production costs, (2) a sufficiently high tax rate (at least 10%) promises reduction in SSB consumption, and finally (3) raised revenue enables more lifestyle intervention in children. This offers insights into what decision makers hoped to achieve with a sugar levy. More certainty what the goals of politicians were was found in direct comparison to other policy options. It was found that public representatives saw the advantages of a sugar levy as: (a) empowering the government to reach parents (and their children respectively) regardless of economic status, (b) the ability to implement SSBT more swiftly than other policy options, (c) and broadening of the governments obesity strategy through a sugar levy which could help to counteract childhood obesity better. It cannot be expected that this were the only aspects that played a role in the shaping process of the UK sugar tax, yet it offered valuable clues into the motives of UK's decision makers. Having established valuable insights into the legitimisation and choice of instrumentalities (this section) and some into the actor constellation (previous section) it is time to turn attention to the last missing puzzle pieces for answering the overarching research question. The considerations of chapters (5.1) and (5.2) offer useful building blocks for the discussion of the journey of the policy tool SSBT in the consecutive chapter (5.3).

5.3 Problematisation and conflicting views: the way to the top the political agenda

This sub-chapter examines how the problematisation developed over the course of the policy making process. The question discussed is: How was SSBT enabled (through problematisation) to move to the top of the political agenda? The way the question is framed already indicates that this process is mainly seen from the perspective forwarded by Hoppe (2011), that understanding the political agenda requires accounting for the tendency of policy makers (and actors within their networks), to apply existing policy solutions to carefully manufactured policy problems. Yet, attention is not only given to the result, in form of the problem that decision makers established to be the one SSBT is supposedly addressing, but the process of its establishment as the dominant framing of where the problem lies. This offers a better understanding of the problem frames decision makers accepted and how it relates to the bandwidth of framings that alternatively could have been selected. This chapter provides four elements. First, a

discussion of those problem frames that were underlying the argumentation of representatives discussed in the previous chapter (5.3.1). Second, a contrastation of these framings with conflicting ones or conflicting views based on the same framings within the politicians' speech acts (5.3.2). Third, the identification of problem frames, used in earlier stages of the policy making process, that allow the conclusion that SSBT is a desirable policy option and those conflicting such conclusions (5.3.3). The focus here lies on understanding what kind of actors forwarded arguments that rested on identical frames as those used by public representatives and which alternative frames were presented by some actors participating actively in the policy debate that were not picked up again. Ultimately this promises to facilitate better understanding of the richness of argumentation throughout the agenda setting process. Fourth (5.3.4), it is scrutinised in how far the identified problem framings changed towards ever more structured problematisation during policy making. Thus, it is possible to examine if this process unfolded according to the expectations of Hoppe (2011). This prepares the discussion of the findings and their implications for answering the sub-question.

5.3.1 Problem frames used by politicians in support of SSBT

At least three frames are underlying the arguments seeking legitimisation of a sugar levy. The first one is understanding high obesity and overweight prevalence as consequence of poor diet with high sugar intakes. One speaker for instance forwarded the claim that sugar was the "worst culprit" (HCH, 2015, p.2) when it comes to childhood obesity. The frame was also underlying argumentations that a sugar tax nudges people into "easy alternatives" (HCH, 2015, p.7) in form of NNS and thus results in sugar reduction. Next to this, many orators reached the conclusion that for instance an "obesogenic environment" (HCH, 2015, p.19) prevails or that the food environment triggers high consumption of "unhealthy" food items (HCH, 2015, p.2). Especially claims from the two categories that were found to be most prominent in chapter (5.2) made use of this framing. For example, the prevailing food environment was often understood as consequence of policy failure because the government has not been able to ensure that healthy food items are increasingly more accessible. Or the understanding was that the "epidemic of childhood obesity" (HCH, 2015, p.15) was caused by overconsumption of sugar. Also claims that concern the effectiveness of SSBT in Mexico in reducing SSB consumption are informed by the logic that there is wrong dietary behaviour that requires correction. This suggests the logic to be that when people purchase less SSB, due to a tax, it contributes to healthier diets. However, in these cases the link to obesity is not directly made. Moreover, the proposed frame identified here includes both explanations of the persisting wrong dietary patterns as a demand side problem and supply side problem. This raises question if these two understandings could lead to controversies based within the same policy frame, because the conclusion could be that it is a policy failure that there is no sufficient supply of health food items; or a market failure as consumers are taking ill-informed market choices and overconsume SSB.

Next to this the presence of a second frame is noticeable. Various speakers classified high sugar intake from SSB's as potent health risk factor.¹⁴ Overall politicians showed concern that there was a “ticking health time bomb” that is connected to various health problems ranging from “unacceptable” tooth decay (HCH, 2015, p.15), the “danger” (HCH, 2015, p.7) that due to overweight the life expectancy of children could decrease, up to development of often fatal disease (diabetes, cancer and CVD) linked to SSB consumption. Difficulty with the classification of this second frame stems from the fact that these health arguments often were connected to the high economic costs linked to the development of disease. Here SSBT often was not only seen as tool to stop the development of disease but much more of financing the response to deteriorating health conditions. Yet, due to the always present connection to health problems these claims are assumed to be relating to the same frame.

The third frame that was identified relates to the understanding that it is government's responsibility to act in the interest of their electorate who desire SSBT. Arguments connected to this frame refer to opinion polls showing support for a tax and Jamie Oliver's success with his petition.

5.3.2 Problem frames used by politicians in opposition to SSBT

It is important to recognise that arguments calling the legitimacy of SSBT into question can in some cases be assigned to alternative framings of the situation. However often they are also conflicting views relating to the same frame used by the supporters of SSBT. Here both cases are discussed. Beginning with the alternative frames at least three can be identified. First, obesity was framed as an issue of “personal responsibility” and thus not a concern for legislators (HCH, 2015, p.3). This frame was mainly established in direct opposition to the “too simplistic” (HCH, 2015, p.7) conclusion that lower life expectancy predictions for today's children is predominately down to diet.

Second, the frame found application that the main factors for the development of obesity are physical activity patterns and lifestyle choices. For example, it was claimed that the sedentary lifestyle is the problem as people are “becoming couch potatoes” (HCH, 2015, p.22). Next to this, “inactivity” was described as “key factor” (HCH, 2015, p.23) in obesity development. Orators using this frame often lined out that cross government action to encourage more physical activity was the most promising way to address obesity. Third, the frame was used that taking an economic perspective on the matter, SSBT would be unwise. This frame applies to claims that SSBT should not be implemented due to its regressive nature and that SSBT could become a precedent and lead to a general shift in policy making into a direction that disregards industry interests. One speaker even lined out that there was a risk of treating the industry unfair by not considering that also health charities and public health bodies had financial interests to protect in the debate around the sugar levy (HCH, 2015, p.24).

¹⁴ Please note that there is no agreement among the orators' grouped into this frame, if obesity and overweight are to be equated with disease or only constitute a risk factor.

Turning towards arguments opposing a soda tax and relating them to alternative interpretation of the frames used by supporters, one aspect stands out. Agreement with the framing of obesity being triggered by overconsumption of sugar did not necessarily lead to the support of SSBT. Multiple times orators have highlighted that changed product labelling is the better “alternative” (HCH, 2015, pp. 3-6). What is more one orator raised the point that the government should be allowed to improve the existing policies to reduce SSB consumption. Noteworthy appears that the undersecretary Jane Ellison, representing the government during the petition debate, stated: “All agreed, that as a society we are eating too much sugar” (HCH, 2015, p.24). Her opposition to a sugar levy was justified with the policy advice from PHE ranking SSBT lower in effectiveness than other measures (ibid.). That SSBT was not the most effective measure to lower sugar intake was also supported by another speaker claiming that compulsory sugar reduction targets would be the most effective measure.

5.3.3 Frames from stakeholder consultations

It would be interesting to understand where the arguments parliamentarians used originated from. Looking at the policy debate one could assume that parliamentarians were influenced by those stakeholders that actively participated in the policy debate beforehand. It appears nonsensical to suggest however that a causal relationship could be established between points stakeholders raised and arguments public representatives made use of. Nonetheless, looking at those incidences where politicians had publicly accessible discussions with stakeholders can provide valuable insights for anyone seeking to understand the agenda setting. It offers the opportunity to not only see which actors publicly supported/opposed SSBT but on top of that allows evaluating how used policy frames correspond to the wider policy debate. This section provides a discussion of those policy frames that can be found in the policy advice given to the government by PHE (PHE, 2015a; 2015b) and points raised by stakeholders invited to the parliaments public consultations (HC, 2015a; 2015b; 2015c). The goal was to understand the bandwidth of arguments that were presented. Attention is given to underlying framings in the debate and how this bandwidth varied during the policy making process.

