

## **Sweetening the deal:**

**A study linking public opinion in the Netherlands and the United Kingdom with their respective policy contexts with regards to curbing consumption of sugar-sweetened beverages (SSBs)**



*(Photograph: Agence France-Presse, 2016)*

Douglas Meyer

13078755

ES4

Dissertation supervisor: Mr. Bert van den Bergh

Date of completion: 08-01-2019

The Hague University of Applied Sciences

Faculty of Management & Organisation

European Studies



## Executive Summary

This study, titled *Sweetening the Deal*, considers policy interventions to reduce sugar consumption. The study addresses the research question: **To what extent does public opinion in the Netherlands and in the United Kingdom either correspond or contrast to policy approaches being taken by their governments to curb consumption of sugar-sweetened beverages (SSBs)?** It does so first by reviewing the literature available on obesity and possible policy measures to combat it. There is a consensus that overweight and obesity rates are too high across EU Member States, and that these conditions considerably increase risk of negative health impacts. Sugar is recognized as a significant contributor to weight gain. As a source of excess sugar and ‘empty calories’, SSBs are a popular focus for new sugar consumption reduction policies. The literature review zooms in on the sub-questions: How do different states address the problem of too high sugar consumption? How have different stakeholders argued their cases related to a sugar tax? What are the expected vs. measured impacts of sugar related policies? By comparing policy contexts relating to SSB taxes across EU Member States, the effectiveness of different measures become visible. The United Kingdom, with its newly implemented Soft Drinks Industry Levy, and the Netherlands, which relies mainly on market negotiations with food and drink manufacturers to reduce sugar consumption, are selected as focus countries. Based on a lack of literature citing public opinion input, the current study sampled the Netherlands (115 respondents) and the UK populations (102 respondents) to investigate whether the opinions and concerns of the public correspond to their respective policy contexts. Respondents completed an online survey within a three-week period, and the qualitative and quantitative responses of each sample were then analyzed. Both populations significantly underestimated the prevalence of overweight. In addition, both populations attributed blame for overweight to multiple stakeholders, although the UK sample more strongly finds the individual culpable. This response calls for enhanced inter-stakeholder cooperation between government, schools, parents and manufacturers to reduce sugar consumption. Both samples’ majority opinion was that a healthy weight is mainly the product of childhood interventions. Hence, sugar consumption curbing policies should focus on childhood. The final stage of this report, the Conclusion and Policy Recommendations, suggest future measures to further reduce the problem of excessive sugar consumption in the two populations studied. There are concerns about the external validity of the sampling, so further research is required to provide a broader sample of both populations and cross-reference these findings. In addition, more research is needed into artificial sweeteners’ health impacts, and potentially extending the sugar tax to cover sugar substitutes. Both populations showed concern for the disproportionate effect a sugar tax could have on low income households, potentially limiting their food choices. Hence, poverty alleviation and increasing accessibility to unprocessed foods are also highly recommended.

## Contents

Executive Summary .....	1
Preface .....	3
Introduction .....	4
Background information/literature review .....	6
- How do neighboring states address the problem of too high sugar consumption? .....	6
- How have different stakeholders argued their cases related to a sugar tax? .....	7
- What are the expected vs. measured impacts of sugar related policies according to the different stakeholders? Do they meet the expectations?.....	9
Research methods .....	11
Results and discussion .....	14
Consumption of sugar-sweetened beverages.....	14
Households surveyed .....	17
Self-reported measures of health .....	19
Perceptions of overweight and obesity levels.....	21
Opinions on obesity's causes and solutions.....	23
Opinions on a potential sugar tax in the Netherlands, and on the newly-introduced sugar levy in the UK .....	31
Initiatives to combat obesity and overweight .....	36
Sample characteristics .....	39
Validity of results/sample scrutiny .....	41
Conclusions .....	43
Policy Recommendations .....	45
Word count .....	46
References .....	47
Appendix A – Student Ethics Form.....	51
Appendix B – Coded raw data from survey open questions.....	54

## Preface

“Sweetening the deal: *A study linking public opinion in the Netherlands and the United Kingdom with their respective policy contexts with regards to curbing consumption of sugar-sweetened beverages (SSBs)*” was written to fulfill the graduation requirements of the European Studies program at the Hague University of Applied Sciences. It was researched and written in the timeframe of September 2017 to January 2019. Much of my free time in high school and university revolved around not only studying, but also writing policy. The intricacies of developing and adopting said policy has always kept me thoroughly enthralled. This topic gave me the ability to piece together a complex legislation puzzle of pleasing both people as well as politics using something myself and all other commuters are confronted with on a daily basis – the exorbitant amount of sugary soft drinks readily available at often highly discounted rates. It is the last time I will be piecing together a legislative puzzle like this for the foreseeable future, as I expect to move away from politics in my future career endeavors to seek out a field with more direct personal contact. To make a difference in person rather than on paper.

This dissertation would not have been possible without the support of my family and my partner. In the face of continuous adversity, I was unsure how I would persevere and complete my degree program, but there was never a moment where they were not there to help me back up. I had to learn how to run my own race, at my own pace. They were there to walk me through that process. In the end, they kept me on course to completing a journey that I am incredibly proud of, and this document to solidify this upcoming achievement.

Whenever I write or perform anything, my main intention is always to captivate my audience. To not only provide some new thoughts and knowledge, but to do so in an entertaining manner. To have this not merely be a thesis written for a grade, but to be a generally enjoyable read. I therefore sincerely hope you enjoy reading this dissertation as much as I enjoyed creating it.

Douglas Meyer

## Introduction

Recent years have seen a spike in the consumption of a plethora of prepackaged foods, quick vending machine treats and cheap canned beverages of every variety (e.g. Monteiro, Moubarac, Cannon, Ng & Popkin, 2013). A research report drafted in 2014 by the European Commission on recommendation by the World Health Organization found that “weight problems and obesity are increasing at a rapid rate in most of the EU Member States, with estimates of 51.6 % of the EU’s population 18 and over overweight” (World Health Organization, 2016b). This makes Europe the “second highest proportion of overweight or obese people in 2014, behind the Americas” (European Commission, 2014). One of the ‘silent killers’ identified in this report is the easy availability and the abundant marketing of energy-rich food. The most notable resource that is filled with caloric energy and is unequivocally part of our societies is sugar. This sweet and addictive ingredient has been found by the World Health Organization to be a key player of not only Europe’s health problems, but that of the world (World Health Organization, 2016a). The UN body stated that the “consumption of free sugars, including products like sugary drinks, is a major factor in the global increase of people suffering from obesity and diabetes” (World Health Organization, 2015).

The call to arms against sugar consumption has gone mostly unanswered, with only two EU Member States adopting any kind of policy aimed at persuading their citizens into making better choices since the scathing report, which brings the amount of Member States with such a policy to a grand total of five. These two countries were the United Kingdom and Ireland, with the former being one of two focus countries in this report. First announced by Her Majesty’s Treasury on March 7<sup>th</sup>, 2017 and set in to law in April the following year, the United Kingdom’s soft drink sugar tax bill sets out to add a surcharge of 18 pence a liter for beverages that contain 5 grams of sugar, and 24p a liter for beverages that contain 8 grams of sugar or more (Foster, 2017; Arthur, 2018; HM Revenue and Customs, 2018). This includes alcoholic beverages with 1.2% alcohol volume or more and excludes pure fruit juices and milk as those do not contain any added sugar. The proceeds of this tax will be going to the Department of Education to fund school sports (BBC News, 2017). “You don’t see this harsh battle in the Netherlands, where manufacturers come together with the government to make arrangements. Politicians seem to expect more from finding answers together than from laws” (Kamsma & Tuenter, 2018). The Netherlands’s response to the aforementioned 2014 EU report was to sign an accord with manufacturers in which they vowed to lower the salt, fat, sugar and overall calorie content of their products (Vahtla, 2017). The Dutch soft drink industry also decided on their own to remove more than 20 kilocalories per 100 milliliters out of school vending machines by 2019. The fact that these two countries have widely different approaches to tackling the same issue of sugar sweetened beverages (SSBs) makes for an interesting deep dive into the processes that these

two countries have gone through, and what the measured and perceived impacts of these processes truly are. The following chapters of this dissertation set out to answer this exact question.

This study seeks to answer the research question: **to what extent does public opinion in the Netherlands and in the United Kingdom either correspond or contrast to policy approaches being taken by their governments to curb consumption of sugar-sweetened beverages (SSBs)?** The sub-questions associated with this study are fourfold – the first three will be addressed in the forthcoming Literature review chapter, and the fourth is concluded in the Discussion and Conclusion chapters.

1. How do different states address the problem of too high sugar consumption?
2. How have different stakeholders argued their cases related to a sugar tax?
3. What are the expected vs. measured impacts of sugar related policies?
4. What other measures can be taken in order to further reduce the problem of excessive sugar consumption?

## Background information/literature review

### - How do neighboring states address the problem of too high sugar consumption?

A tax on sugar sweetened beverages is still a relatively rare sight, with only 26 nations in the world having raised the price of sugary or sugar-sweetened beverages in order to reduce obesity levels in their respective populations (Han, 2018). Of those 26 nations, five of them joined the list only last year (Han, 2018). The shining European example of a working sugar tax is Hungary (The Economist, 2017). In September of 2011, Hungary's government enforced an extra tax on not only SSBs, but on sugar-containing drinks in general, as well as energy drinks, fruit preserves and pre-packaged sweetened products (Campbell, 2016; Petersson, 2017). As a result many Hungarians drastically reduced their consumption of these items. "30% have reduced their consumption of pre-packaged sweets, 22% of energy drinks and 19% of sugar-sweetened soft drinks" (Dr. Eva Martos, in Campbell, 2016; MacGuill, 2017). The following year, France introduced its own tax aimed at reducing the consumption of sweetened drinks. This was not merely a sugar measure however, adding a €0.08 tax on all drinks with added sugar or artificial sweetener (Capacci, Allais, Bonnet, & Mazzocchi, 2016). This number is based on the growth rate of the consumer price index and is adjusted every 1<sup>st</sup> of January (Capacci, Allais, Bonnet & Mazzocchi, 2016, p.18). While the impact of the tax is yet to be fully evaluated, sugar-sweetened beverage sales fell by 3.3% within five months of introducing the tax (World Health Organization Europe, 2015, p.24). Further south, Portugal has cut their consumption of most sugary drinks by half, in part by the introduction of a sugar tax in the beginning of 2017. The tax is a two-tiered system, with drinks containing more than 80g of sugar per liter being taxed at €16.46 per 100 liters, and drinks with fewer than 80g are taxed at €8.22 per 100 liters (Agence France-Presse, 2016). That same year saw the two-tiered system carrying over to Spain, where a similar system was introduced in Catalonia (Heller, 2017). The levy imposed by the regional government saw the price of drinks with between five and eight grams of sugar per 100 milliliters rise by €0.08, and drinks with more than eight grams of sugar for every 100 milliliter rise by €0.12 (Baquero, 2017). A sugar tax is not the only way to tackle the problem of rampant sugar consumption, however. The rest of Spain has opted to "partner with more than 500 food and beverage companies to reduce salt, sugar and fat levels in more than 3,500 products, with a deadline of 2020" (FoodBevMedia, 2018). Lithuania has also decided not to pursue a sugar tax in favor of collaborating with food manufacturers to reduce salt and sugar content in their products (Vahtla, 2017). Rather than being forced into reformulating their recipes, companies such as Coca-Cola and Nestlé have decided to make changes to their production for Lithuania voluntarily (Tamma, 2017). As these discussions are still ongoing however, it is not yet clear what impact these agreements have made (FoodBevMedia, 2018). Finland has had a turbulent history with regards to regulating sugar, introducing and repealing legislation off and on since the 1940s.



However, as of 2014, a tariff on sugary and sugar sweetened beverages stands at €0.22 per liter containing more than 0.5% sugar. There has been a steady decline in the demand for sugary beverages since the introduction of the tax, though it is unclear if it is due to the tax or following a trend of decline originating years prior (Department of Health Ireland, 2016). Lastly, there has also been a failed case as well. Denmark had implemented a sugar tax back in October 2011. This tax was called to life not because of a high obesity rate, as Denmark at the time in fact had the lowest obesity rate of any European country, but rather that 65% of children and 35% of adults consumed too much sugar (Ajjaji & Ong, 2015). The Danish government decided on an all-encompassing fat tax, in which an amount of €2.15 was taxed per kilogram of saturated fat. While the goal was to drastically decrease the overall fat intake, the opposite occurred and “almost a year after the implementation of the tax, it was scrapped due to the adverse effects it showed” (Ajjaji & Ong, 2015).

#### - How have different stakeholders argued their cases related to a sugar tax?

The government of the United Kingdom was crystal clear in its reasoning behind the introduction of its sugar levy, worrying about the fact that “the UK has one of the highest obesity rates in the developed world, and it’s getting worse. [...] The general issue of obesity in the UK costs the NHS around £6 billion each year” (Warner, 2018). As of 2018 more than 60% of the adult British population is overweight (National Statistics, 2018). The Department for Health and Social Care warns this trend may grow from childhood, claiming over 35% of boys and 20% of girls aged between six and ten will be obese by 2050 (Department of Health, 2012). Camilla Cavendish, author of the Soft Drinks Industry Levy under David Cameron, argued in 2018 that “the sugar tax on drinks is not a tax on customers, it is a tax on manufacturers. The whole point of it was to get manufacturers to change the ingredients of the product. [...] Making things more expensive does change people’s behaviour” (Warner, 2018). The British Medical Association welcomed the Levy, having been urging the government to introduce a sugar tax since July of 2015 to “combat escalating rates of obesity and Type 2 diabetes.” (Diabetes.co.uk, 2017). According to research done by the University of Cambridge, around 8,000 cases of type 2 diabetes a year were attributed to the consumption of sugary drinks (Wood, 2015). Soft drink manufacturers were obviously less excited, but not necessarily for the reasons one might think. The British Soft Drink Association (BSDA) has stated that it feels punished, despite having continuously cooperated with the government, as well as reformulating products of their own accord (British Soft Drinks Association, 2016). The soft drink sector is the only one that has set a calorie reduction target for 2020 in line with government guidelines, as well as proactively drawing up plans with the government regarding advertising sugary beverages to children on television (Public Health England, 2018). The BSDA argued that the government had used considerably outdated statistics, and that in fact the sugar consumption of 11-to-18-year-olds had

reduced by 23% between 2010 and 2014, and that “overall sugar intake dropped by over 8% over the two years to 2014” (Warner, 2018). Gavin Parlington, director general of the BSDA, thus argued that “current data illustrates that a tax of this sort on a single category will not have a meaningful impact on obesity levels. [...] The decline in sugar from soft drinks has been offset by increases in sugar from other foods. Whilst sugar intake from soft drinks has decreased by 18.7%, it has increased in frozen confectionery, take-home confectionery, and biscuits” (Gavin Parlington, as cited by Nawrat, 2018). The UK sugar tax is nestled within a broader set of targets to stimulate the food industry to cut 20% of their products’ sugar content by 2020, with a 5% reduction in the first year (Public Health England, 2018). Despite the first-year interim target period elapsing, progress has been slower than hoped with only a 2% sugar reduction achieved so far (Public Health England, 2018).

In the Netherlands, the government is less eager to label soft drink manufacturers as the root cause of the obesity issue. State Secretary of Health, Welfare and Sport, Paul Blokhuis, spoke about the topic in February 2018, stating that he hoped companies and organizations across the Netherlands could come together with sound proposals. For example, that municipalities have started projects in which the focus is on getting the youth moving, as well as schools making healthier choices for their canteens and vending machines (NRC, 2018). “If I came with measures now, I would disturb that process” (Paul Blokhuis, as cited by NRC, 2018). That is not to say it would be impossible for the Netherlands to implement a tax on sugar-sweetened beverages. “The State Secretary is open for all measures that are effective and feasible, so that would include a soft drink tax” (Brands, 2018). Many of the national charities are avidly in favor of a sugar tax being implemented. The Diabetes Fund, together with the Heart Foundation and Kidney Foundation have been fighting for a decrease in sugar consumption since the signing of the Accord for Improved Product Composition, the accord in which manufacturers vowed to lower the salt, fat, sugar and overall calorie content in their product (Diabetes Fonds, 2018). They believe the accord set the bar way too low from the start. The Consumers Association has joined these charities in their fight to improve the Accord and has repeatedly created ad campaigns in order to show the population just how much sugar everyday food items contain for no apparent reason (Consumentenbond, 2018).

Marc Jansen, director of the Central Bureau for Food Trade, the organization lobbying on behalf of soft drink manufacturers, is skeptical of any taxation. “Manufacturers in the Netherlands have already been using considerably less sugar than a few years ago, and that was achieved without a tax” (Marc Jansen, as cited by Brands, 2018). Companies such as Vrumona, owner of beverages such as Pepsi and Royal Club already has a portfolio in which 57% of its beverages has no added sugar. For Unilever’s Lipton Ice Tea this number is 45% (Brands, 2018).

- What are the expected vs. measured impacts of sugar related policies according to the different stakeholders? Do they meet the expectations?

The Sugar Levy has seemingly had a preemptive effect for UK soft drink manufacturers. The company behind the Scottish favorite IRN-BRU for example, decided that its brands will be reformulated to be exempt from the levy (Warner, 2018). Sugar content in its flagship brand has been reduced by more than half to below five grams since January 2018, and parent company AG Barr said nine out of ten regular drinkers believed it delivered a 'good or excellent taste match'. The manufacturer's original intent was to have 90% of its total brand portfolio not be liable to the tax but has since shifted this goal to up to 99% after reaching their original goal (Warner, 2018). They have learned they will never reach the 100% however, after making a mistake "earlier this year by ceasing production of their original full-sugar product and replacing it with an almost half-sugar version. Fans have started a 'Hands off our Irn Bru' petition and taken to social media to protest against the change." (Ashey Pollock, as cited by Nawrat, 2018). About half of Coca-Cola's products are expected to fall under the levy and will be shrinking portion sizes and increasing their prices rather than reformulating their iconic brands. Instead the company has been making a large shift into the non-carbonated drink market. In its still drink portfolio are products such as Fuzetea iced tea, Honest Coffee iced coffee, and dairy-free Adez smoothies. All the aforementioned drinks are exempt from the tax. "Over the next few years, Coca-Cola expects over 30% of UK sales to come from still drinks, more than double the current level" (Warner, 2018). Due to the early shift to sugar free alternatives, the BSDA estimates the industry will stay relatively stable. "In total, we estimate that there will be a 0.4 percent reduction in the volume of soft drinks sold. However, this figure includes sales of milk, which are not part of the BSDA portfolio. When only those drinks included in the BSDA's definition of the soft drinks market are included, the estimated decline in volumes is 1.6 percent" (British Soft Drinks Association, 2016, p.12). In relation to this, the BSDA also expects the total revenue generated by this levy to be lower than the Treasury predicted, stating "[b]ased on the estimated volumes of different types of soft drinks that will be consumed after the levy is introduced, we calculate that the levy could raise £420 million in revenue for the government. Our estimate is lower than the Treasury's projection of £520 million in 2018/19, the first full year of the proposed levy" (British Soft Drinks Association, 2016, p.16). Lastly, the BSDA is skeptical about its weight loss potential, stating "daily calorific intake could fall by an average of five calories per person. This is equivalent to around 0.2 percent of the recommended daily amount of calories per adult" (British Soft Drinks Association, 2016, p.14). Jonathan Davison, beverage analyst at GlobalData Consumer has a more positive outlook on the levy. "Whilst the UK's decision to implement a tiered tax system did cause a mass wave of reformulations, it also ensured consumers still had a choice to either stick with sugary brands or switch to healthier alternatives. Other countries, like Belgium for example, simply placed a tax on

all soft drinks, so there was no incentive to go healthier.” “Success is also far more likely among younger age groups. Three economists at the Institute for Fiscal Studies have predicted the tax will reduce young people’s sugar consumption through soft drinks by roughly 80%” (Davidson, as cited by Nawrat, 2018). Accounting organization Deloitte believes the tax paves the way for so-called “sin taxes” and builds upon the taxes placed upon the likes of tobacco and alcohol that we have all become accustomed to, stating ‘[t]his arguably marks the first step towards the government tackling potentially unhealthy foods through tax measures.’ (Deloitte, as cited by Warner, 2018). Seeing as the Netherlands has not implemented a levy in this sense, there is no measurable data on the matter. Coca-Cola has however been further promoting their sugar free alternatives in this country as well, even going as far as only selling the sugar-free version of Sprite known as Sprite Zero, rather than offering both the full sugar as well as the sugar free alternative. Other soft drink manufacturers have been taking similar steps in recent years (AD, 2017).