The three frames present among speakers supporting SSBT before, all reappeared in the analysis of the five documents. The frame that obesity is mainly the consequence of sugar rich dietary patterns, and thus a justification for SSBT was forwarded by four stakeholders during consultations. Jamie Oliver stated that there was a need to “prioritise most dynamic part of sugar consumption” referring to SSB as driving factor behind weight gain (HC, 2015b, p.13). This view was also included in the policy advice from PHE; in following wording: “soft drinks are the single largest source of sugar for children” (PHE, 2015a, p.12). Next to this Jamie Oliver made a direct connection to the food environment by stating that the government is doing an “incredible disservice to children” by allowing a food environment that promotes sugar overconsumption (HC, 2015b, p.10). Speakers from Children’s Food Campaign (CFC) and PHE moreover stressed the need to nudge individuals into healthier food choice or highlighted that experimental data from other countries allows the conclusion that a sugar levy addresses overconsumption (HC, 2015a; PHE, 2015b). This was backed by an Oxford University scholar arguing that UK pricing data allow predictions that when SSB prices rise NNS would be the substitute (HC, 2015c). During consultations, speakers using this frame explicitly stated that their claims related to children not the general

population as it was often the case with the parliamentarians. It can be noted that this frame was present in the argumentation of a wide range of actors with four different institutional backgrounds.

The second framing that high intake of sugar leads to considerable health issues and thus legitimises government intervention to curb this problem was shared by an even wider constellation of actors. Specifically spokes people from medical associations can be added to the list of supports. Just like the politicians did consulted stakeholders listed various health conditions (cancer, CVD, caries, morbid obesity or diabetes) that SSBT could help to prevent (HC 2015a; 2015b). Noteworthy is that some speakers focused much more on children's health while especially health experts lined out that sugar reduction promises to improve adults' health condition (HC, 2015c; 2015a). This shows that stakeholders were much less in agreement (unlike parliamentarians) that the problem predominantly affected children. Jamie Oliver once more was very explicit and linked his calls for sugar taxes with accusations of the government failing to place child health before commercial interest by allowing soda producers to sell such high sugar food items without constraints (HC, 2015b).

Regarding the third pro-taxation frame, that the public support for a sugar tax indicates that it is a valuable policy, the finding was made that Jamie Oliver (HC, 2015b), the spokesperson from the CFC and one health practitioner from the Faculty of Public Health used this frame (HC, 2015a; HC, 2015c). Interestingly the former two were the only stakeholders referring to all three pro-taxation frames. Overall it needs to be noted that the other two pro-taxation frames were the ones widely shared by multiple stakeholders and across all analysed policy documents.

The stakeholders in opposition also made use of the same frames as parliamentarians in opposition did. Only exception was the frame that obesity is mainly down to personal responsibility that was absent in the analysed documents. The framing that obesity is to be understood predominantly as consequence of a lack of physical activity and education was only forwarded by one stakeholder that represented the interest of the major soft drink producers (HC, 2015a). The frame that SSBT made economically no sense was forwarded not only by the industry representative (HC, 2015a), but also Chris Snowdon, from a libertarian think-tank, declared that the problem with SSBT is that they are "regressive" and therefore "simply not the right mechanism" (HC, 2015a, p23). Once more the frame that sugar reduction is needed was also used to argue against a new tax. That alternative policies to SSBT could be more effective to change sugary dietary patterns driving obesity was not always defended as explicitly. Paul Darrah representing the British Medical Association stayed rather implicit by claiming that "a whole raft of things" needs to be done to shift dietary patterns (HC, 2015a, p.11). Other speakers more explicit. Ian Wright (Food and Drink Federation) claimed that better education was needed to improve dietary patterns and that McKinsey found that other measures are more promising to reduce sugar content than one of fiscal nature (HC, 2015a). Moreover, a PHE functionary prompted that other policies are more promising for cutting back sugar consumption within the population (HC, 2015c). This view was repeated in PHE's official policy advice concluding that regulating marketing and promotions promised more success than trying to generate monetary disincentives to soda purchases (PHE, 2015a). Dr. Tedstone representing PHE during

the consultations shared that an internal ranking of policies (regarding effectiveness) saw a tax only in the fourth position (HC, 2015c).

Taking a step back it appears that framings that politicians used in support of a sugar tax were more widely propagated by stakeholders and shared by actors from various backgrounds before the parliamentary debates. It is important to highlight, however that the sheer numbers of public health interest groupings involved was much higher than of industry interest groups or libertarian economic institutions in the early stages of policy making. Regardless of this circumstance, the question arose if possibly those frames that industrial groups relied on to oppose a sugar tax were neglected by public representatives. To scrutinise this, all five policy documents are approached with a similar strategy used before to identify problem frames used to position in favour of or in opposition to SSBT that did not resemble the ones identified before. This search included all stakeholders to eliminate the possibility that generally the bandwidth policy framings presented by stakeholders was wider than those of politicians. In total, seven alternative frames are identified in the five policy documents. It is striking that these frames are almost distributed evenly between the supporters and opponents of a sugar levy, with four alternative frames found among supporters and three among opponents. This indicates that some arguments and their corresponding frames from both camps were neglected by parliamentarians in their later discussions.

It is difficult to determine why politicians decided to choose particular frames. In one case, it can be assumed however that the frame was neglected due to flaws in the logic presented. Namely, Jamie Oliver attempted to establish the understanding that SSBT would not be regressive as it would help to curb the problem of health inequalities and thus be desirable (HC, 2015b). While it was argued by other actors including PHE (PHE, 2015b) or a BMA spokesperson (HC, 2015a) that links between health effects of high SSB consumption and social deprivation are visible, they showed awareness that such a tax would be regressive for this very reason (ibid). PHE even warned of increasing regressiveness further by including dairy based products as they are core food items (PHE, 2015b). The very definition of repressive taxation is that it effects the poor more than the better situated at the point in time tax is collected (Suits, 1977), which can be expected given since soda consumption is higher in low income groups. That SSBT could turn out improving the health status of some individuals in the long run economically speaking has no implication on the regressiveness. The other seven frames offer no such apparent clues why they may were been overlooked. Yet, three main patterns were found.

Firstly, some actors used frames to try defeating opponents' positions. For instance, two university scholars from Oxford framed the introduction of SSBT as a necessary experiment to overcome the problem of sufficient evidence bases (HC, 2015c). They claimed that given the ambiguity of predicting impacts on obesity figures and the moral constraints disabling randomised control trails, evidence was only to be generated by implementing and monitoring a sugar levy nationwide (ibid.). What is more, the frame was advocated that a sugar tax was an ineffective policy tool as only altering prices of SSB would not impact consumers' health (HC, 2015a), something speakers from the food industry, the libertarian think tank and even the chair of action on sugar highlighted considered problematic (ibid). They argued that consumers would: substitute SSB's with other sugary products, not change behaviour because prices

are not the only utility factor, would consume other unhealthy nutrients instead or decide to consume NNS that still trigger obesity (ibid.). This frame can be believed to aim at dismissing claims that SSBT had a positive track record in Mexico and thus promises reduction in soda sales in the UK.

Secondly, two of the frames identified stood in direct competition with Jamie Oliver's claim that SSBT is not "anti-business" (HC, 2015b, p.12). Ian Wright, representing drink manufactures, painted a dramatic picture of the economic consequences (HC, 2015a). The celebrity chef insisted that SSBT would only be a reminder to the food industry to take their responsibilities seriously and not harm them substantially. This rested on the arguments that restaurants that already participated in the voluntary sugar taxation scheme he initiated, faced no revenue loss, and that soda producers have diversified portfolios and are invested in dairy and water based products as well, thus making SSBT unproblematic (HC, 2015b). Ian Wright attempted to establish two frames directly conflicting such rationales. On the one hand side, a sugar levy was presented as a substantial threat to businesses, because it would shy away investors, make foot-loose multinationals leave, and cause unemployment. On the other hand, taxation was portrayed as unfair treatment by the government of an industry that was highly responsible and dedicated to public health (HC, 2015a). Various arguments were presented to uphold this frame. The claim that the industry was aware of high sugar contents and, thus already started reformulation was present in acts of arguing not only from the FDF but also the representative of the BRC (HC, 2015a). Next to this Ian Wright claimed that the industry had a self-interest in healthy customers, that the soda market contained scores of healthy drinks and that in some products reformulation was impossible (ibid.). These claims appear to convey the message to the government that there is no need for intervention. Arguably the claim made by Chris Snowdon that there is no market failure the government needed to correct (ibid.), can be assigned to the frame as it also problematises that SSBT could turn to be an unnecessary and business crippling intervention.

Thirdly, one frame was not directly reacting to any of the points raised by other speakers. Prof. Susan Jebb (OBE) Oxford University and Prof. Simon Capewell (FPH) both problematised the lack of policy tools that allowed the prevention of obesity development within all individuals because currently attention was mainly given to treating those affected (HC, 2015c). This position became explicit in the statement "we are stuck with treatment" of Prof. Capewell (HC, 2015c, p.41) or Prof. Susan Jebb's (OBE) warning to not "pin it all" to preventing obesity in at risk children (HC, 2015c, p.29). Ultimately, the frame points towards the conclusion that SSBT solves the problem of a society wide obesity prevention tool being absent.

5.3.4 Problem framings: putting it all into perspective

The findings from this chapter are placed into perspective by looking at the patterns that emerged and the answers that were provided to the corresponding sub-question. Looking onto the 14 framings (Table 6.) and the problematisation that are interconnected with them the question emerges how they were distributed along the policy making process in the studied period from October 2015 until May 2016. In other words, the question is what patterns could be identified offering clues about the journey of SSBT to the top of the political agenda. In search of possible patterns the corpus texts are assigned to four time windows across the policy making process. The rationale of this creation of a time-based overview was inspired by the claim of Hoppe (2011) that problematisation often continuously narrows due to problems being presented as increasingly structured by policy makers.

On first sight, looking at the time-based overview in Figure 6 it may appear that this was not the case since there does not appear a continuous trend of narrowing down on the problem, which is assumed here as being indicated by less problem framings being presented within acts of arguing. What should be kept in mind, however is that the narrowing on one single problem frame in the second-time slot could also just be the result of a consultation report naturally featuring very little room for political argumentation, as it aims at providing an objective summary of the stakeholders' views and no judgement. This conclusion can be supported with the very small number of only four arguments identified in the entire document. Leaving these considerations on the side for a moment three main patterns emerged.

First, the pattern emerges that the very complex issue of addressing obesity, which is described as an "moderately structured problem" by Hoppe (2011, p.74), becomes portrayed as a structured problem that Osborne is confident to address with SSBT (HMT, 2016). Following the logic of Hoppe this implies that not only agreement on the future state of affairs desirable (less obesity) must have been established but also high certainty on the "means" that can help bring about this state (Hoppe, 2011, p.75). The decreasing number of policy frames that question the ability of SSBT to alter the status quo between time-slot one, three and four supports this expectation of Hoppe. This conclusion rests on the observation that four framings suggesting SSBT to be the wrong means disappear between time-slots 1 and 3 and another four between time-slots 3 and 4. Overall the narrowing of considerations that took place lead to an exclusion of more and more arguments in opposition to SSBT taxation until a point where only one frame suggesting that SSBT is a valuable policy remained.

Second, looking at the actors that advocated the various policy frames and their backgrounds noteworthy findings are made. For instance, the frame used by the Chancellor of the Exchequer was the same that stakeholders from a CHC, PHE, the University of Oxford, a health practitioner and Jamie Oliver have used, while those frames used by representatives from the affected industries became increasingly unimportant. Overall the strong reliance on the framing that sugar reduction is needed to preserve children's health by Osborne indicates what important role stakeholders advocating concern for public health possibly played. This can be interpreted as a clear indication that the argumentation in favour of SSBT is a fiscalisation of child health. By using this label, it is made clear that the goal of SSBT, as shown was not merely raising revenue.

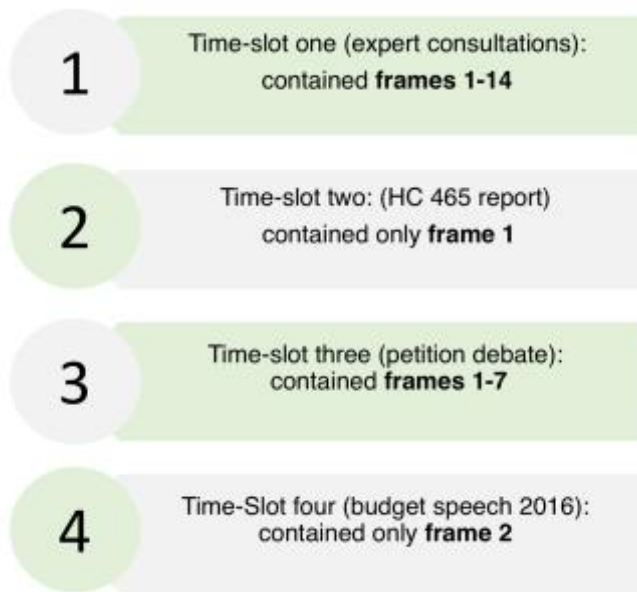


Figure 6. Distribution of problem frames across time (October 2015 - May 2016)

Table 6. Overview of problem frames (frames 1-7 politicians; 1-3 and 5-14 stakeholders)

Nr.	Summary	Problematised aspect	Relation to SSBT	Favouring SSBT
1	Obesity predominantly consequence of wrong dietary patterns with high sugar intake	One main sugar source are SSB (especially in children)	Tax promises reducing SSB consumption	Yes
2	High intake of sugar associated with various health risks and disease	Sugar leading to deteriorating health	SSBT could improve public health by reducing sugar intake	Yes
3	Public in favour of SSBT	Not following the public's will would be policy failure	SSBT is what the people desire so it should be supported	Yes
4	Obesity is a personal responsibility not the government's	Government could overstep boundaries of responsibility and interfere with citizens freedom	SSBT disregards personal responsibility of citizens	No
5	Obesity predominantly consequence of lack of education and physical activity	The government should focus on education and encouraging physical activity to address obesity	SSBT would address wrong aspect and not counteract obesity	No
6	Economically SSBT is nonsensical because it is unfair and regressive	Industry would be burdened unjustifiably much and low income individuals could suffer financially	SSBT should be refrained from as no market failure prevails	No
7	Obesity predominantly consequence of wrong dietary patterns triggered by obesogenic food environment	Policy tools of fiscal nature are less effective in changing dietary patterns than other alternatives	SSBT not advisable as it is less effective than other options	No
8	SSBT is not regressive as it decreases health inequalities and thus makes the poor better off	Health inequalities are linked to higher sugar consumption of the poor	SSBT promises to make the poorest better off and is thus desirable	Yes
9	Implementing a SSBT is a necessary experiment to sufficiently test evidence base	Evidence base cannot be improved further due to research related constraints	SSBT should be implemented testwise	Yes
10	The lack of obesity prevention policies could be addressed with a SSBT	Currently too much attention on treatment not on prevention	SSBT promises helping prevention	Yes
11	SSBT are a way to remind businesses of their responsibility and not harming them	Government needs to signal that child health is important	SSBT interpreted as strong signal	Yes
12	Price changes in SSB will be insufficient to improve public health	Price incentives will not effect consumers' choice considerably	SSBT could be a redundant measure with unintended consequences	No
13	SSBT substantial threat to UK prosperity	The loss of attractiveness for soda companies to invest could cause job loss and decrease national wealth	SSBT harming UKs national wealth	No
14	Industry is responsible and started reformulation already making state intervention unnecessary	Industry needs no extra incentivisation and is doing what it can	SSBT redundant as industry is acting responsible	No

Third, an interesting pattern emerged within the frames that allowed a positive verdict on the desirability of SSBT between time-slots 1 and 4, especially in frames one and two. While these two frames were associated with adults and children during the stakeholders' consultation, attention increasingly shifted towards children. In the petition debate, still both frames were present with a tendency to associate SSBT with protecting children, while in Osborne's acts of arguing the sole focus was children's health. This can possibly be explained with expectations politicians may have that claims calling for protecting children promise better reception in the public. Alternatively, it also could be associated to only having a limited understanding for the scientific evidence on obesity that is much richer when it comes to adults' obesity. Regardless of the reasons for this focus on children it once more indicates that the problematisation was narrowed by elected officials as a shift occurred from SSBT as means to address obesity and interlinked consequences in the entire population to predominantly or even solely doing this in children.

In conclusion, the discovered patterns in the use of problem framing provide valuable clues on how SSBT was enabled to move to the top of the political agenda. Important appeared the support of a wide array of stakeholders that all advocated the need to consider SSBT as valuable tool to reduce sugar consumption and thus counteract the associated health risks and disease. This great attention to clearly non-economic considerations underlines the fiscalisation dimension once more. Next to this, the movement of SSBT was enabled by a complexity reduction of obesity from an unstructured problem to a structured one with agreement on means and goals of the policy (at least within the government). Ultimately the answer to the third sub-question appears to be that complexity reduction in form of narrowing down problem frames and advocacy of these frames by certain actors contributed to the rise of SSBT onto the political agenda. Once more the clear division line was found between the advocates of public health that understand SSB consumption as a public concern and welcome state intervention, while actors more concerned with the economic elements held the view that SSB consumption needs not to be regulated by governments. The success of those calling for more government intervention appears to point at a new interpretation of obesity as a societal concern. Next to this it was also seen how the bandwidth of argumentation decreased. Apparently, there was less room for the technological challenge that producers of SSB could face when having to adapt technologically and financially. Policy makers' attention was more guided towards addressing concerns over public health in their discussions of the policy tool sugar tax. This raises the question: is SSBT after all primarily a hidden tax the soda industry must pay on childhood obesity? The findings made in this section, however also show that arguments from all actors participating during consultations were not further considered by decision makers in their policy discussion.

6. Conclusion

6.1 Summary

This thesis project shows that the policy innovation SSBT cannot be explained as mere result of scientific evidence produced within the public health expert community. On the contrary, through the application of a new theoretical angle, it is revealed that the political process was much more a lively struggle, a struggle of a variety of actors where to draw the demarcation line between public and private interests.