Despite its rising popularity among governments, introducing tax as a measure to reduce consumption was in fact found to be the fourth least effective measure in a report considering sixteen options to reduce obesity levels (McKinsey Global Institute, 2014). Therefore, this dissertation will in addition consider other measures that are being taken or that the public recommend be taken to further reduce the problem of excessive sugar consumption.

## Research methods

The decision was made to poll the public of both the Netherlands and the United Kingdom to see what their opinions were regarding a (potential) sugar tax, obesity prevalence, and what drinks they themselves consume. Public polling was selected as the focus for data collection as it seems that public opinion is often lacking from policy discussions, and it is assumed to be beneficial to hear what the designated beneficiaries of *public* health policies think. For example, one study that tried to understand impacts of sugar taxing in Israel only considered ‘key opinion leaders’ of which none were consumers (Tamir, Cohen-Yogev, Furman-Assaf, & Endevelt, 2018). The full versions of the surveys completed can be found in the submitted dossier.

The question list was as identical as possible for both populations, to allow for direct comparisons between the two samples’ responses. There were of course slight differences in the question list as the Netherlands is still debating an SSB Sugar Levy as a possible future policy, rather than it being a policy already in effect. The questionnaire was only available online and was completely anonymous. Online surveying was chosen as it reduces the barrier to completion of having to distribute and collect in paper copies, as well as offering respondents the freedom of partaking in the survey from any location. In addition, choosing surveys instead of administering interviews reduced the amount of researcher-respondent contact and significantly hastened the collection of data.

The target sample size was 100 participants per sample. This target was achieved, with 102 responses in the UK sample, and 115 in the Netherlands sample. The survey was active online between 25<sup>th</sup> of August 2018 and 14<sup>th</sup> of September 2018. With a sample of this size, it is believed relevant conclusions can be drawn about what the societies as a whole may think about the research questions.

The survey for the population of the Netherlands was published in both English and Dutch as not everyone who lives in the Netherlands speaks English, as well as allowing for immigrants and newcomers in the Netherlands to also participate in the study. Direct translation of the questions was used as much as possible in order to avoid bias of loaded vocabulary in the translated version, which otherwise may skew the results towards one particular opinion. The UK version however was solely published in English.

The survey was produced using the online tool *Survey123*. The benefit of this tool is that it is linked to ArcGIS, and therefore easily produces maps of the results. This allows for consideration of the spatial distribution of contributions.

In order to link data to who the respondent was, some characteristics were requested. These characteristics were: the age in years of the respondent, the gender they identify as, as well as their

home postcode. Collecting background data on the nature of respondents allows for consideration of how their background may affect their views and responses, as well as giving an indication as to whether the sample is representative, and thus the external validity of the dataset.

The research was both qualitative and quantitative in nature. There were approximately 35 questions per survey, the majority of which were multiple-choice (closed) questions. This later enabled rapid data presentation and comparisons. Some questions such as “How much would you estimate you spend on food and drink (including groceries) per week?” required further processing. The estimate provided was divided by the number of people the respondent claims to buy for, and then a box and whisker plot was produced showing how much is typically spent per person per week on groceries. Multi-step data processing took place in Microsoft Excel.

A five-point Likert scale was used to gather opinions on certain statements relating to the research questions, such as “If a person is overweight or obese, it is because of their own choices. To what extent do you agree with the above statement? Strongly agree – agree – neutral/no opinion – disagree – strongly disagree”. This allows for quantitative comparisons of the popularity of each opinion.

Qualitative data was collected using open questions. An example of this is: “How do you think the government should spend the proceeds of the Soft Drinks Industry Levy/Sugar Tax?” Respondents were provided with a text box for these questions to fill in their answer, and a minimum requirement of 100 characters in order to encourage use of full sentences and justifications in their answer. For data presentation, the open question responses were coded for similar themes, and put into a frequency table showing the most popular arguments as responses. This allows for much more insight into the thought processes and views of the sample than closed questions. Although this unfortunately removes some of the nuances of the data, it does allow patterns to be displayed. In addition, some of these responses gave useful insights into people’s opinions and have thus been presented as quotes in the Results and Discussion chapter below.

Respondents were recruited from both populations from Facebook ‘marketplace’ pages such as Buy and Sell pages. By joining Facebook pages of other towns and cities such as Wageningen, Spijkenisse, Leeds, and Manchester, it was possible to recruit a more geographically spread sample. This increased the distance of familiarity between researcher and respondents and reduces researcher bias in the results. In addition, hearing from respondents from many different parts of the countries reduces location bias, an example of this being that if most people who live in Manchester feel one way about an issue, sampling only within that city would reduce the scope of the results and make it less externally valid.

Respondents were briefed at the beginning of the survey on how their responses would be used, and that their participation was voluntary and could be withdrawn at any time via email before

publication of the dissertation. The decision was made however to not inform respondents of the actual research topic, so as to not invite (self-)selection bias in favor or against a Sugar Tax – respondents were instead invited to a survey ‘about groceries’. The data was kept anonymous and will be destroyed after this dissertation is complete.

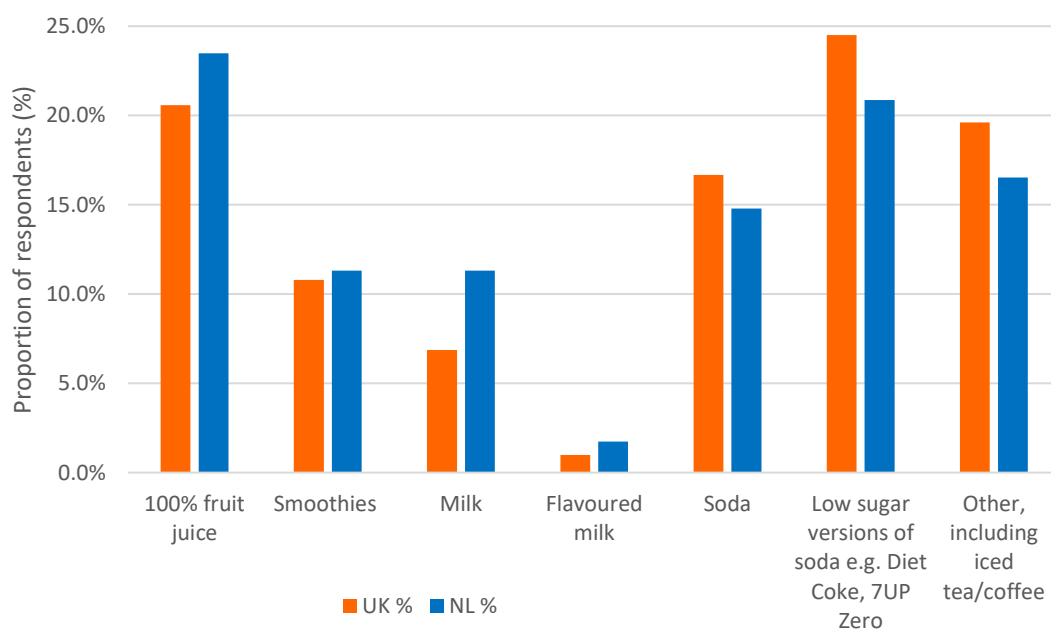
The next chapter analyses the wealth of results that the surveys produced.

## Results and discussion

This chapter presents the results, delving into patterns within the findings and potential causes of these results. It also critiques the samples themselves and lays the foundations for future policy moves based on the current study's results. The Netherlands sample consisted of 115 responses, and the UK's yielded 102 responses. Where the two populations were asked a different question, the relevant question header is above the Figure(s). Unless otherwise stated, summary statistics are all given to the nearest percentage point. It is divided into sections of grouped results where questions were on the same topic. For ease of comparison across figures, the UK sample data is always presented in orange/reds and the Netherlands (usually abbreviated to 'NL') sample is presented in blues.

### Consumption of sugar-sweetened beverages

Figure 1 - What is your favourite non-water soft drink?

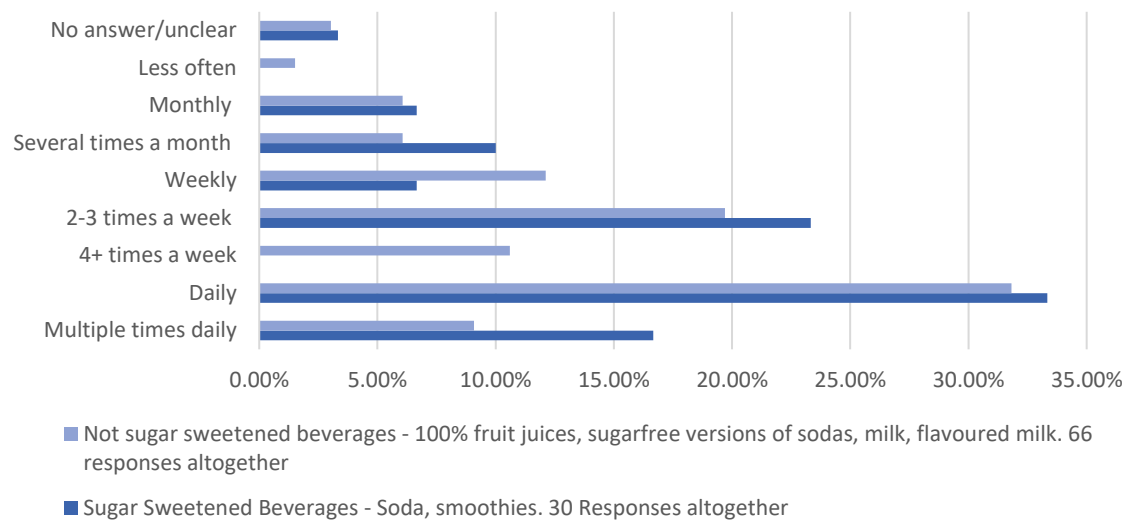


The most popular non-water soft drinks in the Netherlands sample were 100% fruit juice (24%) and low-sugar versions of sodas (21%) (Figure 1). Of the responses given, only the smoothies and full-sugar sodas would be liable for the sugar levy in the UK. This amounts to 30 responses or 26% of the sample. The 100% fruit juice is excluded from the levy, as is milk and milk-based drinks containing over 75% milk such as chocolate milk which typically consists of 75 to 90% milk (HM Revenue and Customs, 2018). When we look at the UK responses, the top two are reversed, with the most popular favorite drink being low sugar versions of sodas (25%) and 100% fruit juices (21%) (Figure 1). The third most popular drink is sugar-sweetened sodas with 17%. In this sample, 28% of the responses would be liable for the Sugar Levy. This suggests a negligible



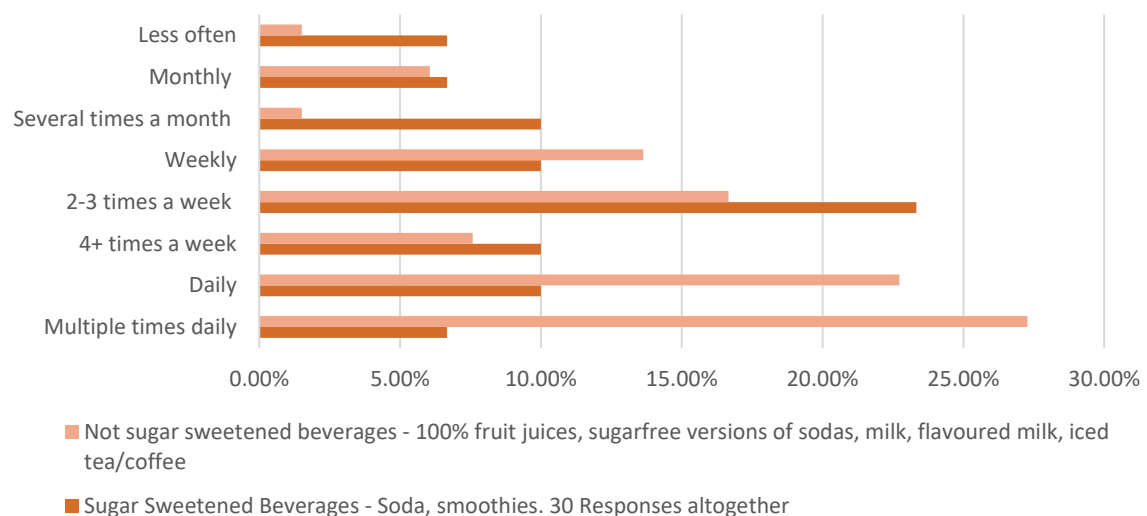
difference in favoring of SSBs between the two populations. A different pattern emerges, however, when we consider the frequency of consumption (Figures 2a and 2b).

Figure 2a - Frequency of consumption of the Netherlands' sample's self-reported favourite non-water soft drink



In the Netherlands, 50% of respondents who prefer SSBs consume one at least once a day, as opposed to non-SSB-favoring respondents of which only 40% report drinking that drink at least daily. This could be related to the addictiveness of sugar; those who drink sugary drinks may be more likely to drink them more frequently because they are addicted to the sugar in them. On the other hand, it may also be a result of aggressive advertising campaigns or simply a force of habit.

Figure 2b - Frequency of consumption of the UK sample's self-reported favourite non-water soft drink



The UK, however, exhibits the opposite pattern: in this group, 50% of respondents who prefer a non-SSB drink one at least daily, compared to only 17% of people who prefer SSBs. This is intriguing because it suggests that the UK has a different soft drinks culture to the Netherlands in that people prefer non-sugar-added soft drinks, or more promisingly, that the Sugar Levy has triggered a shift toward low sugar soft drinks. As this was a time-independent survey though with no follow-up, it cannot be determined whether this pattern is linked to the Sugar Levy. What is perhaps concerning is that several respondents reported some kind of ‘addiction’ in their answer or otherwise very frequent consumption of low sugar sodas. This is perhaps evidence of the addictive nature of artificial sweeteners, or a misconception that low-sugar drinks are healthy and hence the guilt that respondents felt about their consumption levels.

Households surveyed

Figure 3 - Including yourself, how many people are you responsible for buying groceries for?

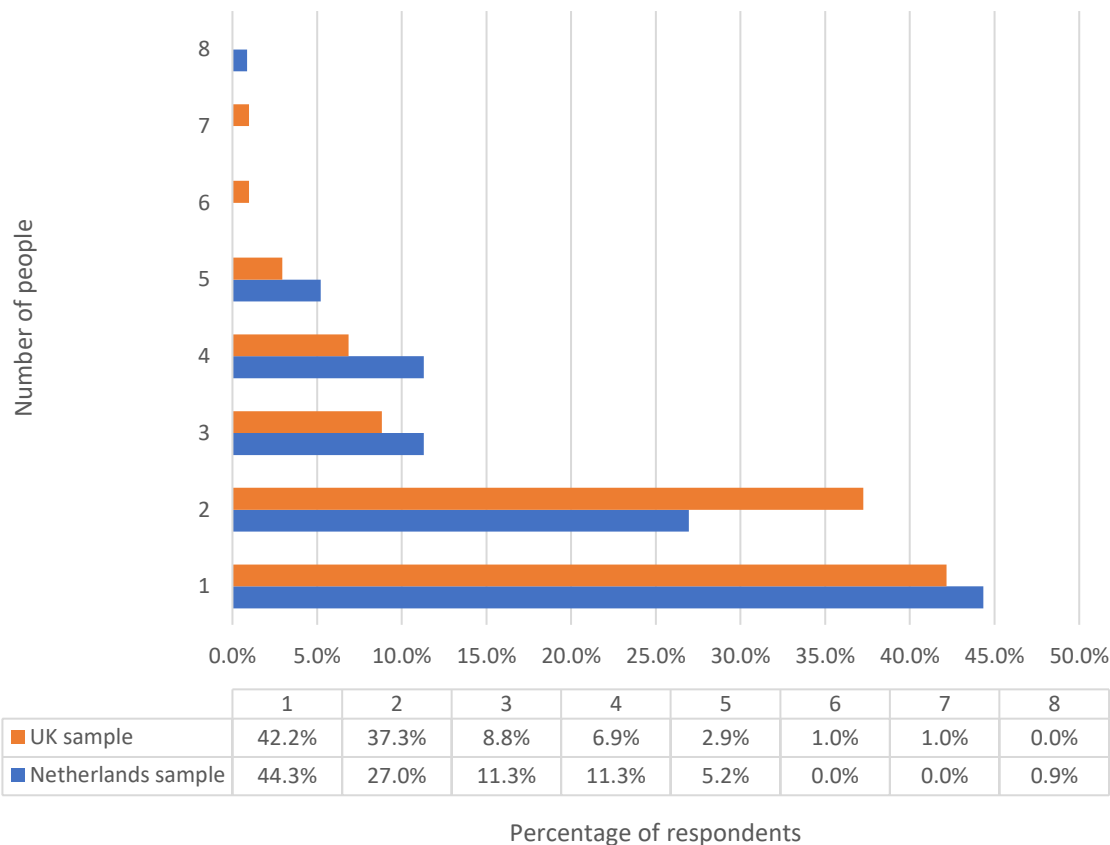


Figure 4 - Of the people for whom you buy groceries shopping, how many are children?

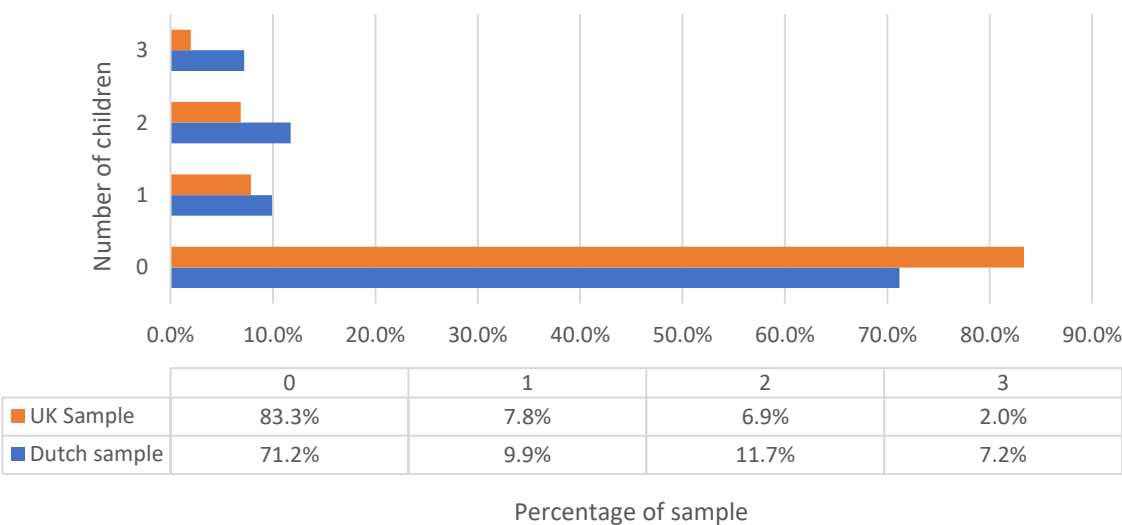
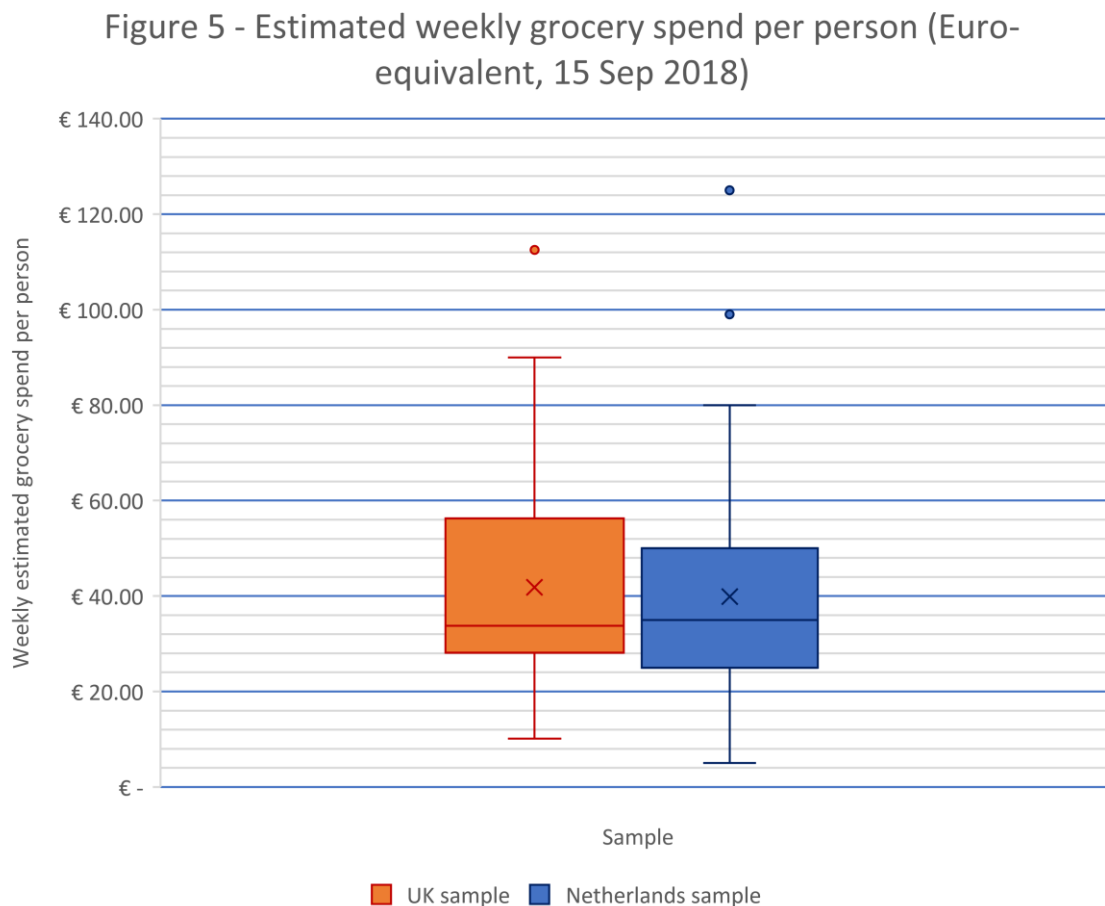


Figure 3 shows that two-thirds of Dutch respondents are responsible for only one or two people's groceries. 71% of respondents had no children who relied on them for groceries (Figure 4). Figures 3 and 4 also show a similar pattern in the UK in that most respondents there (81%) buy groceries for only one or two people. Of the people responsible for feeding children in both samples, none of the households surveyed contained more than three children, suggesting small households. This means the two populations are comparable in terms of grocery responsibilities.



For ease of comparison, the UK data was converted from GBP to EUR based on the conversion rate at the end of the sampling period (15 September 2018; £1 = €1.1249). Figure 5 therefore shows the median weekly grocery spend per person in the Netherlands sample is €35, and the UK's median is €33.75. The mean weekly UK spend on groceries was almost €42 per person and 62% of the sample spend no more than £39 per person per week on food and drink. The Netherlands' mean grocery spend was similar, at €39.90. With a modest per-person grocery spend, it is fair to assume that much of the samples have modest disposable income. This will affect the food and drink choices available to them and potentially also their opinions to public health policies.

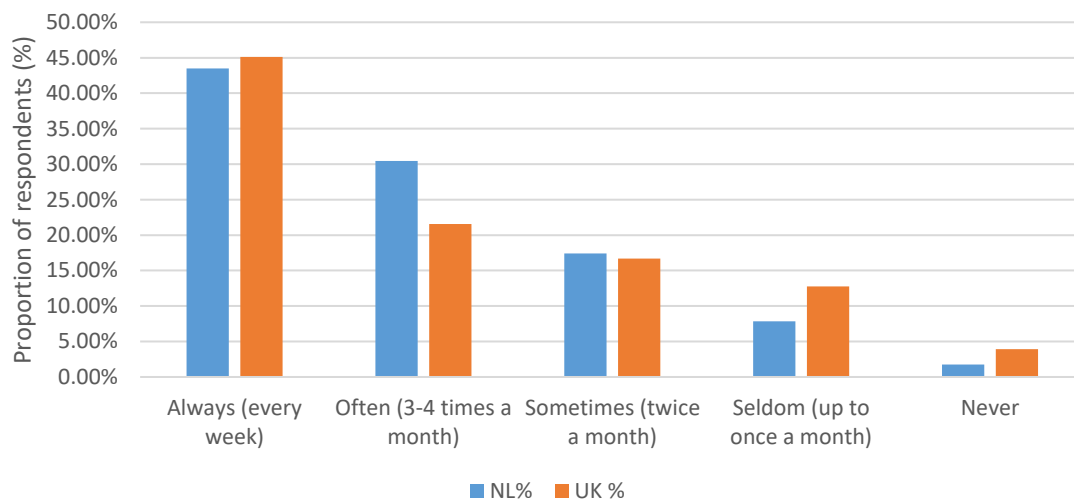
There are 3 outliers not shown on this box plot: all are Netherlands respondents who estimated their weekly grocery spends per person of €200, €210 and €250 respectively. As these results

would significantly skew the data and/or may be a result of misreading the question, they have been excluded from Figure 5.

### Self-reported measures of health

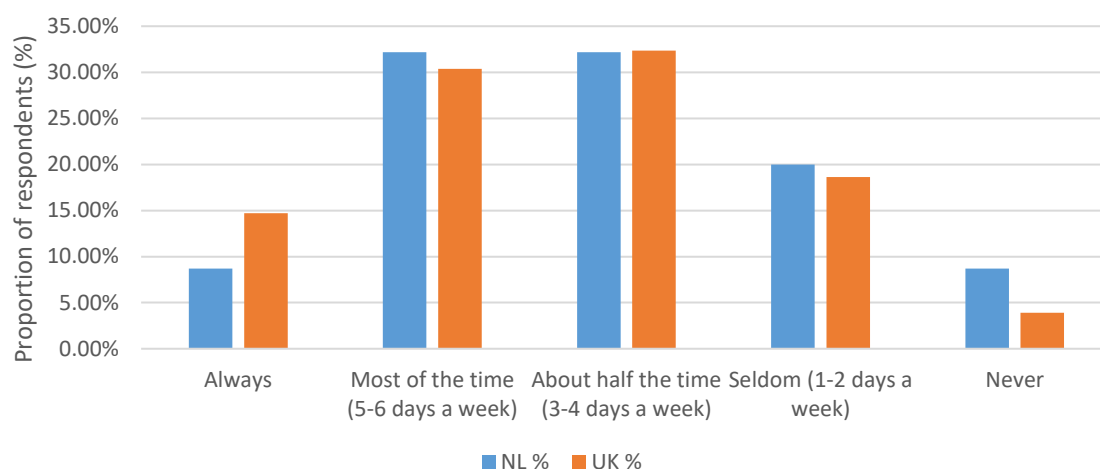
The next section of the surveys sought to ascertain how ‘healthy’ the respondents were, in terms of physical activity, fresh produce consumption and sugar consumption. All three questions yielded similar results between the two samples.

Figure 6 - How often would you say you meet the World Health Organisation weekly target of at least 150 minutes of physical activity per week?



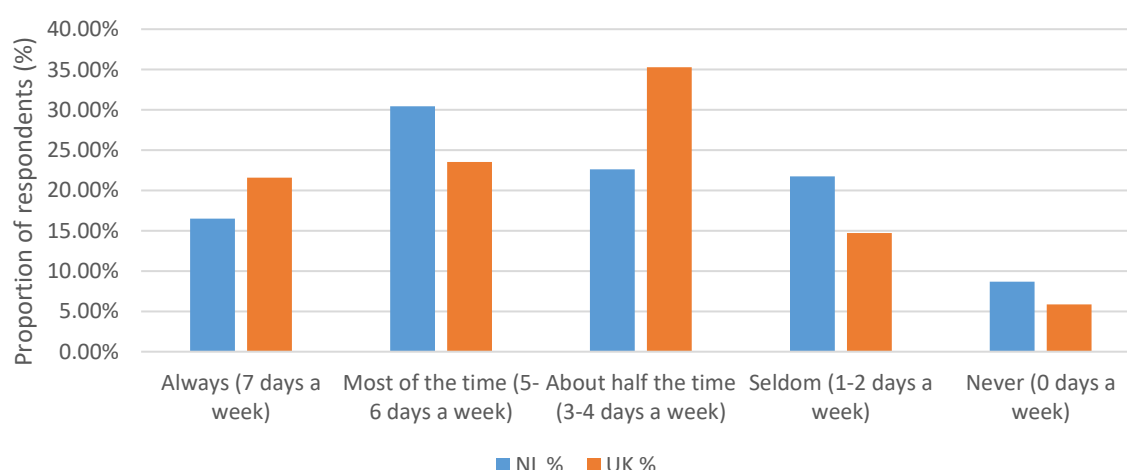
In the Netherlands, 74% either often or always meet the WHO recommendation to get 150 minutes of physical activity per week. Less than 2% reported to never reach this target (Figure 6). This may contribute to an expectation that far fewer people are classed as being overweight than there actually are. In the UK sample, 67% of people reported ‘Always’ or ‘Often’ (at least 3 times a month) meeting the physical activity guidelines (Figure 6). This is slightly lower than the Netherlands’ 74% but still shows a confident majority who believe they exercise sufficiently.

Figure 7 - How often do you think you consume at least 5 portions of fruit and vegetables per day?



When it comes to getting their five-a-day, 40% of Netherlands respondents say they do so at least five times a week. Varied and sufficient consumption of fruit and vegetables is one indicator of a healthy diet. 45% of the UK sample claim to get five portions a day at least five days a week. A UK government summary report for 2018 found that 26% of UK adults always consume at least five portions of fruit and vegetables a day (OECD, 2017, p.2). In our sample, only 15% reckoned they did. This suggests our UK sample is less reliably consuming the recommended fruit and vegetable intake compared to the wider population.

Figure 8 - How often do you consume less than the recommended 30g of sugar per day?



Finally, self-reported sugar consumption compared to guideline daily amounts was requested (Figure 8). In the Netherlands, 47% report eating within the recommended sugar intake per day for at least five days a week. A similar proportion of the UK sample (45%) claim to consume the recommended guideline. Almost 9% in the Netherlands say they never meet this target. There is

minimal difference between the populations on self-reported sugar consumption. No follow-up information was requested to ascertain whether respondents are consciously taking measures to reduce their sugar consumption.

Overall then, the two populations report approximately equal levels of fruit and vegetable intake, sugar consumption and physical activity. This makes it more likely that they are equally (un)healthy samples, which renders the rest of the comparisons more reliable.

### Perceptions of overweight and obesity levels

Figure 9 - Estimated adult overweight and obesity prevalence

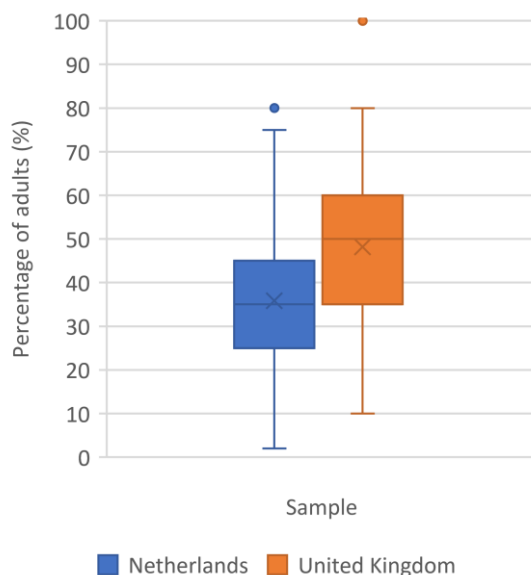
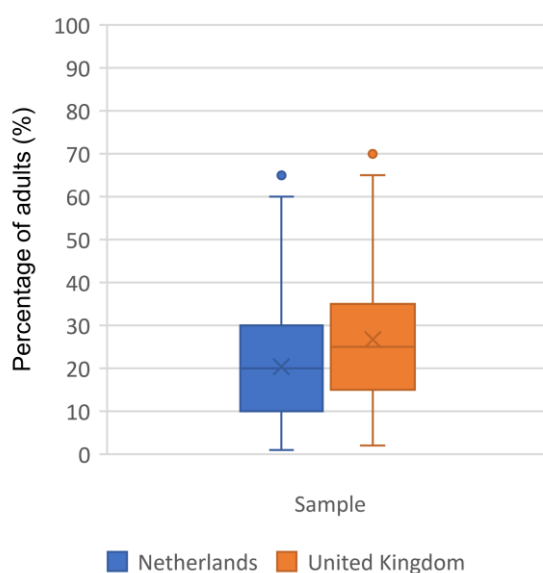


Figure 10 - Estimated adult obesity prevalence



Questions 8 and 9 yielded noteworthy results. When asked to estimate what proportion of the adult Dutch population were overweight, 89 of 115 respondents underestimated the true value of 48.9% (Figure 9) (CBS-Statline, 2018). The response of the 77% of people who thought it was lower than this probably shows that they underestimate the problem of overweight and obesity in the Netherlands. The UK sample displayed the same misconception: the mean estimate of overweight and obesity prevalence among adults in the UK was 48%. The median response was 50%, and the mode 60%. Unfortunately, that is an underestimation as the real value according to 2017 data is 62% (Cancer Research UK, 2017). Again, just like the Netherlands sample, it is evident that the surveyed people underestimated overweight rates in their own population. If the population at large believes overweight to be less common than it is, then it is likely that too few people are taking steps to reduce their weight and improve their health.

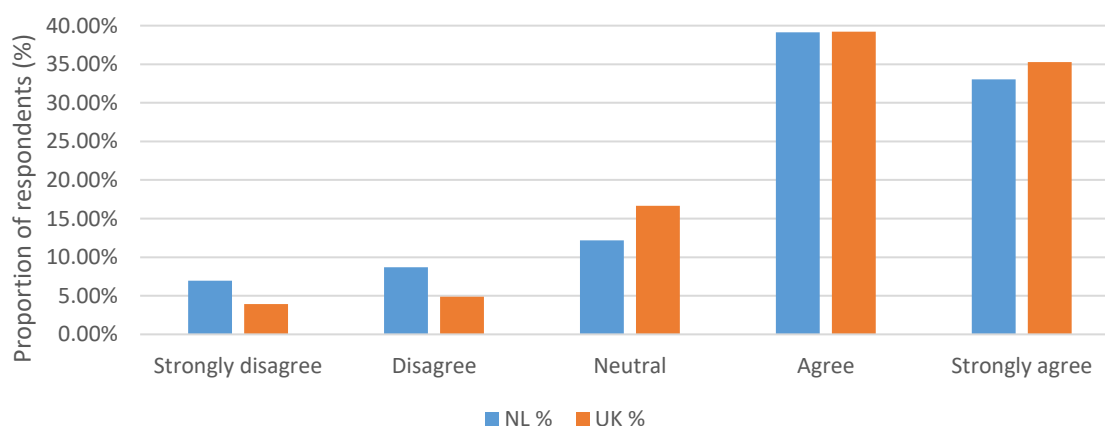
In question 9, which solely asked about the proportion of obesity (BMI exceeding 30.0) in the population, we see the opposite trend to above. The Netherlands sample mainly *overestimated* the proportion of obesity in the population. The measured rate was 13.9% of adults (CBS-Statline, 2018). Less than 36% of the respondents guessed this rate or below. This shows that people overestimate the prevalence of obesity but underestimate the proportion of the population that are not a healthy weight. This likely has implications for how the topic of overweight is discussed in public fora and what policies result from this, as well as the eventual policies' relative successes in the society. In the UK, the estimated obesity prevalence was much more accurate, with the mean value being 26.7%. The mode was 30% and the median 25%. "In 2016, 26% of adults were classified as obese" (National Statistics, 2018). It may be that enhanced media coverage of obesity levels in the UK prompted this public understanding: the UK is frequently cited as 'the most obese country in western Europe' e.g. Dearden, 2017; Siddique, 2017. It is for this reason, too, perhaps, that the UK is one of the only five countries in the EU to be an early adopter of policies to reduce sugar consumption.