To revisit all findings made, the discussion turns toward the fundamentals of this project. The study has followed three main rationales, which were formulated based on the gaps prevailing in the existing literature. Insights into the policy-making process were missing. Available studies that discuss SSBT as a policy option predominantly focus on offering an analysis of the public health situation in the UK and issue recommendations on appropriate responses, either supporting or denoting claims that SSBT is a valuable tool. This study offers a broader perspective. The matter is approached with the goal in mind to comment on the richness of argumentation exchanged during the policy process. Giving attention to the richness appeared particularly important due to the observation that knowledge on the effectiveness of sugar taxation remains sketchy. The goal of this policy study was to examine the policy making process from a fresh perspective.

The analysis focused on two specific elements of the policy-making process. First, the way SSBT secured a spot on the political agenda, and second, the policy-shaping process. Information on the two stages is collected with the help of three sub-questions. This design was chosen in response to theoretical literature on policy making processes. The resulting approach accounts for the three pillars of policy innovation and the duality of problem processing. The first two sub-questions cover the three pillars and impart knowledge about problem processing, while the third sub-question complements a better understanding of problem finding. Taken together the answers from the sub-questions offer insights into the agenda setting and shaping processes.

With respect to policy shaping, the analysis chapter contains altogether ten important findings. First, the discussion of the socio-technological influences that affected involved actor constellation showed at least four aspects promoting the pro-taxation outcome: (1) the increased attention of the public health community on sugar as a key nutrient in obesity prevention, which is part of the explanation for the change of government's stance towards SSB consumption; (2) the soda industries' efforts of diversification and reformulation, which led to alternatives to SSB being established on the market which is linked to the decision not to tax NNS; (3) the public health advocates' anticipation of falling sugar prices on the EU market, which made a sugar content levy targeting the industry appear more desirable to tax supporters; (4) the broken-down negotiations on EU level on new product labelling requirements, which informed the logic that price differentials could be used instead to nudge consumers. Second, the analysis of political argumentation forwarded by decision-makers added three interesting findings explaining which design trades they value: (5) motivating soda producers to change their products and their marketing practices by increasing production costs; (6) politician's assumption that a sufficiently high tax rate (at least 10%)

promises a reduction in SSB consumption; (7) politician's belief that raised public revenue enables more lifestyle intervention in children. Third, analysing parliamentarians acts of arguing that contained direct comparisons of SSBT with other policy options revealed another three topics: (8) the sugar levy was understood as a chance to reach parents, regardless of economic status; (9) decision makers' conviction that SSBT can be a swift response to counteract obesity with a policy tool straight away; and finally (10) SSBT was portrayed as filling a void in the government's health care policy on childhood obesity.

The answers to questions forwarded on the agenda setting are found across all sub-chapters of the analysis. Chapter (5.1), setting out the political arena, offered an overview of actors that were pushing SSBT actively onto the agenda. It is shown that university scholars, the members of public health interest groups, doctors' associations, the members of the HC committee and the chancellor of the exchequer all actively worked towards SSBT becoming part of the government's agenda. It became clear that Jamie Oliver mobilised citizens by establishing a forum in which an image of sugar as a considerable risk for society could form. Seen holistically, it appears that the struggle around the question whether SSB consumption is a public concern was won by those who felt that intervention in the name of public health was necessary. This explains the placement of SSBT on the political agenda.

Sub-chapter (5.2) empowers to see the clues about the agenda-setting process contained within the arguments decision-makers used in hope to legitimise SSBT. The ten categories of arguments identified were condensed to three main motivations for decision-makers to place SSBT onto their agenda. Firstly, SSBT is presented as a way to bring about intervention in the name of public health. Secondly, SSBT is portrayed as a response to the need to intervene in the soda market where from politicians' viewpoint undesirable behaviour prevails on the demand and supply side. Thirdly, the credo is visible that using SSBT can correct a current policy failure in the domain of public health.

The patterns within the problematisation discovered in chapter (5.3) provide some valuable lessons on how SSBT was enabled to move to the top of the political agenda. This movement was enabled by a complexity reduction. This reduction moved obesity from an unstructured problem to a structured one, with agreement on means and goals of the policy (at least within the government). Ultimately, complexity reduction in the form of narrowing down problem frames and advocacy of these frames by certain actors contributed to the rise of SSBT onto the political agenda.

The study was not only set out to contribute a new perspective by analysing the modalities of agenda setting and policy shaping, it also elaborates on the richness of a considerable part of the policy making process. Throughout all chapters, a clear faultline is found between the advocates of public health and actors more concerned with economic elements. The former understand SSB consumption as a public concern and welcome state intervention, whereas the latter hold the view that SSB consumption needs not to be regulated by governments. That the government decided to intervene in the name of public health hints at the way that mainly economic concerns were taken out of the equation. Especially the last section of the analysis shows that the bandwidth of argumentation decreased. Apparently, there was less room for the technological challenge that producers of SSB face when having to adapt technologically and financially. Policy makers' attention was more guided towards addressing concerns over public health in

their discussions of the policy tool sugar tax. Unfortunately, more than mapping of the richness has not been possible. On this note, it is time to turn towards the second section of the conclusion.

6.2 Limitations and outlook

One limitation of this study already came to the fore. The contribution accounted for the richness of the debate through the mapping of problem framings and their change across time. This can be interpreted as a success, yet there was no way to understand which precise role the concerns of those opposing the tax played. The findings do not allow the conclusion that their concerns were completely disregarded because some arguments included in the budget speech arguably were inspired by their criticism. How arguments interrelate was not possible to entangle in this study. Nevertheless, this thesis adds to the scholarly debate by flagging the possibility that decision-makers neglected some actors' concerns. The findings provide a starting point for other researchers and hopefully invite them to examine this topic more elaborately. Overall this study provides two main take home messages that are more generalizable. First, the amount of attention that was given to arguments in favour of SSBT linked to the idea that obesity is a public concern, indicates that SSBT is a health policy that moves away from the notion that anti-obesity policy should place personal responsibility at the centre. Second, it was shown that there is a goal beyond revenue generation with SSBT. Under the label of fiscalisation it was pointed out that part of the successful arrival of the topic on the political agenda is down to the belief in the potential of SSBT. Supporters see potential to promote public health also directly via incentivisation. The question if these two findings are really the expression of a new understanding of public health policy making, or merely two interesting aspects of this specific case, cannot be answered. This study allows flagging these two elements as interesting areas for further exploration and hopefully inspires other researchers to call to question whether public health policy really is predominantly evidence based.

Furthermore, the discussion of legitimacy presented is solely pointing at the way politicians sought to legitimise SSBT. It was not possible to understand how convincing they were. At this point, further research is needed to understand the degree to which SSBT is indeed a legitimate policy tool. This study is a first attempt to shed some light on an underresearched domain. Therefore, the outcome can be framed as an achievement, as it helps to see which aspects need to be studied in more depth. For instance, the project suggests that it would be desirable to consider in more detail how unusual actors like Jamie Oliver change the dynamics within political arenas. Moreover, constraints in the form of time and word counts have only allowed the provision of first clues on the characteristics of the policy making process around SSBT.

Many more questions can and hopefully will be discussed about the way SSBT was able to reach the heights of the political agenda and which aspects influenced the final shape of the policy tool. For the future, a better understanding of the political processes that surround anti-obesity policy making is desirable. Obesity is an example of a complex societal phenomenon, and consequentially poses a multifaceted policy challenge. Therefore, this research topic will stick around for many years to come.