## Opinions on obesity's causes and solutions

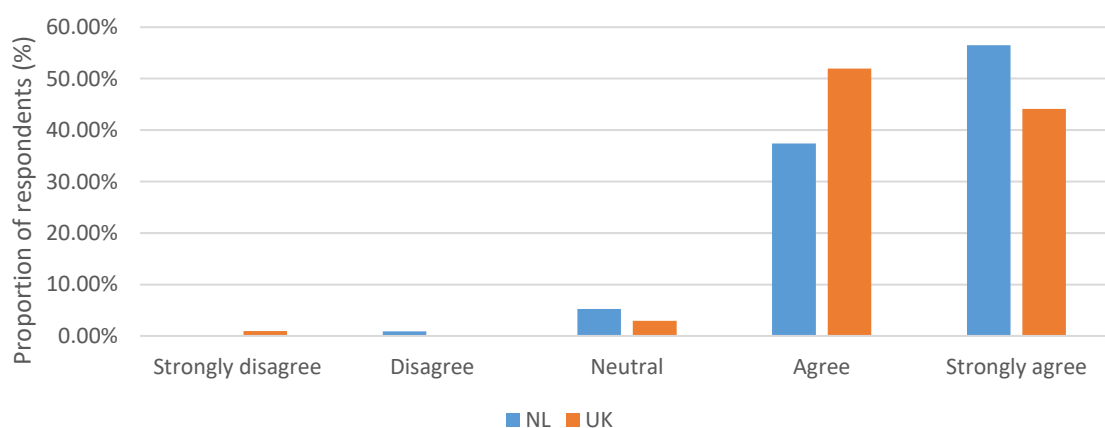
The following section of the surveys (questions 10-23) asked to what extent respondents agreed with the statement provided. For each statement, the Likert scale outcome options were: Strongly disagree, Disagree, Neutral/No opinion, Agree, and Strongly agree. These statements gauged opinions related to the cause of the obesity problem; which stakeholders are responsible for combating obesity; and potential solutions. It is remarkable how similar the two populations answered most of these questions. This subchapter will briefly outline the main patterns found and any significant differences between the samples.

Figure 11 - "I think that food and drink manufacturers are responsible for the nutritional content of their products."



Both samples agree that manufacturers are responsible for the nutritional content of their products: 83% of Netherlands sample and 75% of UK sample.

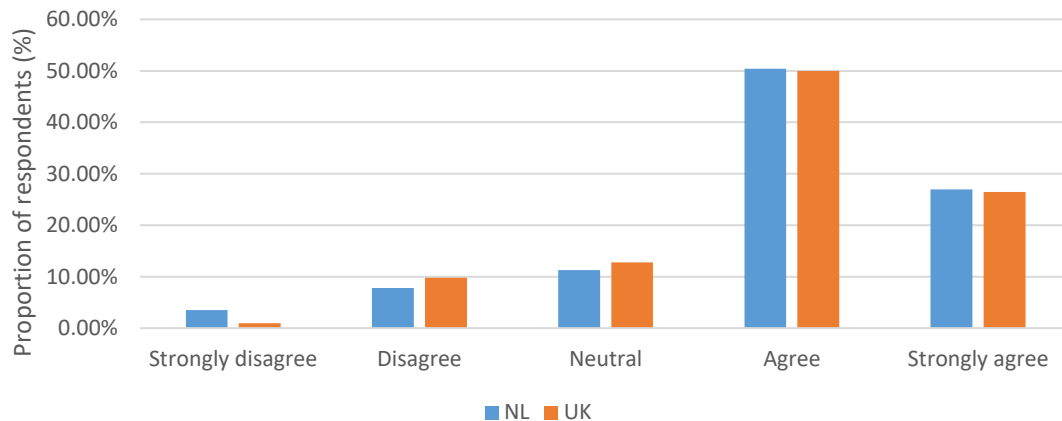
Figure 12 - "I think it is the responsibility of parents to promote a healthy lifestyle."



Both populations are overwhelmingly in agreement with this statement (93-96% of each sample responded affirmatively), although the UK response is slightly less enthusiastically in favor than

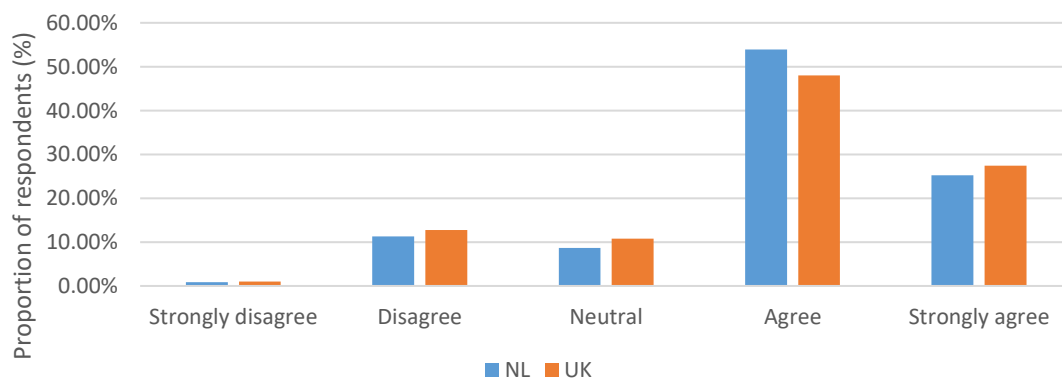
the Netherlands'. Parents are widely held accountable for promoting a healthy lifestyle to their children. This begs the question and further research as to whether parents are equipped or feel able and confident to do so.

Figure 13 - "I think it is the government's responsibility to promote a healthy lifestyle."



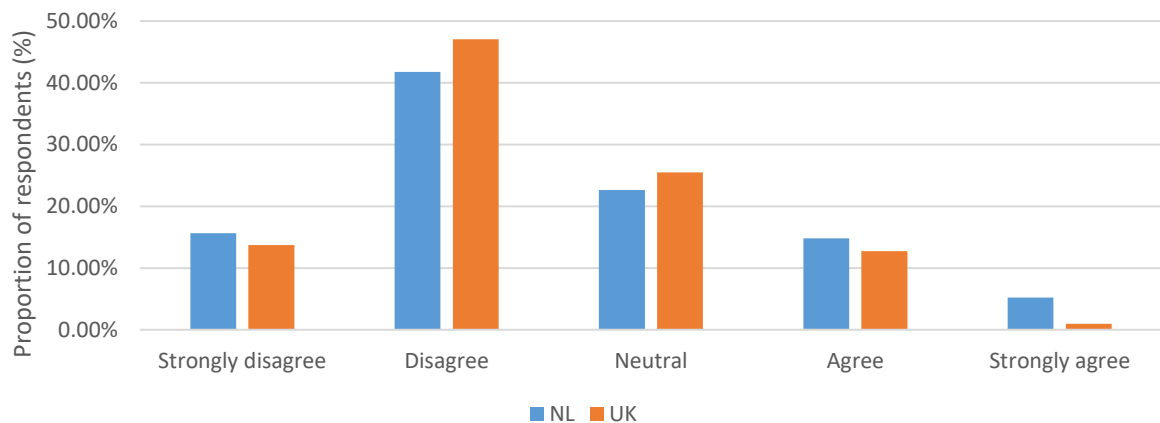
As in Figure 12, there is broad agreement that the government is responsible for promoting a healthy lifestyle (Netherlands 80% agree or strongly agree; UK 76%). There is slightly less consensus on this statement than the parental responsibility one, and seemingly less enthusiasm for this topic, as the "strongly agree" numbers are lower. This suggests a societal leaning towards expecting a healthy lifestyle to be promoted from the household/parents and caretakers, as opposed to (solely) the state and outside the home. This should therefore be reflected in the policy and what the governments of both countries choose to do to bolster public health. It is clear that multilevel stakeholder cooperation is expected by the populace to tackle the problem of obesity (Department of Health, 2012).

Figure 14 - "I think that the government has a responsibility to 'nudge' people to make better food choices."



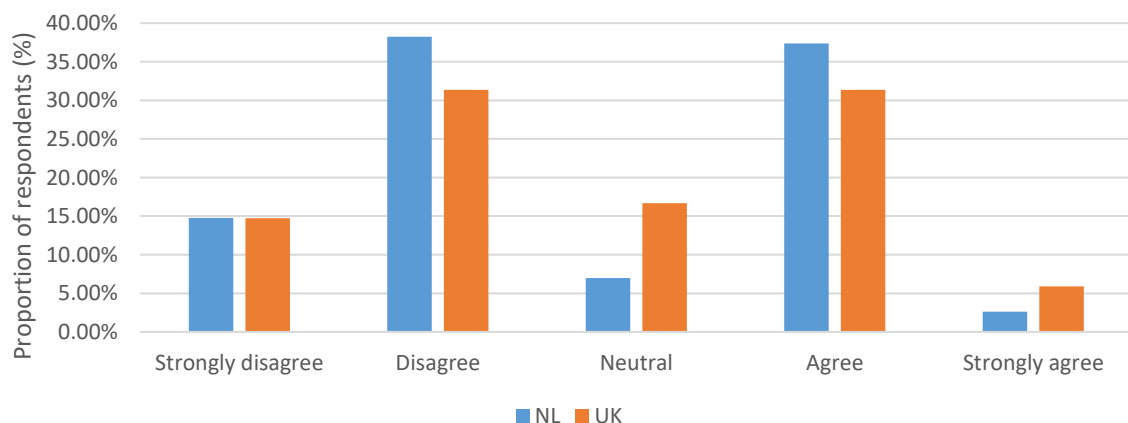
75-79% of each sample believe their government does have the responsibility to ‘nudge’ people towards healthier choices. This may represent either a broader societal acceptance of the rule of government to influence choices and public health, or simply a passing on of responsibility from individuals to the government.

Figure 15 - "I think the government has too much control over our food choices."



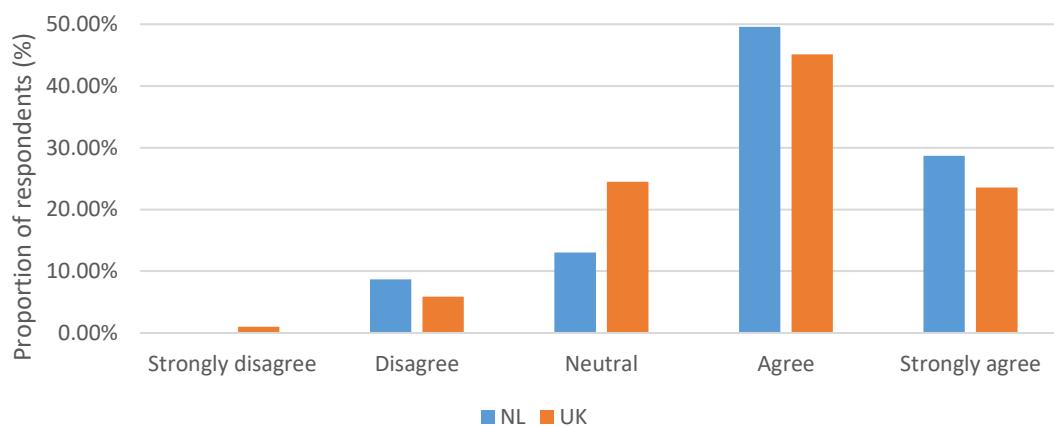
A minority of both samples – 20% in Netherlands, 14% in UK – felt that their government has too much control over food choices. The 57-61% who disagreed may be the people who favor more government intervention to nudge people to make healthy food choices.

Figure 16 - "In the supermarket, I often end up buying convenience foods that I had not intended to."



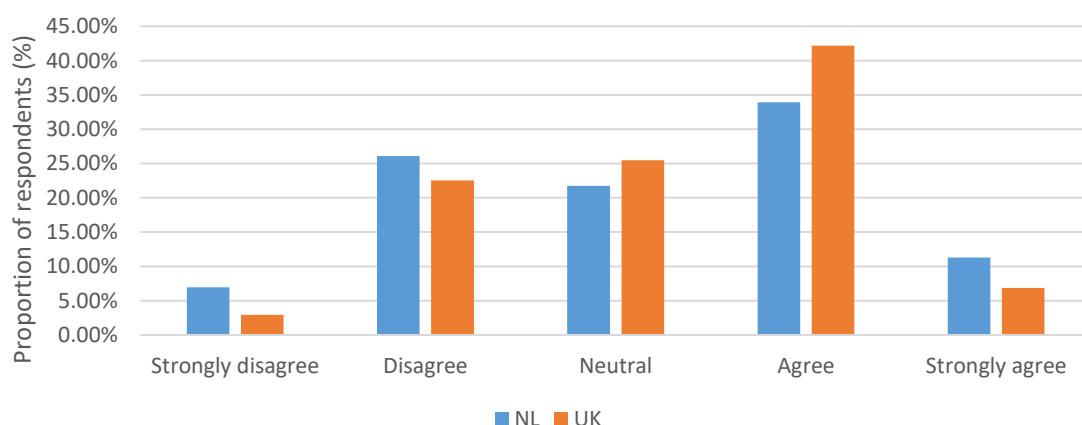
In other words: Are shoppers consciously being swayed by marketing campaigns to buy less healthy but more convenient products? Despite it not being a good thing to admit to, over one-third of each sample report that they do buy convenience foods without planning to.

Figure 17 - "I consciously choose healthier options in the supermarket."



The samples show approximately the same pattern, although there are more respondents in the UK who do not report consciously choosing healthier options in the supermarket. The 69-78% who do are prime targets for food manufacturers and marketing companies. Consumers that are actively seeking healthier alternatives mean there is a market for them. In addition, it demonstrates that if a range of healthy options are available for purchase, people will buy them. However, this does link back to the unintentional purchase of unhealthy and processed food question (Figure 16). With many people picking up items that were not on their list, this could affect how balanced and nutritious their diet is. This is particularly relevant when looking at ‘food deserts’ – places where the availability of healthy food is low, especially where fast food and convenience shops have replaced previous markets. Figure 17 shows the importance of having a variety of options, as most of the population *would* choose a healthy option if they can.

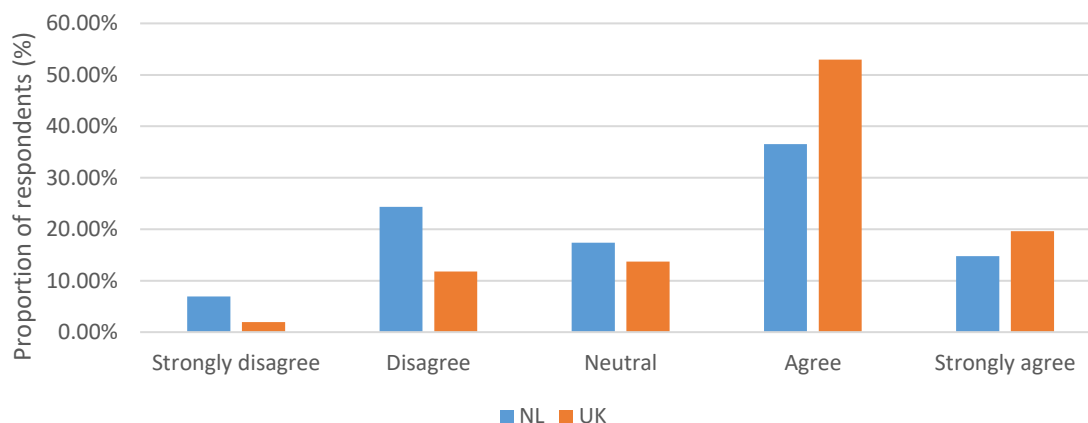
Figure 18 - "I would be willing to pay more for food and drink if I knew they were healthy."



Less than half the Dutch sample, and around one-half of the UK sample, would be willing to spend more on food and drink if it was for a healthier alternative. Without further background

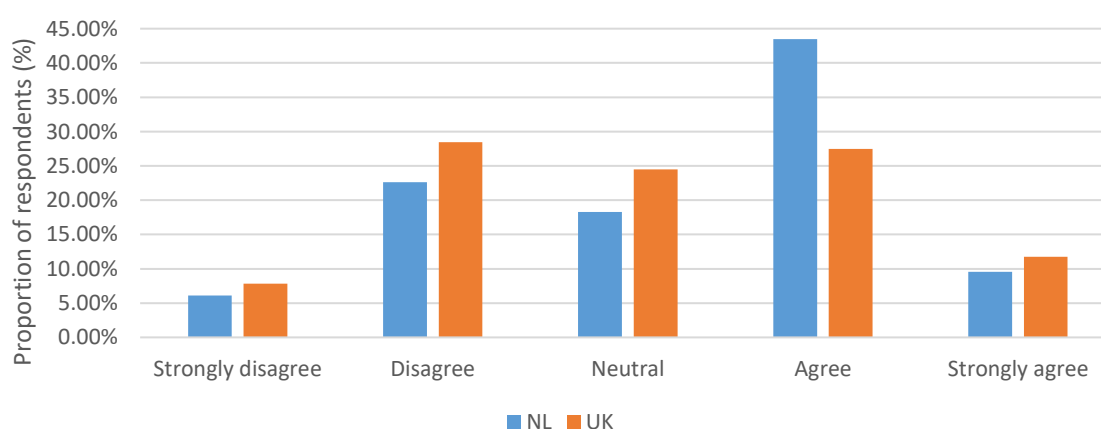
information, it is unclear why this is the case. There could potentially be a resistance to spending more than necessary on daily needs, or it could be that most polled households are unable to spend more than they currently do on food and drink.

Figure 19 - "I read the packaging of products in the supermarket before buying them."



Just over one-half of Netherlands respondents read food packaging. This potentially indicates a 50/50 split between health-conscious and not. In the UK this is not the case; 73% of respondents read food packaging. It may be that this population is more health-conscious, or that UK packaging is more accessible. In turn this may be the result of policies like enforcing traffic-light labeling, to make decisions about supermarket products quick and easy for consumers. Alternatively, this could be evidence *against* enforcing a traffic light labeling system in the Netherlands, as customers apparently do not habitually take note of nutritional information on packaging.

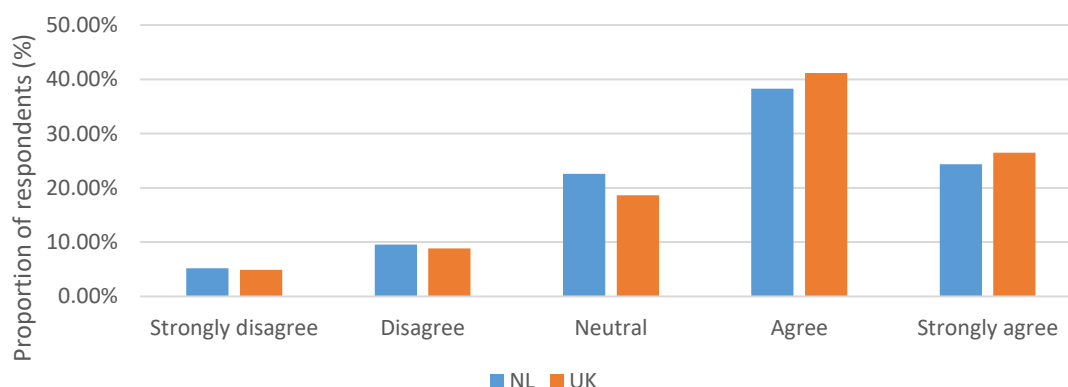
Figure 20 - "I am more likely to buy a product if the packaging specifies that it has no added sugar."