7. References

- Aguirre, E. K., Mytton, O. T., & Monsivais, P. (2015). Liberalising agricultural policy for sugar in Europe risks damaging public health. *British Medical Journal*, 351, h5085.
- Allender, S., & Rayner, M. (2007). The burden of overweight and obesity-related ill health in the UK. *Obesity Reviews*, 8(5), 467-473.
- Al-Nakeeb, Y., Lyons, M., Collins, P., Al-Nuaim, A., Al-Hazaa, H., Duncan, M. J., & Nevill, A. (2012). Obesity, physical activity and sedentary behavior amongst British and Saudi youth: A cross-cultural study. *International Journal of Environmental Research and Public Health*, 9(4), 1490-1506.
- Andreyeva, T., Long, M. W., & Brownell, K. D. (2010). The impact of food prices on consumption: a systematic review of research on the price elasticity of demand for food. *American Journal of Public Health*, 100(2), 216-222.
- Andreyeva, T., Chaloupka, F. J., & Brownell, K. D. (2011). Estimating the potential of taxes on sugar-sweetened beverages to reduce consumption and generate revenue. *Preventive Medicine*, 52(6), 413-416.
- Backholer, K., Sarink, D., Beauchamp, A., Keating, C., Loh, V., Ball, K., ... & Peeters, A. (2016). The impact of a tax on sugar-sweetened beverages according to socio-economic position: a systematic review of the evidence. *Public Health Nutrition*, 19(17), 1-15.
- Bahl, R., Bird, R., & Walker, M. B. (2003). The uneasy case against discriminatory excise taxation: soft drink taxes in Ireland. *Public Finance Review*, 31(5), 510-533.
- Baker, S. (6 December 2016). The Jamie Oliver diet: How U.K. celebrity chef took on big sugar. *Bloomberg*. Retrieved from <https://www.bloomberg.com/news/articles/2016-12-06/the-jamie-oliver-diet-how-u-k-celebrity-chef-took-on-big-sugar>
- Barney, J. B. (1995). Looking inside for competitive advantage. *The Academy of Management Executive*, 9(4), 49-61.
- BBC, (n.a.). (5 October 2015). Brighton and Hove initiative tackles sugar addiction. *BBC News*. Retrieved from <http://www.bbc.com/news/uk-england-sussex-34443114>
- Butland, B., Jebb, S., Kopelman, P., McPherson, K., Thomas, S., Mardell, J., & Parry, V. (2007). Tackling obesities: future choices-project report, 10, 17). London: Department of Innovation, Universities and Skills.
- Butler, S. (16 August 2016). Sugar tax's industry opponents team up before consultation. *The Guardian*. Retrieved from <https://www.theguardian.com/business/2016/aug/16/sugar-tax-industry-opponents-launch-campaign-levy-soft-drinks-obesity>
- Block, J. P., Chandra, A., McManus, K. D., & Willett, W. C. (2010). Point-of-purchase price and education intervention to reduce consumption of sugary soft drinks. *American Journal of Public Health*, 100(8), 1427-1433.
- Borrás, S., & Edler, J. (2012, March). *The Governance of Change in Socio-Technical and Innovation Systems: Some Pillars for Theory-Building*. In Communication to the Jean Monnet International Workshop, "The Governance of Innovation and Socio-Technical Systems: Theorising and Explaining Change". Copenhagen Business School, Denmark.
- Boseley, S. (3 September 2015). Jamie Oliver's sugar tax campaign joined by Abokado. *The Guardian*. Retrieved from <https://www.theguardian.com/lifeandstyle/2015/sep/03/jamie-olivers-sugar-tax-campaign-joined-by-abokado>
- Briggs, A. D., Mytton, O. T., Kehlbacher, A., Tiffin, R., Rayner, M., & Scarborough, P. (2013). Overall and income specific effect on prevalence of overweight and obesity of 20% sugar sweetened drink tax in UK: econometric and comparative risk assessment modelling study. *British Medical Journal*, 347, f6189.

- Briggs, A. D., Mytton, O. T., Kehlbacher, A., Tiffin, R., Elhussein, A., Rayner, M., ... & Scarborough, P. (2017). Health impact assessment of the UK soft drinks industry levy: a comparative risk assessment modelling study. *The Lancet Public Health*, 2(1), 15-22.
- Brownson, R. C., Chriqui, J. F., & Stamatakis, K. A. (2009). Understanding evidence-based public health policy. *American Journal of Public Health*, 99(9), 1576-1583.
- Campbell, D., Smithers, R. & Butler, S. (17 March 2016). Sugar tax: Osborne's two-tier levy brings mixed response. The Guardian. Retrieved from <https://www.theguardian.com/uk-news/2016/mar/16/budget-2016-george-osborne-sugar-tax-mixed-response>
- Caraher, M., & Cowburn, G. (2005). Taxing food: implications for public health nutrition. *Public Health Nutrition*, 8(08), 1242-1249.
- Caprio, S. (2012). Calories from soft drinks—do they matter. *The New England Journal of Medicine*, 367(15), 1462-1463.
- Capewell, S. (2014). Sugar sweetened drinks should carry obesity warnings. *British Medical Journal*, 348, g3428.
- Cha, M., Haddadi, H., Benevenuto, F., & Gummadi, P. K. (2010). *Measuring user influence in twitter: The million follower fallacy*. International Conference on Web and Social Media Proceedings, 10(10-17), 30.
- Charteris-Black, J. (2013). *Analysing political speeches: Rhetoric, discourse and metaphor*. Basingstock: Palgrave Macmillan.
- Chouinard, H. H., Davis, D. E., LaFrance, J. T., & Perloff, J. M. (2007, June). Fat taxes: big money for small change. In *Forum for Health Economics & Policy* 10(2), 1-30.
- Crabbé, A., & Leroy, P. (2008). *The handbook of environmental policy evaluation*. London: Earthscan.
- Crerar, P. (14 January 2016). Boris Johnson imposes sugar tax at city hall. Evening Standard. Retrieved from <http://www.standard.co.uk/news/politics/boris-johnson-imposes-sugar-tax-at-city-hall-a3156431.html>
- Crimson&Co, (n.a.). (2016). *Sugar drinks tax likely to leave a bitter taste for drinks manufactures unless action is taken*. Retrieved from <https://www.crimsonandco.com/news/2016/02/sugary-drinks-tax-likely-to-leave-a-bitter-taste-for-drinks-manufacturers-unless-action-is-taken/>
- Cottle, S. (1998). Ulrich Beck, Risk Society and the Media: A Catastrophic View?. *European Journal of Communication*, 13(1), 5-32.
- Dathan, M. (7 January 2016). David Cameron Threatens to introduce sugar tax if industry fails to combat 'obesity crisis'. *The Independent*. Retrieved from <http://www.independent.co.uk/news/uk/politics/david-cameron-threatens-to-introduce-sugar-tax-if-industry-fails-to-combat-obesity-crisis-a6801091.html>
- Datta, S. (2016). The obesity epidemic: time for the Government 'heavies' to step in?. *BJOG: An International Journal of Obstetrics & Gynaecology*, 123(2), 161-162.
- Dee, A., Kearns, K., O'Neill, C., Sharp, L., Staines, A., O'Dwyer, V., ... & Perry, I. J. (2014). The direct and indirect costs of both overweight and obesity: a systematic review. *BioMed Central Research Notes*, 7(1), 242-251.
- De la Peña, C. T. (2010). *Empty pleasures: The story of artificial sweeteners from saccharin to Splenda*. Chapel Hill: University of North Carolina Press.
- de Ruyter, J. C., Olthof, M. R., Seidell, J. C., & Katan, M. B. (2012). A trial of sugar-free or sugar-sweetened beverages and body weight in children. *New England Journal of Medicine*, 367(15), 1397-1406.

- Deshmukh-Taskar, P., Nicklas, T. A., Yang, S. J., & Berenson, G. S. (2007). Does food group consumption vary by differences in socioeconomic, demographic, and lifestyle factors in young adults? The Bogalusa Heart Study. *Journal of the American Dietetic Association*, 107(2), 223-234.
- Dharmasena, S., & Capps, O. (2012). Intended and unintended consequences of a proposed national tax on sugar-sweetened beverages to combat the US obesity problem. *Health Economics*, 21(6), 669-694.
- Dobbs, R., Sawers, C., Thompson, F., Manyika, J., Woetzel, J. R., Child, P., ... & Spatharou, A. (2014). *Overcoming obesity: An initial economic analysis*. McKinsey Global Institute. Retrieved from <http://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/how-the-world-could-better-fight-obesity>
- Dobrow, M. J., Goel, V., & Upshur, R. E. G. (2004). Evidence-based health policy: context and utilisation. *Social Science & Medicine*, 58(1), 207-217.
- Donnelly, H. & Hughes, L. (22 October 2015). Revealed 'Sugar tax report' which was suppressed by Government. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/news/health/news/11947892/Revealed-Sugar-tax-report-which-was-suppressed-by-Government.html>
- Erduran, S., Simon, S., & Osborne, J. (2004). Tapping into argumentation: Developments in the application of Toulmin's argument pattern for studying science discourse. *Science Education*, 88(6), 915-933.
- Epstein, L. H., Jankowiak, N., Nederkoorn, C., Raynor, H. A., French, S. A., & Finkelstein, E. (2012). Experimental research on the relation between food price changes and food-purchasing patterns: a targeted review. *The American Journal of Clinical Nutrition*, 95(4), 789-809.
- Fletcher, J. M., Frisvold, D. E., & Tefft, N. (2011). Are soft drink taxes an effective mechanism for reducing obesity?. *Journal of Policy Analysis and Management*, 30(3), 655-662.
- Fletcher, J.M. (2013). Substitution patterns can limit the effects of sugar-sweetened beverage taxes on obesity. *Preventing chronic disease*, 10, 1-3.
- Fletcher, J. M., Frisvold, D. E., & Tefft, N. (2015). Non-Linear Effects of Soda Taxes on Consumption and Weight Outcomes. *Health Economics*, 24(5), 566-582.
- Fox, D. M. (2005). Evidence of evidence-based health policy: the politics of systematic reviews in coverage decisions. *Health Affairs*, 24(1), 114-122.
- Frohlich, X. (2017). The informational turn in food politics: The US FDA's nutrition label as information infrastructure. *Social Studies of Science*, 47(2), 145-171.
- Ferdman, R.A. (11 February 2016). Coca Cola's clever new trick. *The Telegraph*. Retrieved from https://www.washingtonpost.com/news/wonk/wp/2016/02/11/coca-colas-clever-little-trick/?utm_term=.daee5b004a30
- Geels, F. W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research Policy*, 31(8), 1257-1274.
- Gibson, S. (2008). Sugar-sweetened soft drinks and obesity: a systematic review of the evidence from observational studies and interventions. *Nutrition Research Reviews*, 21(2), 134-147.
- Gibson, S., & Shirreffs, S. M. (2013). Beverage consumption habits "24/7" among British adults: association with total water intake and energy intake. *Nutrition Journal*, 12(1), 1-9.
- Hall, K. D., Sacks, G., Chandramohan, D., Chow, C. C., Wang, Y. C., Gortmaker, S. L., & Swinburn, B. A. (2011). Quantification of the effect of energy imbalance on bodyweight. *The Lancet*, 378(9793), 826-837.