53% of the Netherlands sample claim they would be more likely to buy a product if it claims to contain no added sugar. This further suggests the 50/50 split between the sugar-conscious and those making no such conscious adjustments to their purchasing and consumption behaviors. This

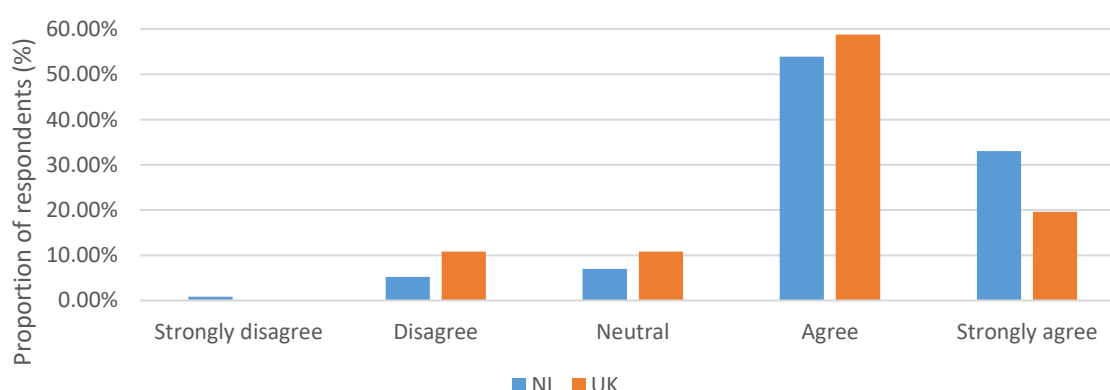
compares to only 39% of the UK sample, suggesting no added sugar variants would be less popular there. This contrasts the results about SSBs being less popular in the UK in favor of low-sugar or artificially sweetened soft drinks (Figures 1 and 2).

Figure 21 - "I find the use of nutritional information 'traffic lights' (red, yellow and green codes) on foods helpful."



The samples show very similar patterns, with a majority finding traffic light labelling on food and drink helpful. This is curious because in the Netherlands, this is not currently required for food and drink manufacturers. Further research could consider the barriers between this preference (62% of the respondents) and the lack of policy to reflect it. Within this discussion it is also worth noting the considerable role that trade lobbies can have in policymaking.

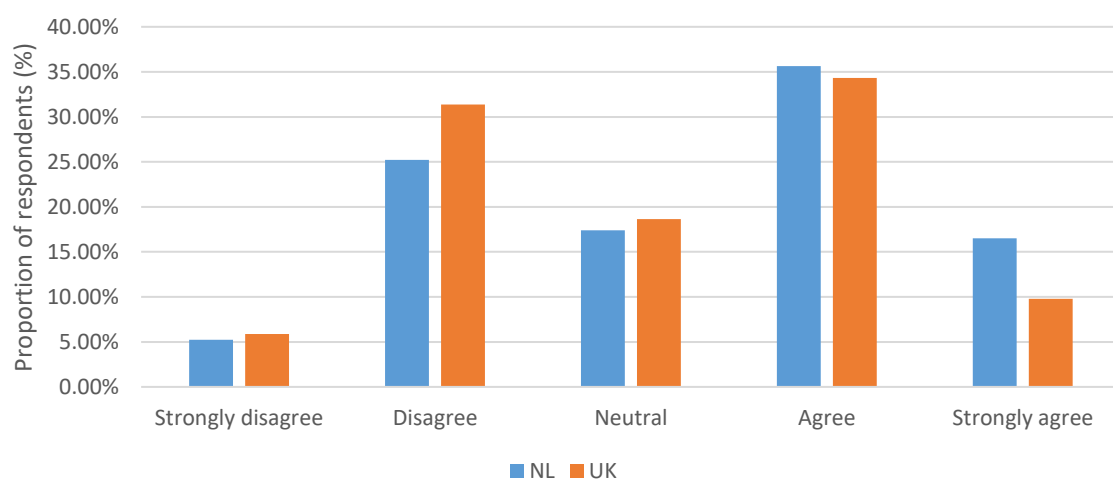
Figure 22 - "People are unknowingly consuming too much sugar because they don't know what is in their food."



78-87% of each sample agreed that so-called 'hidden sugars' are responsible for increased sugar consumption amongst the population. This should be a call to action for manufacturers and industry regulators to reduce the amount of added sugars in products, as the public holds them responsible for too-high sugar consumption (this echoes Figure 11). This should also be a nudge to make packaging clearer to show customers what products contain, so they can make better choices for their health.

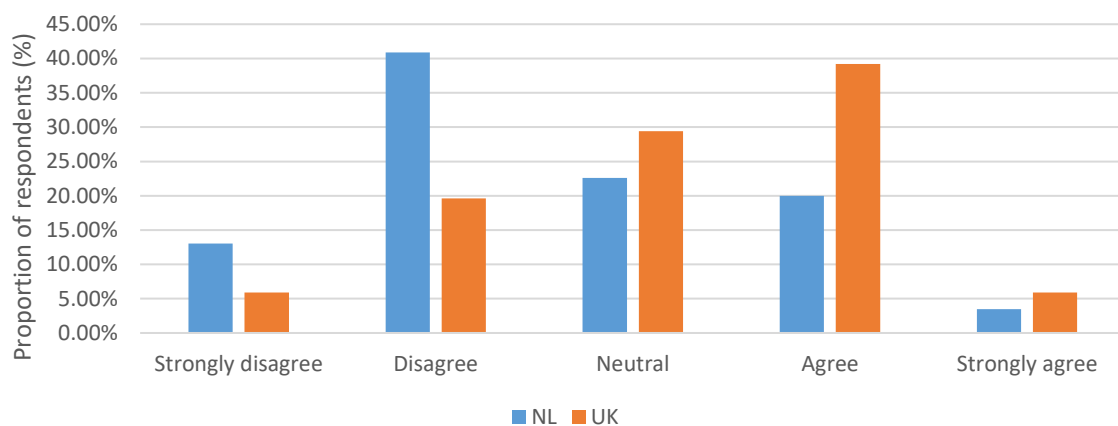
There is a discord here between public health and big business (trade lobbies, market leaders) seeking to profit more from convenience food – which stakeholder holds the biggest stake? Effectively this is a debate between policy and business. Another question that this result poses is whether choosing healthy food is a free choice if it is unclear what is in the products they buy. EU-wide guidelines stipulate that food products must display their nutritional content per 100g, however it is not always clear to consumers how many grams a portion is and how many portions are in the packet.

Figure 23 - "In my lifetime, I feel that food options have become less healthy."



The respondents were asked if they agree that 'In recent years, I feel that food options have become less healthy'. This trend has been observed by the media, but this question tests whether the populations also believe it to be true. Feelings around food options becoming less healthy over time are not as clear-cut: in the Netherlands 52% thought yes, and 30% said no, and in the UK 44% said yes and 37% said no.

Figure 24 - "If a person is overweight or obese, it is because of their own choices."



Asking whether people agree obesity is caused by an individual's own choices yielded a stark difference between the two samples. In the Netherlands, over half of respondents (54%) feel that there are other factors beyond a person's choice which contribute to obesity. This agrees with recent research about the effect that genetics has on likelihood to become obese, as well as cultural effects on food choices that fall outside the individual (Tamir, Cohen-Yogev, Furman-Assaf, & Endevelt, 2018). The UK figure, however, is almost a mirror image of the Netherlands' on the same question. Only 23% of the Dutch sample agree that being too heavy is an individual's own choice, compared to 45% of the UK sample. This is an interesting dichotomy between the two samples, suggesting that weight gain in the UK is more commonly attributed to the individual, or that Dutch residents feel multiple stakeholders are instead responsible for improving public health.



## Opinions on a potential sugar tax in the Netherlands, and on the newly-introduced sugar levy in the UK

The next section of the survey differed because of the differing policy context in the two countries researched. This subchapter reviews UK views on the newly-introduced sugar levy, and what the Dutch sample think about a *possible* sugar tax.

Figure 25a - Prior to completing this survey, had you heard about the Dutch Parliament discussing a sugar tax for the Netherlands?

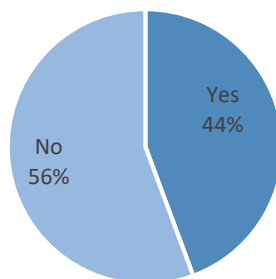
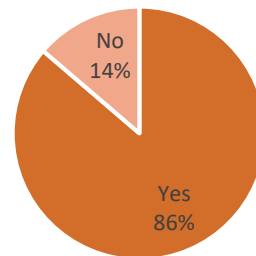


Figure 25b - On April 6, 2018, the Soft Drinks Industry Levy, or 'Sugar Tax' came into effect in the UK. Before completing this survey, were you aware of this?



More respondents have not heard of the sugar tax discussions and debates in the Dutch parliament than have heard of them, although it is nearly an even split (Figure 25a). If the public did not know that these discussions occurred, how could their opinion or disfavor have been the main reason that the topic was tabled? It appears that the public did not get a say in this decision.

An overwhelming majority (86%) of the UK sample had heard about the newly instated Sugar Tax (Figure 25b). This is promising because it shows wide public reach of the new policy.

Figure 26a - In general, would you be in favor of implementing a Sugar Tax in the Netherlands?

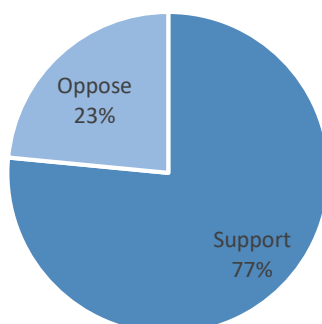
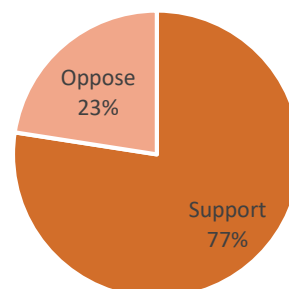


Figure 26b - In general, do you support or oppose the introduction of the Sugar Tax in the UK?



Almost as many people (77%) are in favor of the Sugar Tax (Figure 26b). Public opinion seems to favor the Sugar Tax when looking at the sample data.

Despite the topic not currently being entertained in Dutch parliament, 77% of respondents would be in favor of introducing an SSB sugar levy in the Netherlands (Figure 26a). If this sample were extended across the Netherlands, and measures taken to ensure its reliability, then this would be a call to place the topic back on the political agenda. The CDA allegedly lost votes because this issue was on the table – it must therefore be considered whether discussions can resume without interference from electoral schedules (Kamsma & Tuentner, 2018). The effect of the political cycle of 5 years on the outcome of policymaking is an important one to consider, especially when the issue being addressed transcends short timescales. When is the best time to discuss potentially controversial issues without affecting the electorate? It is important to remember when making policy recommendations that there are a lot of vested interests by different stakeholders, not all of which may be transparent to the public such as a re-election agenda vs. better public health. This brings up considerations again about the influence of trade lobbies on which policies are considered and enacted.

Some of the extended response open-questions were coded to allow the following analysis. The full tables of responses can be found in Appendix B. When asked about *why* they support the sugar levy, many UK respondents referenced children's health and nudging children to make healthier choices. Like the Netherlands, the most popular argument in favor of a sugar tax remains that it spurs companies to reduce the sugar content of their drinks (24%). This is in line with the government attesting that the intention of the tax was to trigger manufacturers to reduce sugar content (Warner, 2018).

In each sample some reference was made to the addictiveness of sugar being similar to that of tobacco, and hence the need to tax it prohibitively. This echoes the findings of Blecher (2015).

The biggest concern among UK Sugar Tax sceptics is the disproportionate effect it will have on the poor, who will be 'priced out' of the market for sugary drinks by this legislation. Although the two samples come from different policy contexts, it is curious that the top arguments presented on both sides of the argument are the same in both countries. This perhaps reflects a European unity of ideas, or a consequence of exposure to similar media in the two countries that could impact consumer opinion.

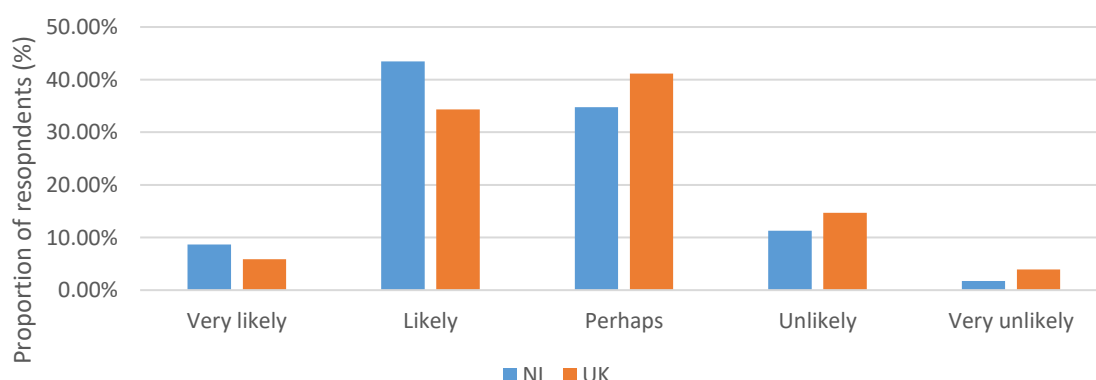
One sceptic of the sugar tax's success argued that the government are merely "joining the bandwagon" of sugar-free drinks after the population had already transitioned to consuming far less of them. This echoes the British Soft Drinks Association's assertion that "overall sugar intake dropped by over 8%" in 2012–2014" (Warner, 2018). Although not being a majority opinion raised in this sample, this does bring into question the cause vs. consequence nature of the sugar tax that so far in this dissertation has been taken for granted. Is it that the SSB levy is reducing

consumption, or is the falling out of favor of SSBs what is prompting governments to respond with a tax to prevent them rising again? The time-independent nature of the present study cannot conclusively answer this question.

The top three arguments given in favor of introducing a sugar tax in the Netherlands were that: it would push food manufacturers to reduce their products' sugar content (21%); it would raise awareness among consumers about the sugar content of their food and drink (15%); and it could improve public health and promote a healthier lifestyle (10%). In contrast, the most frequently cited arguments against introducing a sugar tax in the Netherlands were that the government should not intervene in consumer choices (7%); it would perpetuate or exacerbate (income) inequality between households who can afford to continue buying high-sugar foods and those who cannot (5%); and the prices of fresh produce and unprocessed food should instead be lowered or subsidized and their accessibility guaranteed (3%). For many households this would reduce the attraction of high-sugar and/or processed products, and shift consumption towards healthier options. This is in line with earlier findings that 60% of the sample do not consume the recommended five portions of fruit and vegetables daily (Figure 7). If they were more affordable, consumption would be expected to rise.

A popular concern among respondents opposing a new tax were the impact it would have on low-income households. In addition, many respondents brought forward alternative potential solutions to excessive sugar consumption and overweight that the sugar tax intervention neglects, including providing better food and cookery education to adults.

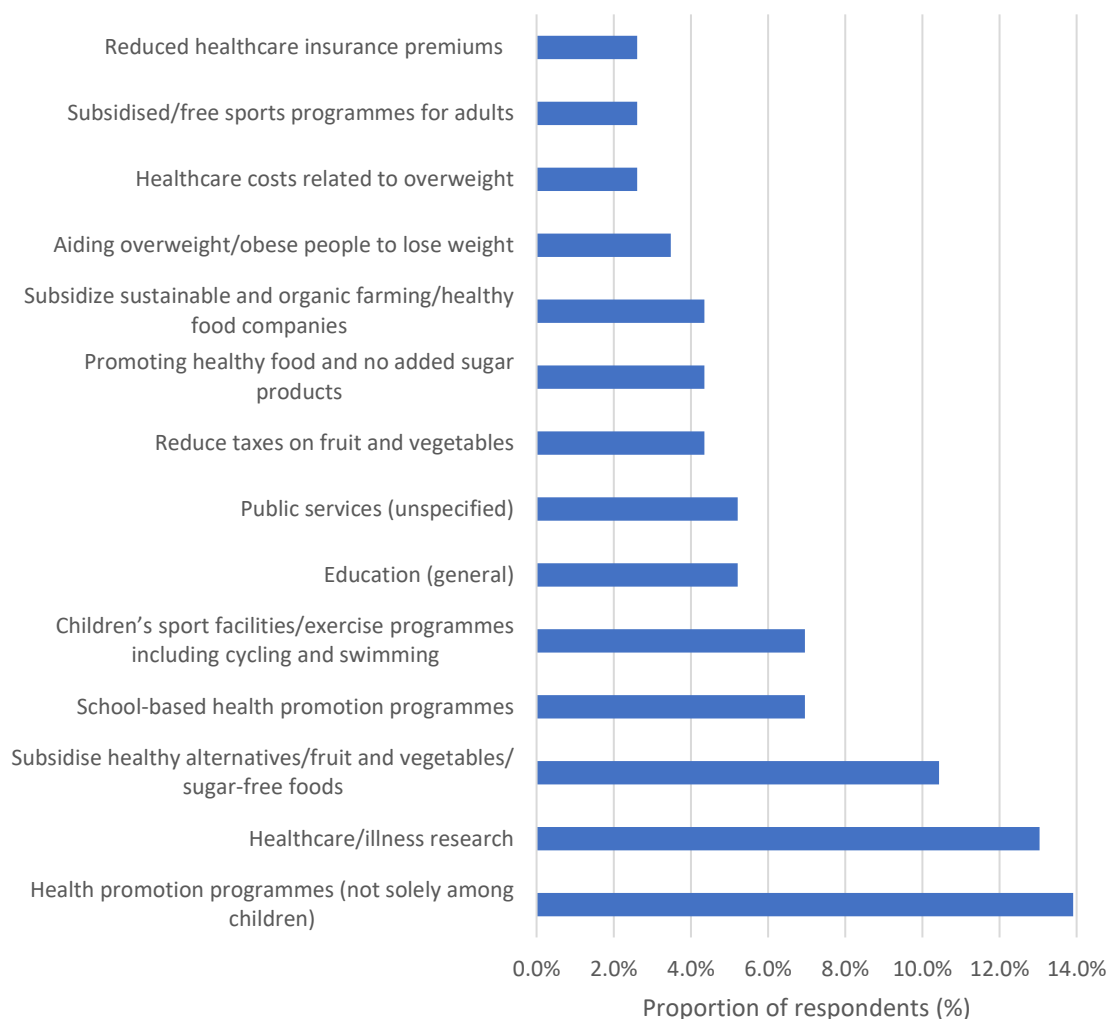
Figure 27 - How likely do you think it is that a higher price of sugar-sweetened soft drinks will make people choose a lower sugar alternative?