Hawkes, N. (2016). Sugar tax will double funding for sport in primary schools, says chancellor. *British Medical Journal*, 352, 1602-3.

Health Committee, (HC). (2015a). *Oral Evidence: Childhood Obesity Strategy, HC 465 Tuesday 13 October*. Retrieved from <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-committee/childhood-obesity-strategy/oral/23058.pdf>

Health Committee, (HC). (2015b). *Oral Evidence: Childhood Obesity Strategy, HC 465 Tuesday 19 October*. Retrieved from <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-committee/childhood-obesity-strategy/oral/23245.pdf>

Health Committee, (HC). (2015c). *Oral Evidence: Childhood Obesity Strategy, HC 465 Tuesday 20 October*. Retrieved from <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-committee/childhood-obesity-strategy/oral/23284.pdf>

Health Committee. (2015d). *Childhood Obesity: Brave and Bold Action 2015*. Retrieved from <https://www.publications.parliament.uk/pa/cm201516/cmselect/cmhealth/465/465.pdf>

Her Majesty's Treasury, (HMT). (2016). *Oral statement to Parliament, Budget 2016: George Osborne's speech*. Retrieved from <https://www.gov.uk/government/speeches/budget-2016-george-osbornes-speech>

Hilton, S., Patterson, C., & Teyhan, A. (2012). Escalating coverage of obesity in UK newspapers: the evolution and framing of the “obesity epidemic” from 1996 to 2010. *Obesity*, 20(8), 1688-1695.

Holehouse, M. & Riley-Smith, B. (1 August 2015). Jamie Oliver helping government with child obesity strategy, David Cameron reveals. The Telegraph. Retrieved from <http://www.telegraph.co.uk/news/politics/11777077/Jamie-Oliver-helping-government-with-child-obesity-strategy-David-Cameron-reveals.html>

House of Commons Hansard, (HCH). (2015). *Sugary Drinks Tax*. Retrieved from <https://hansard.parliament.uk/Commons/2015-11-30/debates/15113012000001/SugaryDrinksTax?highlight=Sugar%20Taxation#contribution-15113012000145>

James, W. P. T. (2008). WHO recognition of the global obesity epidemic. *International Journal of Obesity*, 32, 120-126.

James, J., Thomas, P., Cavan, D., & Kerr, D. (2004). Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomised controlled trial. *British Medical Journal*, 328(7450), 1237-41.

Johnson, R. J., Segal, M. S., Sautin, Y., Nakagawa, T., Feig, D. I., Kang, D. H., ... & Sánchez-Lozada, L. G. (2007). Potential role of sugar (fructose) in the epidemic of hypertension, obesity and the metabolic syndrome, diabetes, kidney disease, and cardiovascular disease. *The American journal of clinical nutrition*, 86(4), 899-906.

Johnston, I. (21 May 2015) Ministers warns food industry could face ‘sugar Tax’. The Independent. Retrieved from <http://www.independent.co.uk/life-style/health-and-families/health-news/minister-warns-food-industry-could-face-sugar-tax-10268698.html>

John, P., & Jennings, W. (2010). Punctuations and turning points in British politics: The policy agenda of the Queen's speech, 1940–2005. *British Journal of Political Science*, 40(03), 561-586.

Jou, J., & Techakehakij, W. (2012). International application of sugar-sweetened beverage (SSB) taxation in obesity reduction: factors that may influence policy effectiveness in country-specific contexts. *Health Policy*, 107(1), 83-90.

Kalavana, T. V., Maes, S., & De Gucht, V. (2010). Interpersonal and self-regulation determinants of healthy and unhealthy eating behavior in adolescents. *Journal of Health Psychology*, 15(1), 44-52.

- Kessler, D. A. (2009). *The end of overeating: Taking control of the insatiable American appetite*. Emmaus: Rodale
- Khan, T., Powell, L. M., & Wada, R. (2012). Fast food consumption and food prices: evidence from panel data on 5th and 8th grade children. *Journal of Obesity*, 2012, 1-9.
- Kingdon, J.W. (2011). *Agendas, alternatives, and public policies*. Boston: Longman.
- Knapton, S. (21 May 2015). Sugar tax to pay for treating obesity. The Telegraph. Retrieved from <http://www.telegraph.co.uk/news/health/news/11622500/Sugar-tax-to-pay-for-treating-obesity.html>
- Kuhlmann, S. (2001). Future governance of innovation policy in Europe—three scenarios. *Research Policy*, 30(6), 953-976.
- Landon, J., & Graff, H. (2012, June). What is the role of health-related food duties. In London: National Heart Forum. Retrieved from http://www.worldobesity.org/site_media/uploads/UKHF_duties.pdf
- Lawrence, R. G. (2004). Framing obesity: The evolution of news discourse on a public health issue. *Harvard International Journal of Press/Politics*, 9(3), 56-75.
- Lin, B. H., Smith, T. A., Lee, J. Y., & Hall, K. D. (2011). Measuring weight outcomes for obesity intervention strategies: the case of a sugar-sweetened beverage tax. *Economics & Human Biology*, 9(4), 329-341.
- Livingstone, M. B. E. (2001). Childhood obesity in Europe: a growing concern. *Public Health Nutrition*, 4(1a), 109-116.
- Lobstein, T., & Dobb, S. (2005). Evidence of a possible link between obesogenic food advertising and child overweight. *Obesity Reviews*, 6(3), 203-208.
- Lopez, R. A., & Fantuzzi, K. L. (2012). Demand for carbonated soft drinks: Implications for obesity policy. *Applied Economics*, 44(22), 2859-2865.
- Macdonald, L., Cummins, S., & Macintyre, S. (2007). Neighbourhood fast food environment and area deprivation—substitution or concentration?. *Appetite*, 49(1), 251-254.
- Malik, V. S., Schulze, M. B., & Hu, F. B. (2006). Intake of sugar-sweetened beverages and weight gain: a systematic review. *The American Journal of Clinical Nutrition*, 84(2), 274-288.
- Malik, V. S., Popkin, B. M., Bray, G. A., Després, J. P., Willett, W. C., & Hu, F. B. (2010). Sugar-sweetened beverages and risk of metabolic syndrome and type 2 diabetes. *Diabetes Care*, 33(11), 2477-2483.
- Marlow, M. L., & Shiers, A. F. (2010). Would soda taxes really yield health benefits. *Regulation*, 33, 34-38.
- Mayer, I. S., van Daalen, C. E., & Bots, P. W. (2004). Perspectives on policy analyses: a framework for understanding and design. *International Journal of Technology, Policy and Management*, 4(2), 169-191.
- Martin, J. (2013). *Politics and rhetoric: A critical introduction*. London: Routledge.
- McCarthy HD, Jarrett KV, Emmett PM, Rogers I. (2005). Trends in waist circumferences in young British children: a comparative study. *International Journal of Obesity*, 29(2), 157-162.
- McCormick, B., & Stone, I. (2007). Economic costs of obesity and the case for government intervention. *Obesity Reviews*, 8(s1), 161-164.
- Monasta, L., Batty, G. D., Cattaneo, A., Lutje, V., Ronfani, L., Van Lenthe, F. J., & Brug, J. (2010). Early-life determinants of overweight and obesity: a review of systematic reviews. *Obesity Reviews*, 11(10), 695-708.