The survey also asked whether the proposed sugar tax would be effective (Figure 27). 52% of Netherlands respondents find it likely or very likely that a sugar tax would nudge people to choose a lower-sugar alternative when buying soft drinks, and a further 35% find it possible. This means

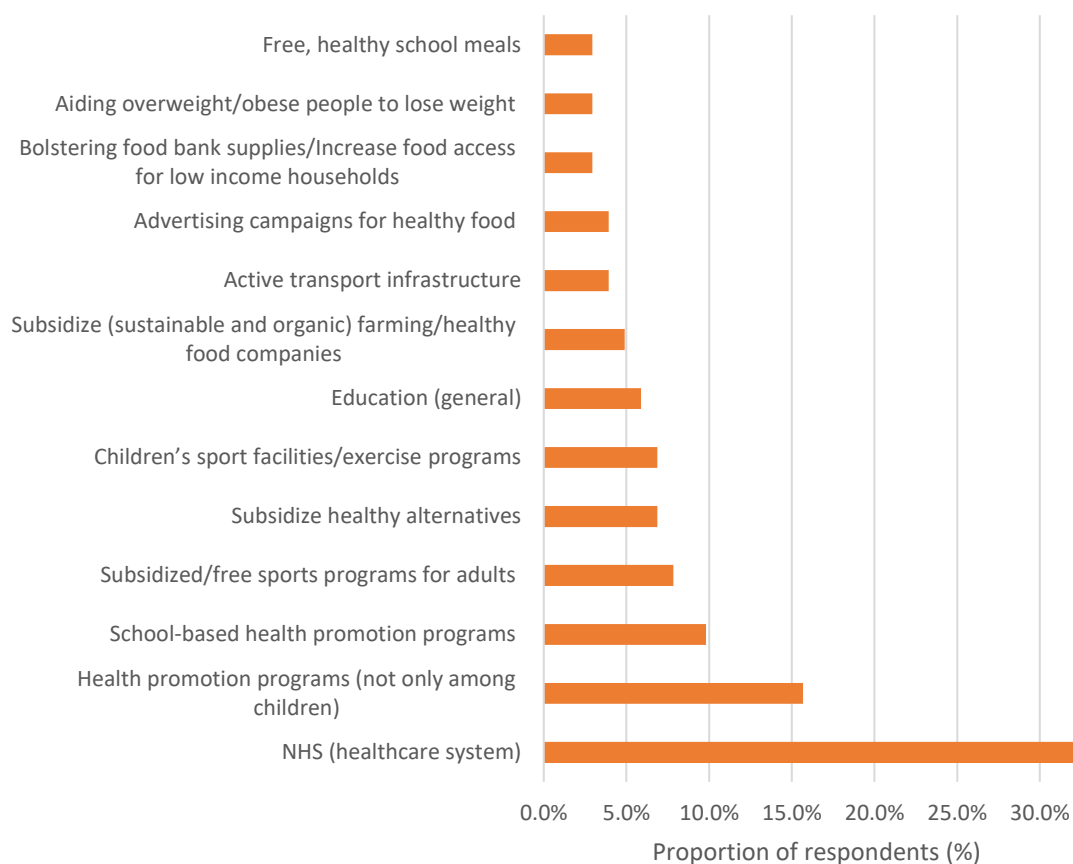
to say that, of this sample, a small majority are convinced of the (intended) benefit of an SSB sugar levy like the UK's if it were introduced in the Netherlands.

Figure 28a - If a Sugar Tax were to be introduced in the Netherlands, how do you think the government should spend the proceeds?



The most popular preferred destinations of proceeds raised by a potential sugar tax are on health promotion programs that are not exclusively for children (14%), healthcare and illness research (13%), and subsidizing healthy alternatives to high-sugar products (10%) (Figure 28a). It is also worth noting that school-based health promotion programs are the fourth most popular response. This reflects a high value placed on the role of schools to promote a healthy lifestyle. Although Figure 12 shows that most people find parents to be a significant determinant of a healthy lifestyle, few of the potential spending options incorporate children learning from or with their parents. Instead, segregated in-school or adult-oriented cooking and health promotion programs effectively sever this link.

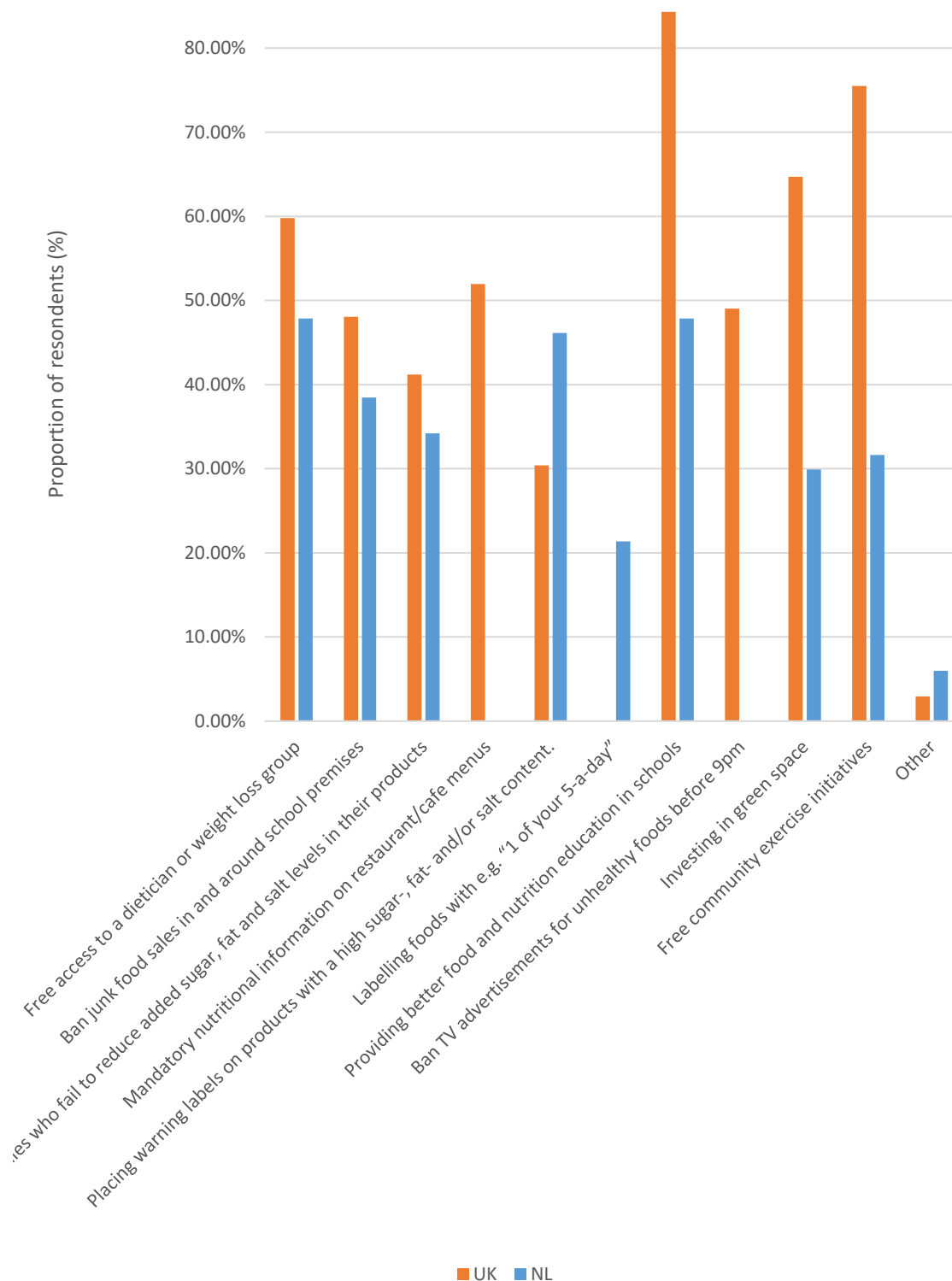
Figure 28b - How do you think the UK government should spend the proceeds of the Sugar Tax?



By far the most popular preferred designation for the proceeds of the UK's sugar tax is the national health system (NHS) (32%). Support for this cause may have been bolstered by recent campaigns and public awareness of funding concerns within the NHS. The next most frequent responses were health promotion programs (not solely among children) such as educating parents and adults (16%), and school-based health promotion programs (10%). At the same time, there has been resistance to the intended destination of the funds, namely school sports programs, by people who feel that school funding cuts are being bolstered by this unreliable new income source (BBC News, 2017).

## Initiatives to combat obesity and overweight

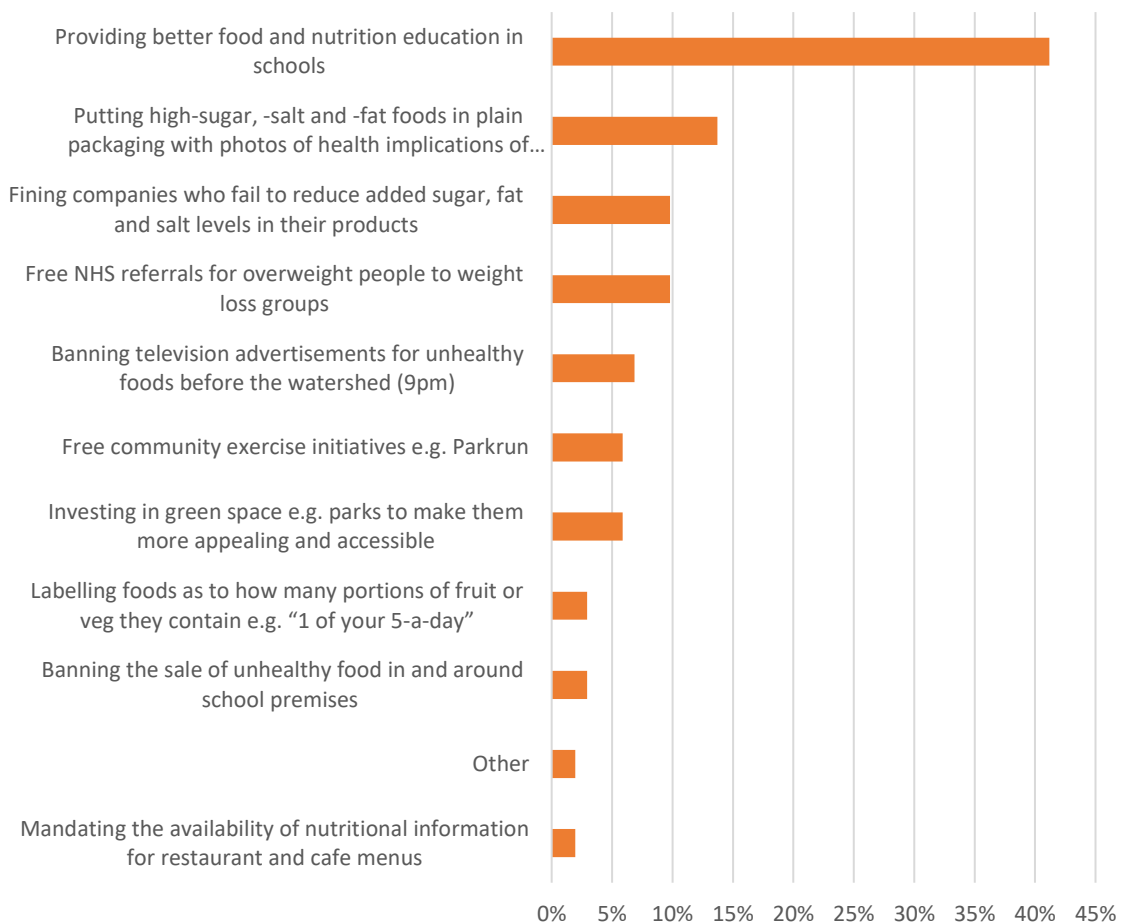
Figure 29 - Which, if any, of the following initiatives do you think have the potential to significantly reduce obesity?



Later in the questionnaire, when prompted with multiple-choice options of initiatives to improve health, the top three most popular responses in the Netherlands were: free access to a dietician in

the basic healthcare package (48%); providing better food and nutritional education in schools (48%); and placing warning labels on products with a high sugar-, fat- and/or salt content (46%) (Figure 30). This suggests that the Dutch hold schools, food manufacturers and healthcare providers accountable for preventing obesity, in approximately equal measure. In comparison, the UK sample rated providing better food and nutrition education in schools as most potentially impactful (84%). Free community exercise regimes (75%), investments in green space (65%) and free NHS referrals to weight loss groups (60%) also proved popular options. This echoes the sentiment that weight gain is primarily attributed to the individual in the UK, as shown in Figure 24.

Figure 30 - Which single initiative do you think would have the greatest impact on obesity levels? (Question exempt from the Netherlands survey)



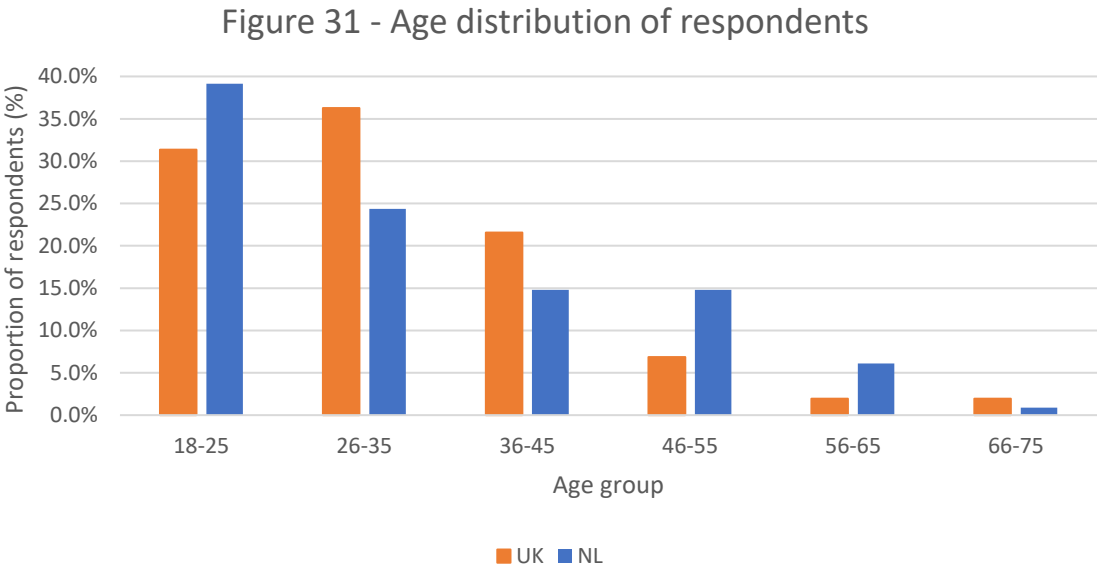
When asked to nominate only one initiative that would have the greatest impact on obesity, by far the most popular response was providing better food and nutrition education in schools (Figure 30). To some extent, this reflects what the Dutch sample had also said – the population tends to hold schools responsible for promoting public health.

In the Netherlands, the most recalled weight control initiatives seem to be those that promote moving more or exercise (7%; see Appendix B). In addition, rules on consumption of unhealthy food and drink within schools was noted by some respondents, as was the addition of some dietician access within the basic Dutch healthcare package (3% apiece). The most commonly recalled obesity-fighting initiatives in the UK were TV adverts (8%). Most of these are produced by the NHS and provide a variety of messages relating to the importance of physical activity, a healthy diet, and the health risks of obesity. The joint-2<sup>nd</sup> most mentioned initiatives were Change4Life, an NHS program oriented towards children and their families, and Couch 2 5k, another program endorsed by the NHS to get people to start running up to 5 kilometers. Both were mentioned by 6% of respondents. Although they were among the most common responses, this by no means suggests a wide recognition of these NHS-endorsed health promotion programs. This leaves much scope for boosting the public profile of these programs. Alternatively, this research could have probed with images of these campaigns' mascots or logos and asked respondents first whether they recognize them, and secondly what they promote. This approach would have given a more complete picture of how successful media campaigns are in getting the public to understand their message. As it stands, this research gives an overview of what the public recollects from obesity prevention campaigns. There is consensus among the two samples that addressing healthy diet and sugar consumption should be sooner rather than later; ideally in the formal education setting but at least during childhood. This represents a broader opinion that health should be instated from childhood onwards, and the most impactful policies are those that target children e.g. a sugar tax, energy drink ban for under-16s, or television advertising banned before the 9pm watershed (e.g. Levy, Friend and Wang, 2011; Levy, 2013; and Public Health England, 2018).

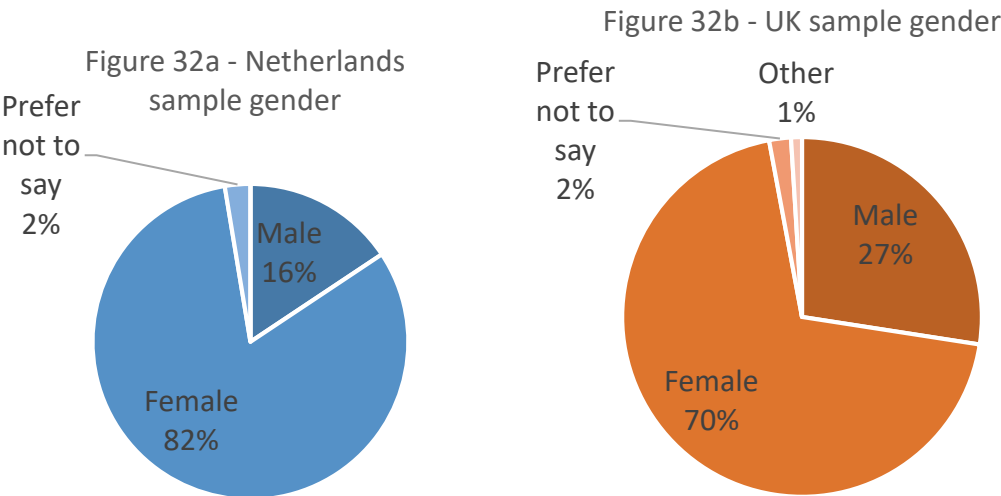
The open-response question yielded several insights into existing health promotion initiatives within the UK. "Couch 2 5K is a great initiative. It's hopeful and inspiring rather than punitive." This respondent, a 33-year-old female, asserts the value of positivity in boosting health. "The Change4Life advert about not just sitting on the couch but getting out and being active as a family." This 40-year-old female instead emphasizes the social aspect of getting healthier. In addition, some health promotion can be inadvertent: one 27-year-old female responded, "There are regular news reports about the dangers of obesity, but I don't think this is a deliberate initiative." Another respondent claimed that "Monitoring of children's weight at school [...] was not well thought out - letters sent to parents if their child was deemed 'overweight' but no support or follow up." This demonstrates the need for initiatives to have a designated purpose and be easy to enact. Lastly, another 27-year-old female respondent found that the price of nutritious food can be overwhelming: "You can't judge unhealthy households when crisps, fizzy drinks, biscuits, microwave meals are half the price of fruit and veg!"



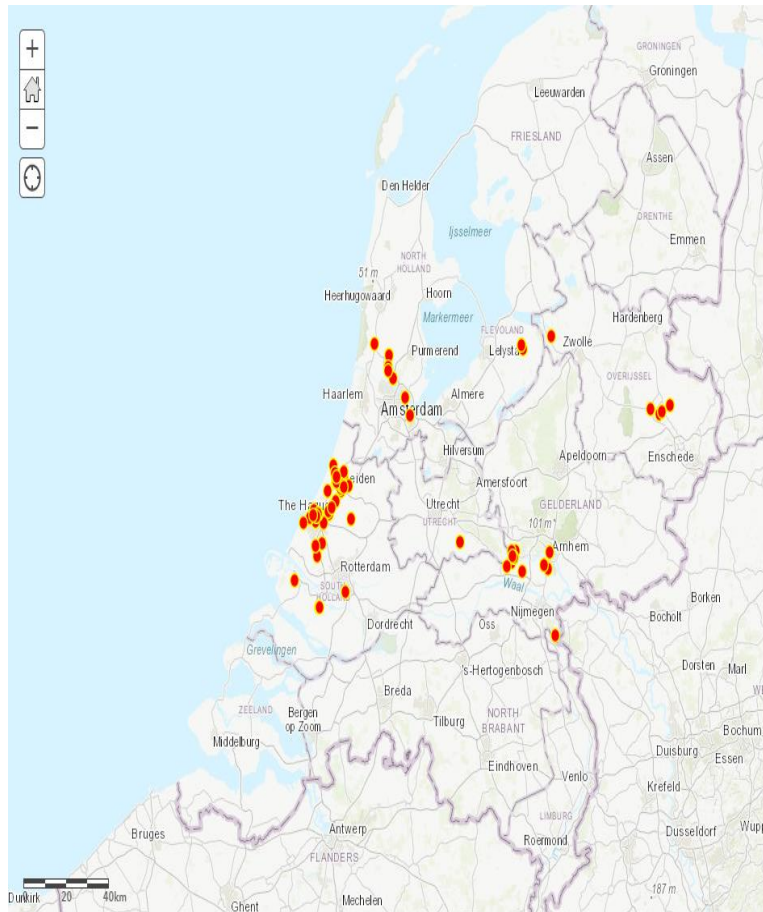
Sample characteristics



Much of the Netherlands (63%) sample was aged under 35, with almost 40% being in the 18-25 range (Figure 31). This is not necessarily a bad thing as these are the people who are setting out as adults for the first time and therefore responsible for making their own food decisions. It must, however, be considered when evaluating the data, that most of it comes from young people. The UK sample has a similar age distribution to that seen in the Netherlands population; most respondents are young (68% under age 36) and an average age of 32 across the sample compared to 33 in the Netherlands sample. Sources of this age bias may be the way the data was collected, namely by recruiting respondents via Facebook which is a social network used mainly by young people. This could have been foreseen at the planning stage but recruiting respondents another way would not have yielded as much data with anonymity and geographic spread.



In Figure 32a, it is visible that over 80% of the Netherlands sample was female. This is potentially problematic as it limits the external validity of the results, and means it is not a representative sample of the roughly 50/50 gender split population of the Netherlands. However, it should be considered that women are probably more likely to find and complete surveys via Facebook, which was the chosen recruitment method, and may be more likely to be responsible for groceries for their households. The UK exhibits the same skew albeit to a lesser extent: 70% of respondents were female and 28% male.



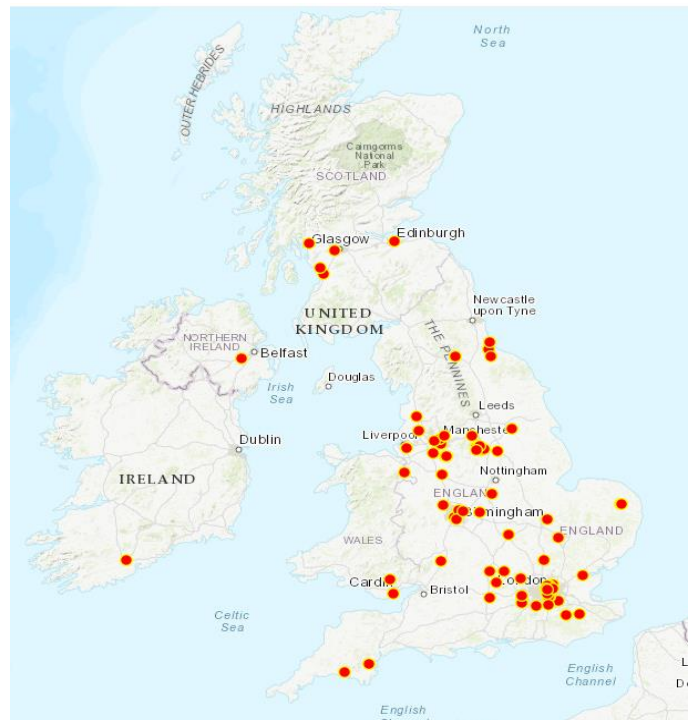
**Figure 33a – Self-reported postcodes of respondents, Netherlands survey**

Figure 33a shows the geographical spread of respondents, from those who chose to leave their home postcode on the survey. 93/115 people provided a postcode within the Netherlands. The other respondents were aware that survey eligibility was based on Netherlands residency but did not provide a postcode for the geolocation of their data.

**Figure 33b – Self-reported postcodes of respondents, UK survey**

Figure 33b maps the spread of the UK data, again based on respondents choosing to leave their home postcode at the end of the survey (87/102).

From 33a we see that most of the Dutch data comes from the cities in the Randstad, with some also coming from the east of the country. This is not necessarily to say it is not representative of the country though, as the population is also concentrated in the Randstad. In the UK (Figure 34b), we also see that our data is quite spatially broad, with a good range of home locations of respondents. With an



approximate spread across the country, location bias is reduced and the sample becomes more representative.

### Validity of results/sample scrutiny

There are several issues with the results gathered from this research method that reduce its ability to be extended to be valid to the broader British and Dutch populations. Firstly, both samples mainly represent women, and mainly young people. For elaboration on the impacts of this, see the subchapter *Results – Sample characteristics* above. In addition, maps 33a and b show that most respondents live in urban areas. This may not be problematic or unrepresentative however, as most of both populations are urban, and urban areas are the most common sites for selling and marketing sugar-added food and drinks.

Further nuances that could have been incorporated with this dataset could be to compare the sample households with how many adults and children are typically part of a household, and whether their household grocery spending is typical of the broader population. Doing so with the current sample size, however, risks overgeneralizing based on few cases of so many different household structures.

It must also be considered that all the data collected in this survey was self-reported rather than observational data where respondents do not have the opportunity to fictionalize their information or amend their results due to recall bias. This means that there may be systematic response biases that have not been considered. Unfortunately, it was outside the scope of this research to conduct

consumer research without it being reported by the consumers themselves. One study that used a randomized controlled trial to assess the impacts of a sugar tax was Waterlander et al.'s 2014 study. They found reduced consumption and no negative side-effects when a sugar tax was imposed, although this is the only study of its kind so requires further research to be reliable (Waterlander, Ni Mhurchu, & Steenhuis, 2014).

In addition, self-selection of participation and voluntary non-completion of the survey on seeing its topic may have systematically excluded groups of the population, for example those who are uncomfortable with talking about bodyweight. This was attempted to be reduced in the questionnaire-writing process by never asking respondents about their own weight and avoiding uncomfortable questions on their income and ethnic and political backgrounds.

Finally, one person in the UK survey logged their home postcode as being in the south of the Republic of Ireland (Figure 33b). This means that either they mistyped their postcode, or there may have been participants who did not meet the eligibility criteria of being resident in the United Kingdom. This is a risk arising from self-selection of participation.

## Conclusions

Regardless of whether action was taken through means of policy or through market negotiations, all EU Member States mentioned in the literature review except for Denmark have had success in reducing their population's sugar intake from SSBs. In both scenarios the SSB manufacturers become heavily involved in the process of reformulation in order to stay competitive, regardless of what their views on the policies are. This bodes well for both the United Kingdom as well as the Netherlands, who have chosen to intervene through means of policy and market negotiations respectively. Previous case studies suggest they can both expect successes from these policy responses. However, it must be said that the data currently available only indicates a decline in sugar consumption, but not necessarily a decline in obesity levels. It is currently unclear as to why this is the case. There is a distinct possibility that the cravings for sugar are now sated through consumption of other products rather than SSBs, or merely that not enough time has passed to determine a causal relationship of reduced obesity rates. The primary research undertaken in this study also cannot extrapolate to this level. The primary data collected does highlight the juxtaposition between itself and the secondary research, however. There is a distinct lack of dialogue in these discussions between a population and the government as well as SSB manufacturers or more broadly, the trade lobbies. While arguably an equal stakeholder in this debate, the population rarely gets a seat at the table and is thus severely underrepresented in current data. The matter is seen as something between the government and the manufacturers only, even though any intervention is under the guise of improving the health and safety of the public. The primary research done for this report starts to fill this knowledge gap. The research methods adopted sought to answer the research question "To what extent does public opinion in the Netherlands and in the United Kingdom either correspond or contrast to policy approaches being taken by their governments to curb consumption of sugar-sweetened beverages (SSBs)?" The most important findings of the survey data include that both the population of the United Kingdom as well as that of the Netherlands greatly underestimate the prevalence of overweight individuals in their population. Also of considerable interest is the fact that respondents from the UK put the onus on the individual for causing and resolving overweight, whereas the respondents from the Netherlands believe in a more social approach. Otherwise, the two nations had strikingly similar opinions on causes and solutions to the question of overweight and obesity. This suggests that public opinion is not solely linked to a nation's policy context. While both samples agreed that a sugar tax could absolutely cut down on the consumption of SSBs, they also fully acknowledged that it is not an ultimate solution that the governments have presented it to be. Health education programs for young and old could sway a purchase choice without the needs for price hikes or changing of formula, and subsidizing sporting initiatives could certainly motivate people to get off the couch with their soda beverage, and into the gym with a water bottle. If we want the next WHO report to show significant change, the population should be leading the conversation. In the

end, it is them that make the difference. This study's focus on the public as a key stakeholder group reduces the research gap in this field. Nevertheless, there are further steps for policymakers based on the study's findings, and these are explored in the following chapter.

## Policy Recommendations

There are many policy recommendations to be made, mostly due to insufficient data in this field of research. Proper long-term investment into researching the health effects of artificial sweeteners are vital if governments are continuing to see these chemicals as *the* solution to rising obesity levels. Sugar-free does not necessarily mean worry-free or healthy, and governments and manufacturers alike should be clear in this. It may be an idea to follow in the footsteps of France, by also taxing the artificially-sweetened drinks. In doing so, one alleviates the potential worries of the population and dispels the false narrative of artificial sweeteners being healthy or in fact good for you. This in turn could create an incentive to buy truly healthy products, that contain little to no artificial or otherwise harmful ingredients. It becomes clear when listening to the respondents that health problems are not merely related to the range of options available in general, but rather the range of options available to *them*. It is commonly the unhealthiest food items that are the cheapest, and it is only natural that these items are the ones being purchased by low-income households. Arguments were made in the survey that the sugar tax is essentially a tax on the poor, as they were predominantly the demographic buying these sugar-laden foods and beverages. In order to rule out the (perhaps accidental) separation of economic classes, a thorough look at the possibilities for market incentives in order to make whole foods and unprocessed foods more affordable is highly recommended. Perhaps the money raised from a sugar tax could be redirected to subsidize the healthier alternatives. Poverty is woven even deeper into the problem of obesity, however. Obesity can be symptomatic of a plethora of other problems including stress. While the saying goes that money does not create happiness, it can sure alleviate good amounts of worry. A study could certainly be done into the perpetuation of ill-health in working class communities, and if for example raising the basic income for these households would contribute to their mental, and thus also physical wellbeing.

Besides recommendations towards policymakers, there are certainly recommendations to be made towards further researching this topic for the same reasons as mentioned above. Despite moderate concerns about the external validity of this study's samples, the depth and breadth of information discovered using this research method demonstrates that should this research be developed and distributed in a more representative way – for example through channels such as YouGov or the Consumentenbond – a wealth of relevant policy feedback can be gathered in a short period of time. This is invaluable for policymakers as it invites the public into the discussions, providing suggestions and information without costing a great deal of time. When doing so, however, it should take into account the cultural and socioeconomic context of respondents. This was not done here as it was considered non-essential, and in fact doing so may have led to certain groups being put off from participating. However, it could create considerable insight into the socio-economic patterns regarding this topic in follow-up research.

All in all, the samples from the UK and the Netherlands have provided a multitude of insights into what these populations think about policy interventions for sugar consumption reduction. Going forward, this research can be used to bolster or base future research, and enact new policy that reflects the public's preferences, considers their concerns, and improves public health.



## References

- AD. (2017, March 10). *Sprite wordt 'suikervrij'*. Retrieved from AD:  
<https://www.ad.nl/binnenland/sprite-wordt-suikervrij~ab039a2d/>
- Agence France-Presse. (2016, October 15). *Portugal to levy sugar tax on soft drinks in 2017*. Retrieved from The Guardian:  
<https://www.theguardian.com/society/2016/oct/15/portugal-to-levy-sugar-tax-on-soft-drinks-in-2017>
- Ajjaji, F., & Ong, J. (2015). *The sugar tax in Holland*. Utrecht: Universiteit Utrecht.
- Arthur, R. (2018, April 6). *Sugar tax comes into effect in the UK*. Retrieved from Beverage Daily: <https://www.beveragedaily.com/Article/2018/04/06/Sugar-tax-comes-into-effect-in-the-UK>
- Baquero, C. S. (2017, May 2). *Catalonia region introduces "soda tax" on sugary drinks*. Retrieved from El Pais:  
[https://elpais.com/elpais/2017/05/01/inenglish/1493645507\\_575034.html](https://elpais.com/elpais/2017/05/01/inenglish/1493645507_575034.html)
- BBC News. (2017, July 27). *Sugar tax 'must not be used to plug school budgets'*. Retrieved from [bbc.co.uk](http://bbc.co.uk): <https://www.bbc.co.uk/news/education-40726838>
- Blecher, E. (2015). Taxes on tobacco, alcohol and sugar sweetened beverages: Linkages and lessons learned. *Social Science & Medicine*, 175-179.  
doi:10.1016/j.socscimed.2015.05.022.
- Brands, A. (2018, April 16). *Komt er ook een suikertaks op frisdrank in Nederland?* Retrieved from NOS: <https://nos.nl/artikel/2227651-komt-er-ook-een-suikertaks-op-frisdrank-in-nederland.html>
- British Soft Drinks Association. (2016). *The economic impact of the soft drinks levy*. London: Oxford Economics. Retrieved from  
[http://www.britishsoftdrinks.com/write/MediaUploads/Publications/The\\_Economic\\_Impact\\_of\\_the\\_Soft\\_Drinks\\_Levy.pdf](http://www.britishsoftdrinks.com/write/MediaUploads/Publications/The_Economic_Impact_of_the_Soft_Drinks_Levy.pdf)
- Campbell, D. (2016, March 18). *Sugar tax: financially regressive but progressive for health?* Retrieved from The Guardian: <https://www.theguardian.com/society/2016/mar/18/sugar-tax-financially-regressive-but-progressive-for-health>
- Cancer Research UK. (2017). *Overweight and obesity by sex and UK country*. Retrieved from Cancer Research UK: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/risk/overweight-and-obesity#heading-One>
- Capacci, S., Allais, O., Bonnet, C., & Mazzocchi, M. (2016, April 15). *The impact of the French soda tax on prices, purchases and tastes: an ex post evaluation*. Retrieved from Toulouse School of Economics: <https://www.tse-fr.eu/sites/default/files/TSE/documents/sem2017/food/mazzochi.pdf>
- CBS-Statline. (2018). *Overgewicht volwassenen*. Retrieved from [volksgezondheidzorg.info](http://volksgezondheidzorg.info):  
<https://www.volksgezondheidzorg.info/onderwerp/overgewicht/cijfers-context/huidige-situatie#node-overgewicht-volwassenen>
- Consumentenbond. (2018). *Veel te veel suiker*. Retrieved from [consumentenbond.nl](http://consumentenbond.nl):  
<https://www.consumentenbond.nl/acties/suiker>

- Dearden, L. (2017, November 11). *UK named most overweight nation in Western Europe as obesity rate rises faster than US*. Retrieved from The Independent: <http://www.independent.co.uk/news/health/uk-obesity-rate-rising-overweight-worst-country-western-europe-world-us-ranking-oecd-research-a8049451.html>
- Department of Health. (2012). *An update on the government's approach to tackling obesity*. London: National Audit Office. Retrieved from [https://www.nao.org.uk/wp-content/uploads/2012/07/tackling\\_obesity\\_update.pdf](https://www.nao.org.uk/wp-content/uploads/2012/07/tackling_obesity_update.pdf)
- Department of Health Ireland. (2016, October). *Introducing a tax on sugar sweetened drinks*. Retrieved from [health.gov.ie/](http://health.gov.ie/): <https://health.gov.ie/wp-content/uploads/2016/10/INTRODUCING-A-TAX-ON-SUGAR-SWEETENED-DRINKS-FINAL-FOR-PUBLICATION.pdf>
- Diabetes Fonds. (2018, July 3). *'Fabrikanten gebruiken te veel suiker'*. Retrieved from [diabetesfonds.nl](http://diabetesfonds.nl/): <https://www.diabetesfonds.nl/minder-suiker/nieuws/fabrikanten-gebruiken-te-veel-suiker>
- Diabetes.co.uk. (2017). *The 2018 UK sugar tax*. Retrieved from Diabetes.co.uk: <https://www.diabetes.co.uk/nutrition/2018-uk-sugar-tax.html>
- Eurostat. (2015). *Overweight and obesity - BMI statistics*. Retrieved from European Commission: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Overweight\\_and\\_obesity\\_-\\_BMI\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Overweight_and_obesity_-_BMI_statistics)
- Finkelstein, E., Zhen, C., Bilger, M., Nonnemaker, J., Farooqui, A., & Todd, J. (2013, March). Implications of a sugar-sweetened beverage (SSB) tax when substitutions to non-beverage Items are considered. *Journal of Health Economics*, 219-239. doi:10.1016/j.jhealeco.2012.10.005.
- FoodBevMedia. (2018, January 19). *Lithuania puts sugar tax on hold after uniting with manufacturers*. Retrieved from FoodBev.com: <https://www.foodbev.com/news/lithuania-puts-sugar-tax-hold-uniting-manufacturers/>
- Foster, K. (2017, March 8). *Budget 2017 : New sugar tax confirmed by Philip Hammond in fight to combat rising obesity*. Retrieved from [independent.co.uk](http://independent.co.uk): <https://www.independent.co.uk/news/uk/politics/budget-2017-sugar-tax-philip-hammond-fight-obesity-child-weight-gain-fizzy-drinks-a7618316.html>
- Han, E. (2018, January 8). *Dozens of countries now tax sugary drinks but sweet-toothed Australia isn't interested*. Retrieved from The Sydney Morning Herald: <https://www.smh.com.au/healthcare/dozens-of-countries-now-tax-sugary-drinks-but-sweettoothed-australia-isnt-interested-20180103-h0cv21.html>
- Heller, F. (2017, August 17). *Reducir los azúcares añadidos a las bebidas en la UE: reto para 2020*. Retrieved from EuroEFE: [http://euroefe.euractiv.es/5943\\_infografias/4742181\\_reducir-los-azucares-anadidos-a-las-bebidas-en-la-ue-reto-para-2020.html](http://euroefe.euractiv.es/5943_infografias/4742181_reducir-los-azucares-anadidos-a-las-bebidas-en-la-ue-reto-para-2020.html)
- HM Revenue and Customs. (2018, April 3). *Check if your drink is liable for the Soft Drinks Industry Levy*. Retrieved from GOV.UK: <https://www.gov.uk/guidance/check-if-your-drink-is-liable-for-the-soft-drinks-industry-levy>
- Kamsma, M., & Tuentner, G. (2018, March 1). *Een suikertaks? Nederland is nog niet zover*. Retrieved from NRC.nl: <https://www.nrc.nl/nieuws/2018/03/01/een-suikertaks-nederland-is-nog-niet-zover-a1594090>