- Mrdjenovic, G., & Levitsky, D. A. (2003). Nutritional and energetic consequences of sweetened drink consumption in 6-to 13-year-old children. *The Journal of Pediatrics*, 142(6), 604-610.
- Mytton, O., Gray, A., Rayner, M., & Rutter, H. (2007). Could targeted food taxes improve health?. *Journal of Epidemiology and Community Health*, 61(8), 689-694.
- Mytton, O. T., Clarke, D., & Rayner, M. (2012). Taxing unhealthy food and drinks to improve health. *British Medical Journal*, 344(e2931), 1-7.
- National Audit Office. (2001). Tackling Obesity in England. Retrieved from <https://www.nao.org.uk/wp-content/uploads/2001/02/0001220.pdf>
- National Health Service Digital. (2017) Statistics on Obesity, Physical Activity and Diet. Retrieved from <http://www.content.digital.nhs.uk/catalogue/PUB23742/obes-phys-acti-diet-eng-2017-rep.pdf>
- Ng, S. W., Mhurchu, C. N., Jebb, S. A., & Popkin, B. M. (2012). Patterns and trends of beverage consumption among children and adults in Great Britain, 1986–2009. *British Journal of Nutrition*, 108(03), 536-551.
- Nederkoorn, C., Havermans, R. C., Giesen, J. C., & Jansen, A. (2011). High tax on high energy dense foods and its effects on the purchase of calories in a supermarket. An experiment. *Appetite*, 56(3), 760-765.
- Prakash, I., DuBois, G. E., Clos, J. F., Wilkens, K. L., & Fosdick, L. E. (2008). Development of rebiana, a natural, non-caloric sweetener. *Food and Chemical Toxicology*, 46(7), 75-82.
- Public Health England. (2016a). *Sugar Reduction: The Evidence for Action*. Retrieved on 13.04.2017 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470179/Sugar_reduction_The_evidence_for_action.pdf
- Public Health England. (2016b). *Sugar Reduction: The evidence for action Annexe 2: A mixed method review of behaviour changes resulting from experimental studies that examine the effect of fiscal measures targeted at high sugar food and non-alcoholic drink*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470173/Annexe_2._Fiscal_evidence_review.pdf
- Public Health England. (2017). Obesity and Health. Retrieved from https://www.noo.org.uk/NOO_about_obesity/obesity_and_health
- Pomeranz, J. L. (2012). Advanced policy options to regulate sugar-sweetened beverages to support public health. *Journal of Public Health Policy*, 33(1), 75-88.
- Popkin, B. M. (2012). Sugary beverages represent a threat to global health. *Trends in Endocrinology & Metabolism*, 23(12), 591-593.
- Powell, L. M., & Chaloupka, F. J. (2009). Food prices and obesity: evidence and policy implications for taxes and subsidies. *Milbank Quarterly*, 87(1), 229-257.
- Powell, L. M., Chiqui, J. F., Khan, T., Wada, R., & Chaloupka, F. J. (2013). Assessing the potential effectiveness of food and beverage taxes and subsidies for improving public health: a systematic review of prices, demand and body weight outcomes. *Obesity Reviews*, 14(2), 110-128.
- Sanger-Katz, M. (2 October 2015). The Decline of 'Big Soda'. *The New York Times*. Retrieved from https://www.nytimes.com/2015/10/04/upshot/soda-industry-struggles-as-consumer-tastes-change.html?_r=0
- Sawer, P. (7 August 2016). Students bitter over university's sugar tax. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/news/2016/08/07/students-bitter-over-universitys-sugar-tax/>

- Scarborough, P., Bhatnagar, P., Wickramasinghe, K. K., Allender, S., Foster, C., & Rayner, M. (2011). The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006–07 NHS costs. *Journal of Public Health*, 33(4), 527-535.
- Signal, L. N., Walton, M. D., Mhurchu, C. N., Maddison, R., Bowers, S. G., Carter, K. N., ... & O'dea, D. (2013). Tackling 'wicked' health promotion problems: a New Zealand case study. *Health Promotion International*, 28(1), 84-94.
- Sturm, R., Powell, L. M., Chiqui, J. F., & Chaloupka, F. J. (2010). Soda taxes, soft drink consumption, and children's body mass index. *Health Affairs*, 29(4), 1052-58.
- Suits, D. B. (1977). Measurement of tax progressivity. *The American Economic Review*, 67(4), 747-752.
- Sustain. (2013). *A Children's Future Fund: How food duties could provide the money to protect children's health and the world they grow up in*. retrieved from <http://www.sustainweb.org/publications/?id=263>
- Swencionis, C., & Rendell, S. L. (2012). The psychology of obesity. *Abdominal Radiology*, 37(5), 733-737.
- Tindale, C. W. (2000). *Acts of arguing: A rhetorical model of argument*. New York: SUNY Press.
- Thow, A. M., Jan, S., Leeder, S., & Swinburn, B. (2010). The effect of fiscal policy on diet, obesity and chronic disease: a systematic review. *Bulletin of the World Health Organization*, 88(8), 609-614.
- Thow, A. M., Quested, C., Juventin, L., Kun, R., Khan, A. N., & Swinburn, B. (2011). Taxing soft drinks in the Pacific: implementation lessons for improving health. *Health Promotion International*, 26(1), 55-64.
- Topping, A. (5 October 2015). Brighton launches voluntary 'sugar tax' in effort to tackle obesity. *The Guardian*. Retrieved from <https://www.theguardian.com/uk-news/2015/oct/05/brighton-launches-voluntary-sugar-tax-in-effort-to-tackle-obesity>
- Underwood, M. (2008). Sugary drinks, fruit, and increased risk of gout. *British Medical Journal*, 336(7639), 285–286.
- Van Baak, M. A., & Astrup, A. (2009). Consumption of sugars and body weight. *Obesity Reviews*, 10(1), 9-23.
- Versluis, E., Van Keulen, M., & Stephenson, P. (2010). *Analyzing the European Union policy process*. Basingstoke: Palgrave Macmillan.
- Watts, R. A., Heiss, S., Moser, M., Kolodinsky, J., & Johnson, R. K. (2014). Tobacco taxes vs soda taxes: A case study of a framing debate in vermont. *Health Behavior and Policy Review*, 1(3), 191-196.
- Wang, Y. C., Coxson, P., Shen, Y. M., Goldman, L., & Bibbins-Domingo, K. (2012). A penny-per-ounce tax on sugar-sweetened beverages would cut health and cost burdens of diabetes. *Health Affairs*, 31(1), 199-207.
- Welsh, J. A., Cogswell, M. E., Rogers, S., Rockett, H., Mei, Z., & Grummer-Strawn, L. M. (2005). Overweight among low-income preschool children associated with the consumption of sweet drinks: Missouri, 1999–2002. *Pediatrics*, 115(2), e223-e229.
- Wollaston, S. (12 October 2015). Jeremy Hunt should practise what he preaches. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/news/health/news/11925833/Jeremy-Hunt-should-practise-what-he-preaches.html>
- Woodward-Lopez, G., Kao, J., & Ritchie, L. (2011). To what extent have sweetened beverages contributed to the obesity epidemic?. *Public Health Nutrition*, 14(03), 499-509.
- World Health Organization. (2003). *Diet, Nutrition and the Prevention of Chronic Diseases*. [Technical Report Series No. 916]. Retrieved from <http://www.who.int/dietphysicalactivity/publications/trs916/en/>

8. Appendices

Appendix A (explanation of timeline milestones)

	Rational behind milestone	Source
1	This first milestone was included to represent the made assumption that solutions (in this case food taxation to address obesity) are floating around as solutions before being picked up by policy makers.	This is based on the theoretical assumptions made by Kingdon (2011)
2	That the WHO declared food taxes as valuable tool in 2003 was included as this according to two academic articles laid the needed foundation for public health advocates to call for food taxes worldwide	Caraheer & Cowburn (2005) and Leicester & Windmeijer (2004)
3	The third one was included as it indicates that the idea of the fat tax was not further pursued by public health advocates as a research explains writing on the idea of fat taxation to address the UK's obesity figures	Caraheer & Cowburn (2005)
4	The first peer reviewed article that pointed at the effectiveness of SSB taxation was included as two scholars claimed that this article received allot attention in the public health literature and started a lively debate among researchers	Jou & Techakehakij (2012)
5	The call of Sustain and the AMRC was included as a milestone because a researcher looking at SSBT concluded that their reports where the first public calls of public health institutions for a SSBT	Briggs (2009)
6	The start of PHE work on a systematic review of the evidence on SSBT was included for two main reasons. On the one hand side the evidence review was cited by many speakers in the parliamentary debates arguing in favor of the tax. On the other hand side the science editor Sarah Knapton of the Telegraph pointed at the relevance this decision of PHE	Telegraph article from Knapton (2015) and analysis of the transcripts from the petition debate on SSBT
7	That Jerney Hunt at this point publicly still claimed that SSBT is ineffective was included as it be seen as proof that the government (David Cameron's Cabinet) still opposed the idea. This information was taken from the same news article	Telegraph article from Knapton (2015)
8	That George Freeman went public with his support for a SSBT was included as a milestone because it was the first time that UK news outlets (based on a lexisnexis search of the author) reported support of a cabinet member of the sugar levy	LexisNexis search that identified Johnston's (2015) article for the Independent as the newspaper story in the UK's broadsheet
9	This has been included as a milestone because it indicates that at this point of time David Cameron still was in opposition of the SSBT (Independent newspaper article) and this arguably motivated Jamie Oliver and Sustain to work on the petition (the Guardian)	Newspaper article from the Independent by Holehouse & Smith (2015) and the Gurdian by Bosely (2015)
10	This Milestone was included only because the petition as such played and important role, something that became very apparent in the analysis of the speech acts of parliamentarians contributing to the petition debate that expressed their gratitude especially to Jamie Oliver and his petition as it gave them room to debate SSBT	Transcripts of SSBT petition debate
11	The support of the HC and PHE of claims that SSBT could help to address obesity was included here as it can be believed to indicate that the body offering policy advise to the cabinet on public health matters (PHE) and MP's from various complexions came out in support for the levy.	PHE (2015) and HC 465 (2015)
12	This was included as milestone because at this point in time news papers for the first time (once more based on the lexisnexis search) citing David Camron on an occasion where he did not dismiss a sugar tax.	LexisNexis search that identified Dathan (2016) article was the first to discuss Cameron's change of mind
13	This final milestone was included as it was the point where SSBT quite surprisingly became part of the governments agenda and thus is a natural end point for this timeline	Campbell, Smithers & Butler, (2016) writing for the Gurdian

Appendix B (sources for table 2.1. and 2.2.)

What is offered here is an overview of the sources that allowed the author to abstract the position of the involved actors. The order is the same and for each named actor a source is provided. For actors involved indirectly from newspapers and for those directly involved from policy documents. Please note the newspapers sources have not been included in the reference to avoid possible confusion.

Actor Name	Source used for categorisation
Coca Cola	Wood, Z. (10 July 2016). Halt sugar tax introduction, urges food and drink industry. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/business/2016/jul/10/halt-sugar-tax-introduction-urges-food-drink-industry-
Unilever	Ruddick, G. (25 January 2016). Unilever boss warns UK against sugar tax. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/business/2016/jan/25/unilever-boss-warns-uk-against-sugar-tax
Tesco	Boseley, S. (7 November 2016). Tesco cuts sugar in own-brand drinks to avoid sugar tax. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2016/nov/07/tesco-cuts-sugar-in-own-brand-drinks-to-avoid-sugar-tax
AG Barr	Armstrong, A. (22 September 2015). Irn-Bru maker takes a swipe at the war on sugar. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/11883128/Irn-Bru-maker-takes-a-swipe-at-the-war-on-sugar.html
Britvic (Pepsi Corp.)	Butler, S. (17 March 2016). Coca-Cola and other soft drinks firms hit back at sugar tax plan. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/business/2016/mar/17/coca-cola-hits-back-at-sugar-tax-plan
AB Foods	Martin B. (16 August 2016). Job fears mount as businesses unite to fight UK sugar tax. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/business/2016/08/15/job-fears-mount-as-businesses-unite-to-fight-uk-sugar-tax/
IEA	HC (2015a)
Tax Payers Alliance	Donnelly L. (16 March 2016). Budget 2016: Sugar tax on soft drinks. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/news/health/news/12195786/Budget-2016-Sugar-tax-on-soft-drinks.html
BBPA	Butler, S. (16 August 2016). Sugar tax's industry opponents team up before consultation. <i>Guardian</i> . Retrieved from https://www.theguardian.com/business/2016/aug/16/sugar-t industry-opponents-launch-campaign-levy-soft-drinks-obesity
BRC	HC (2015a)
FWD	Martin B. (16 August 2016). Job fears mount as businesses unite to fight UK sugar tax. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/business/2016/08/15/job-fears-mount-as-businesses-unite-to-fight-uk-sugar-tax/
AVA	Martin B. (16 August 2016). Job fears mount as businesses unite to fight UK sugar tax. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/business/2016/08/15/job-fears-mount-as-businesses-unite-to-fight-uk-sugar-tax/

NFRN	Martin B. (16 August 2016). Job fears mount as businesses unite to fight UK sugar tax. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/business/2016/08/15/job-fears-mount-as-businesses-unite-to-fight-uk-sugar-tax/
BSDA	Boseley, S. (19 February 2016). Sugar tax could prevent obesity in almost 4 million people, charities say. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2016/feb/19/sugar-tax-could-prevent-obesity-in-almost-4-million-people-charities-say
FDF	HC (2015a)
NFU	Martin B. (16 August 2016). Job fears mount as businesses unite to fight UK sugar tax. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/business/2016/08/15/job-fears-mount-as-businesses-unite-to-fight-uk-sugar-tax/
Cancer Research UK	Boseley, S. (19 February 2016). Sugar tax could prevent obesity in almost 4 million people, charities say. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2016/feb/19/sugar-tax-could-prevent-obesity-in-almost-4-million-people-charities-say
UK Health Forum	Boseley, S. (19 February 2016). Sugar tax could prevent obesity in almost 4 million people, charities say. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2016/feb/19/sugar-tax-could-prevent-obesity-in-almost-4-million-people-charities-say
City University London	Donnelly, H. & Hughes, L. (22 October 2015). Revealed 'Sugar tax report' which was suppressed by Government. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/news/health/news/11947892/Revealed-Sugar-tax-report-which-was-suppressed-by-Government.html
University of Bristol	Donnelly, H. & Hughes, L. (22 October 2015). Revealed 'Sugar tax report' which was suppressed by Government. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/news/health/news/11947892/Revealed-Sugar-tax-report-which-was-suppressed-by-Government.html
University of Oxford	HC (2015c)
University of Liverpool	HC (2015c)
McKinsey Global Institute	Campbell, D. (18 March 2016). Sugar tax: financially regressive but progressive for health? <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2016/mar/18/sugar-tax-financially-regressive-but-progressive-for-health
Oxford Economics	Boseley, S. (19 February 2016). Sugar tax could prevent obesity in almost 4 million people, charities say. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2016/feb/19/sugar-tax-could-prevent-obesity-in-almost-4-million-people-charities-say
Jamie Oliver	HC (2015b)
RSPH	Butler, S. (16 August 2016). Sugar tax's industry opponents team up before consultation. <i>Guardian</i> . Retrieved from https://www.theguardian.com/business/2016/aug/16/sugar-tax-industry-opponents-launch-campaign-levy-soft-drinks-obesity
CHF	Campbell, D. & Mason, R. (22 October 2015). David Cameron faces pressure to back sugar tax. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2015/oct/22/david-cameron-faces-pressure-to-back-sugar-tax

OSG	Donnelly, H. & Hughes, L. (22 October 2015). Revealed 'Sugar tax report' which was suppressed by Government. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/news/health/news/11947892/Revealed-Sugar-tax-report-which-was-suppressed-by-Government.html
CFC (Sustain)	HC (2015a)
AoS	HC (2015a)
NOF	McCann, K. & Donnelly, L. (20 March 2016). Sugar tax plans attacked by campaigners and industry. <i>The Telegraph</i> . Retrieved from http://www.telegraph.co.uk/news/nhs/12199692/Sugar-tax-plans-attacked-by-campaigners-and-industry.html
BDA (Dietetic)	Gander, K. (16 March 2016). Why is sugar bad for you and is a tax enough?. <i>The Independent</i> . Retrieved from http://www.independent.co.uk/life-style/health-and-families/features/sugar-tax-why-is-sugar-bad-for-you-and-is-a-tax-enough-why-is-it-bad-for-you-george-osborne-budget-a6934406.html
FPH	HC (2015c)
ADPH	HC (2015c)
NHS	Meikle, J. (5 March 2016). NHS England prepares for sugar tax with ban on unhealthy food adverts. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2016/mar/05/nhs-england-prepares-sugar-tax-banning-adverts-unhealthy-food
BDA (Dental)	Campbell, D. & Mason, R. (22 October 2015). David Cameron faces pressure to back sugar tax. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2015/oct/22/david-cameron-faces-pressure-to-back-sugar-tax
BMA	HC (2015a)
RCPCH	HC (2015c)
OSG	Boseley, S. (30 November 2015). Pressure grows for 20% tax on sugary drinks to fight childhood obesity. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2015/nov/30/sugary-drinks-tax-childhood-obesity-david-cameron
HC	HC (2015d)
Petition Committee	HCH (2015)
PHE	HC (2015c)
Department of Health	HCH (2015)
HMT	HMT (2016)
City of London	Campbell, D. & Mason, R. (22 October 2015). David Cameron faces pressure to back sugar tax. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2015/oct/22/david-cameron-faces-pressure-to-back-sugar-tax
Brighton and Hove	Topping, A. (5 October 2015). Brighton launches voluntary 'sugar tax' in effort to tackle obesity. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/uk-news/2015/oct/05/brighton-launches-voluntary-sugar-tax-in-effort-to-tackle-obesity
Welsh Government	Morris, S. (10 December 2015). Welsh government backs plan for 'pop tax' on sugary drinks. <i>The Guardian</i> . Retrieved from https://www.theguardian.com/society/2015/dec/10/welsh-government-backs-plan-pop-tax-sugary-drinks

Appendix C (Google UK search term development)

The overview provided from google analytics on search trends in the UK can be found following the link: <https://trends.google.co.uk/trends/explore?q=sugar%20tax>. The figure below shows a graph informing about the development of the usage of the search term.



The second figure displayed shows the most popular search terms that are similar to sugar tax.



Appendix D (source picture front page)

Picture on the front-page was retrieved from

http://i.dailymail.co.uk/i/pix/2014/06/15/1402850843160_Image_galleryImage_Too_Much_Sugar.JPG