- Levy, D. T. (2013). Simulation Modeling of Policies Directed at Youth Sugar-Sweetened Beverage Consumption. *American Journal of Community Psychology*, 299-313.
- Levy, D., Friend, K., & Wang, Y. (2011, March). A Review of the Literature on Policies Directed at the Youth Consumption of Sugar Sweetened Beverages. *Advances in nutrition*, 182S-200S. doi:10.3945/an.111.000356.
- MacGuill, D. (2017, October 10). *FactCheck: Do taxes on sugary drinks actually work?* Retrieved from The Journal: <http://www.thejournal.ie/sugar-soft-drinks-tax-does-it-work-health-benefits-facts-2918363-Oct2017/>
- McKinsey Global Institute. (2014). *How the world could better fight obesity*. Philadelphia: McKinset Global Institute. Retrieved from [http://www.mckinsey.com/insights/economic\\_studies/how\\_the\\_world\\_could\\_better\\_fight\\_obesity](http://www.mckinsey.com/insights/economic_studies/how_the_world_could_better_fight_obesity)
- Monteiro, C., Moubarac, J., Cannon, G., Ng, S., & Popkin, B. (2013, November). Ultra-processed products are becoming dominant in the global food system. *Obesity Reviews*, 14(2), 21-28.
- National Statistics. (2018, April 4). *Statistics on Obesity, Physical Activity and Diet - England, 2018 [PAS]*. Retrieved from NHS: <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/statistics-on-obesity-physical-activity-and-diet-england-2018#summary>
- Nawrat, A. (2018, May 2). *Impact of UK Soft Drinks Industry Levy on the soft drinks industry*. Retrieved from Drinks Insight Network: <https://www.drinks-insight-network.com/features/impact-of-uk-soft-drinks-industry-levy-on-the-soft-drinks-industry/>
- OECD. (2017). *Health at a Glance 2017*. Retrieved from OECD: <http://www.oecd.org/health/health-systems/health-at-a-glance-19991312.htm>
- Petersson, S. (2017). Will the sugar tax reduce obesity? *Fi Europe Conference 2017*. Paris, France: Food ingredients Europe. Retrieved from <https://www.figlobal.com/fieurope/visit/news-and-updates/will-sugar-tax-reduce-obesity>
- Public Health England. (2018). *The problem with sugar*. London: Public Health England. Retrieved from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/710312/Sugar\\_reduction\\_and\\_wider\\_reformulation\\_layman\\_s\\_summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710312/Sugar_reduction_and_wider_reformulation_layman_s_summary.pdf)
- Siddique, H. (2017, November 10). *UK is most obese country in western Europe, OECD finds*. Retrieved from The Guardian: <https://www.theguardian.com/society/2017/nov/10/uk-most-obese-country-in-western-europe-oecd-report-finds>
- Tamir, O., Cohen-Yogev, T., Furman-Assaf, S., & Endevelt, R. (2018). Taxation of sugar sweetened beverages and unhealthy foods: a qualitative study of key opinion leaders' views. *Israel Journal of Health Policy Research*, 43.
- Tamma, P. (2017, August 18). *'Zero calories': Industry moving to reduce sugar in EU beverages*. Retrieved from Euractiv: <https://www.euractiv.com/section/agriculture-food/news/zero-calories-industry-moving-to-reduce-sugar-in-eu-beverages/>

- The Economist. (2017, June 10). *Taxes to trim waistlines are spreading across Europe*. Retrieved from The Economist: <https://www.economist.com/news/europe/21723119-hungary-fattest-eu-member-leading-charge-taxes-trim-waistlines-are-spreading>
- Vahtla, A. (2017, May 19). *Soft drink producers take sugar tax matter to European Commission*. Retrieved from ERR: <https://news.err.ee/596815/soft-drink-producers-take-sugar-tax-matter-to-european-commission>
- Warner, J. (2018, February 26). *The UK Soft Drinks Levy: what's the impact of the 2018 'sugar tax'?* Retrieved from IG: <https://www.ig.com/uk/commodities-news/the-uk-soft-drinks-levy--whats-the-impact-of-the-2018-sugar-tax--42387-180226>
- Waterlander, W., Ni Mhurchu, C., & Steenhuis, I. (2014, July). Effects of a price increase on purchases of sugar sweetened beverages. Results from a randomized controlled trial. *Appetite*, 32-39. doi:10.1016/j.appet.2014.03.012
- Wood, K. (2015, July 22). *8,000 cases of type 2 diabetes a year linked to sugary drink consumption, report claims*. Retrieved from diabetes.co.uk: <https://www.diabetes.co.uk/news/2015/jul/8,000-cases-of-type-2-diabetes-a-year-linked-to-sugary-drink-consumption,-report-claims-93023068.html>
- World Health Organization. (2015, May). *Fiscal policies for diet and the prevention of noncommunicable diseases*. Retrieved from World Health Organization: <http://www.who.int/dietphysicalactivity/publications/fiscal-policies-diet-prevention/en/>
- World Health Organization. (2016a). *Data and statistics*. Retrieved from who.int: <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/obesity/data-and-statistics>
- World Health Organization. (2016b, October 11). *WHO urges global action to curtail consumption and health impacts of sugary drinks*. Retrieved from who.int: <http://www.who.int/mediacentre/news/releases/2016/curtail-sugary-drinks/en/>
- World Health Organization Europe. (2015). *Using price policies to promote healthier diets*. Copenhagen: World Health Organization. Retrieved from [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0008/273662/Using-price-policies-to-promote-healthier-diets.pdf](http://www.euro.who.int/__data/assets/pdf_file/0008/273662/Using-price-policies-to-promote-healthier-diets.pdf)

## Appendix A – Student Ethics Form

### Student Ethics Form

#### European Studies Student Ethics Form

**Your name:** Douglas Meyer

**Supervisor:** Bert van den Bergh

#### Instructions/checklist

Before completing this form you should read the APA Ethics Code (<http://www.apa.org/ethics/code/index.aspx>). If you are planning research with human subjects you should also look at the sample consent form available in the Final Project and Dissertation Guide.

- a. ☐ Read section 3 that your supervisor will have to sign. Make sure that you cover all these issues in section 1.
- b. ☐ Complete sections 1 and, if you are using human subjects, section 2, of this form, and sign it.
- c. ☐ Ask your project supervisor to read these sections (and the draft consent form if you have one) and sign the form.
- d. ☐ Append this signed form as an appendix to your dissertation.

#### Section 1. Project Outline (to be completed by student)

##### (i) Title of Project:

**Sweetening the deal:** Researching the effects of the sugar tax and policies as a means of curbing consumption of sugar sweetened beverages in the United Kingdom and the Netherlands.

##### (ii) Aims of project:

*The aim of the project is to see if there is a disconnect between people and politics, and thus if the United Kingdom and the Netherlands are successfully tackling the question of obesity in their respective countries, or if they should seek to invest elsewhere, rather than trying to persuade behaviour through tax.*

- (iii) Will you involve other people in your project – e.g. via formal or informal interviews, group discussions, questionnaires, internet surveys etc. (Note: if you are using data that has already been collected by another researcher – e.g. recordings or transcripts of conversations given to you by your supervisor, you should answer 'NO' to this question.)

YES/ NO

If no: you should now sign the statement below and return the form to your supervisor. You have completed this form.

This project is not designed to include research with human subjects. I understand that I do not have ethical clearance to interview people (formally or informally) about the topic of my research, to carry out internet research (e.g. on chat rooms or discussion boards) or in any other way to use people as subjects in my research.

Student's signature \_\_\_\_\_ date \_\_\_\_\_

**If yes: you should complete the rest of this form.**

**Section 2 Complete this section only if you answered YES to question (iii) above.**

**(i) What will the participants have to do? (v. brief outline of procedure):**

*The participants will be requested to fill in a digital multiple-choice questionnaire at a point most convenient to them, and will be provided a link to said questionnaire. The questionnaire is comprised of 30 multiple choice questions, which can be answered on any computing device, from phones and tablets to laptops and computers. They will be reminded of the procedure and their rights twice, once during the invitation and once on the landing page of the survey. Whenever the participant clicks on their desired answer, they can scroll down to see and answer the next question. Whenever a participant decides to want to change their answer, they can always scroll back up. After clicking all their preferred answers, they will be asked if they would be willing to provide their rough location on a digital map for use of comparing cities with each other. They are reminded of my email address in case they wish to retract their questionnaire, or if they have any questions. There is also a comment box for further suggestions and comments, as well as a spot to leave their email address. This information is saved separately from the questionnaire and will be permanently deleted after completion of the dissertation. After submitting the survey, they are free to close the webpage.*

**(ii) What sort of people will the participants be and how will they be recruited?**

*The participants of the survey will be a random selection of people in both the United Kingdom and the Netherlands. They will be recruited through a wide range of both personal contact as well as digital. Flyers will be posted on message boards in local supermarkets, and distributed in person in both countries. Of course it is unrealistic to travel throughout the entirety of both countries, and thus for those unvisited areas social media and survey sharing platforms will be used to accrue the necessary data.*

**(iii) What sort stimuli or materials will your participants be exposed to, tick the appropriate boxes and then state what they are in the space below?**

**Questionnaires [ X ]; Pictures[ ]; Sounds [ ]; Words[ ]; Other[ ].**

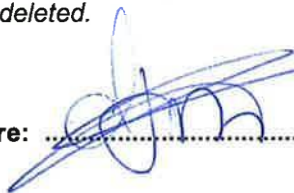
*The questionnaire is a multiple-choice questionnaire. The questions are either formulated in a way in which they choose their preferred statement, or in which they are presented with a statement and they choose whether they agree or disagree with the statement.*

**(iv) Consent:** Informed consent must be obtained for all participants before they take part in your project. Either verbally or by means of an informed consent form you should state what participants will be doing, drawing attention to anything they could conceivably object to subsequently. You should also state how they can withdraw from the study at any time and the measures you are taking to ensure the confidentiality of data. A standard informed consent form is available in the Dissertation Manual.

(vi) **What procedures will you follow in order to guarantee the confidentiality of participants' data?** Personal data (name, addresses etc.) should not be stored in such a way that they can be associated with the participant's data.

*The deliberate choice was made to collect as little personal data as possible to avoid any confidentiality issues. All questionnaires are administered anonymously. The participant is requested to drop a rough location pin on the map to allow comparisons between areas, but no addresses are requested. If the participant wishes, the participant can also leave his or her email address in the box on the bottom of the survey to be kept up to date. The email addresses are stored separately from the surveys and is thus impossible to trace back to a particular survey. After completion of the dissertation, the email addresses will be permanently deleted.*

**Student's signature:** .....



**date:** .....

14-08-2018

**Supervisor's signature** (if satisfied with the proposed procedures): ..... **date:** .....

## Appendix B – Coded raw data from survey open questions

### 1. Why are you in favor or against implementing a sugar tax in the Netherlands?

For		Against	
Reason	Frequency	Reason	Frequency
Pressures companies to take responsibility for health/reduce sugar content// Companies need a push to do so.	25	Government should not regulate food (consumption)// Consumers should decide whether to consume sweet products or not.	8
To raise awareness (of sugar's impacts on health)/make consumers more conscious of their sugar consumption	17	Higher food costs; bad for low income population. /Would not affect high-income population's consumption. /Could stimulate inequality in this way./Low income households have no choice but to buy processed foods if healthy foods are their current level	6
Promote healthier lifestyle/improve public health	12	Prices of healthy food e.g. fresh produce must be lowered, and accessibility increased. For many people they are unaffordable.	4
Makes people choose healthier options instead // The consumer retains the right to choose, but it becomes easier (cheaper) to choose healthy foods.	10	Education is more important to change perceptions and food choices.	3
More tax money → better public services e.g. healthcare, education (could be spent on better nutrition/cooking education)	10	Higher prices would not solve the problem of too-high sugar consumption.	3
To reduce per person sugar consumption	9	Companies will simply replace sugar in their products with artificial sweeteners and chemicals, which could have unknown (health) consequences	3
Raise the barrier/deter excessive sugar consumption	6	If introduced, there would need to be a significant price increase to actually stimulate a change in demand/consumption	2
Because the government is obliged to stimulate healthy lifestyles.	6	Would raise the price of my favorite food; as an adult I should have the choice to buy it and not have to pay extra	2
Reduce obesity/overweight	6	There are enough taxes already	1
Sugar is addictive	3	It would not successfully boost health; only a whole package of dietary education and nudges to	1



		exercise more and eat well would address obesity.	
Alleviate pressure on healthcare system	3	It would be better to stimulate companies to reduce the sugar content of products.	1
Because the tax money could be diverted to subsidizing healthy food e.g. fruit and vegetables	2	School and home examples of setting an example of healthy diet should suffice instead	1
Healthy food is currently more expensive than high-added-sugar products. A sugar tax would address this imbalance.	2	Consumers should become more conscious of what they are buying instead	1
To lower demand	2		
Obesity has been caused by food manufacturers and the government and therefore they should be the ones to resolve it	1		
An efficient solution because it affects both supply and demand sides	1		
Sugar is addictive like tobacco is. Smoking is heavily taxed, so why not sugar consumption?	1		
Beneficial but only if food access among the low-income population is enhanced e.g. through education, cookery information, affordable produce	1		
Sugar is often added unnecessarily to products. This would be reduced with a sugar tax	1		
Need changes 'higher up' to affect consumption	1		
Allergic to artificial flavorings; would raise my grocery bill to buy only sugar products	1		

**Why do you support or oppose the introduction of the Sugar Tax in the UK?**

Arguments in red are those that are not mentioned by the other country.

<b>For</b>		<b>Against</b>	
<b>Reason</b>	<b>Frequency</b>	<b>Reason</b>	<b>Frequency</b>
Pressures companies to take responsibility for health/reduce sugar content// Companies need a push to do so.	24	Higher food costs; bad for low income population. / Punishes the poor	8
To raise awareness (of sugar's impacts on health)/make consumers more conscious of their sugar consumption	12	Companies will simply replace sugar in their products with artificial sweeteners and chemicals, which could have unknown (health) consequences e.g. aspartame	6
To reduce per person sugar consumption	9	Government should not regulate food (consumption)// Consumers should decide whether to consume sweet products or not.	4
Makes people choose healthier options instead // The consumer retains the right to choose, but it becomes easier (cheaper) to choose healthy foods.	8	It won't work/would not successfully boost health	4
Promote healthier lifestyle/improve public health	7	Higher prices would not solve the problem of too-high sugar consumption.	1
More tax money → better public services e.g. healthcare, education (could be spent on better nutrition/cooking education)	6	Prices of healthy food e.g. fresh produce must be lowered. For many people they are unaffordable.	1
Financial incentives / penalties are quite effective at changing behaviors e.g. plastic bag tax	6	Education is more important to change perceptions and food choices.	1
Reduce obesity/overweight	6	If introduced, there would need to be a significant price increase to stimulate a change in demand/consumption	1
Raise the barrier/deter excessive sugar consumption	5	There are enough taxes already	1
It will stop marketing sugary drinks to children [because of the added cost]	4	School and home examples of setting an example of healthy diet should suffice instead	1
Because the government is obliged to stimulate healthy lifestyles.	3	I don't like sweeteners and can no longer buy soft drinks because they have been reformulated to include aspartame	1

Sugar is addictive	3	The government are making money from a non-issue (sugar consumption)	1
It will stop children affording/buying sugary drinks	3	The government are merely 'joining the band wagon' of sugar-free drinks after the population already did so.	1
Obesity has been caused by food manufacturers and/or the government and therefore they should be the ones to resolve it	3		
Sugar is addictive like tobacco is. Smoking is heavily taxed, so why not sugar consumption?	3		
Alleviate pressure on healthcare system	2		
Children buy the cheapest option so make sure that option is not sugar-filled	1		
It has been shown to work in the past	1		
Only the government has enough power over big business/industry to change nutrition contents	1		
Because gaining weight is easier than losing it	1		
Reduces the burden for consumers of reading packaging; price gives the information instead	1		

*How do you think the UK government should spend the proceeds of the Sugar Tax?*

Cause	Frequency mentioned
NHS (healthcare system)	33
Health promotion programs (not solely among children)	16
School-based health promotion programs	10
Subsidized/free sports programs for adults	8
Subsidize healthy alternatives/fruit and vegetables/ sugar-free foods	7
Children's sport facilities/exercise programs including cycling and swimming	7
Education (general)	6
Subsidize (sustainable and organic) farming/healthy food companies	5
Active transport infrastructure e.g. walking/cycle routes, parks, green spaces	4
Advertising campaigns for healthy food	4
Bolstering food bank supplies/Increase food access for low income households	3
Aiding overweight/obese people to lose weight	3
Free, healthy school meals/improving nutrition of school-sold foods	3
Preventive measures (to reduce overweight)	2
Cooking lessons for adults	2
Healthcare costs related to overweight	2
Tax should not be hypothecated (ring-fenced)	2
Dietician workshops	1
Cooking lessons for children	1
Charities	1
Campaigns against 'ugly fruit/veg'	1
Nutritional research	1
Combatting fat phobia in society and in healthcare	1
Reduced or free access to weight loss groups	1
Cancer research	1
Mental health initiatives	1

*If a Sugar Tax were to be introduced in the Netherlands, how do you think the government should spend the proceeds of the Sugar Tax?*

Cause	Frequency
Health promotion programs (not solely among children)	16
Healthcare/illness research	15
Subsidize healthy alternatives/fruit and vegetables/ sugar-free foods	12
School-based health promotion programs	8
Children's sport facilities/exercise programs including cycling and swimming	8
Education (general)	6
Public services (unspecified)	6
Reduce taxes on fruit and vegetables	5
Promoting healthy food and no added sugar products	5
Subsidize sustainable and organic farming/healthy food companies	5
Aiding overweight/obese people to lose weight	4

Healthcare costs related to overweight	3
Subsidized/free sports programs for adults	3
Reduced healthcare insurance premiums	3
Affordable sports programs for vulnerable groups/elderly/disabled	2
Build houses/infrastructure	2
Cooking lessons for children	2
Climate change and recycling policies/Sustainable development	2
Charities	2
Preventive measures (to reduce overweight)	2
More outdoor exercise equipment in parks	2
Bolstering food bank supplies/Increase food access for low income households	2
Dietician workshops	1
Invest in plastic-free packaging	1
Promoting veganism	1
Reduce other taxes	1

*Aside from a potential Sugar Tax, have you heard of or seen any other initiatives to reduce overweight and obesity levels in the Netherlands?*

<b>Initiative(s)</b>	<b>Frequency mentioned</b>
Promote exercise /move more	8
Prevent junk food sales/vending machines with calorie dense foods in school canteens	3
Basic healthcare insurance package includes a few hours of dietician access. Additional insurance add-ons to include sport and therapies	3
Encouraging children to play outside	2
Stricter rules about break/lunch time snacks at primary schools	2
TV shows about the obese e.g. Obiest	2
Educational TV shows	2
Healthy and organic options in cafes/supermarkets	1
Youth initiatives to prevent or curb obesity levels/stimulate youth to be a healthy weight	1
Promoting veganism to reduce cholesterol levels	1
Employers offering voluntary health checks and subsidized gym memberships for employees	1
Exercise days by employers	1
Higher health insurance premiums for overweight sign-ups	1
New products at the supermarkets e.g. cauliflower rice, vegetable base pizzas	1
Paying people to cycle to work	1
Clear labelling on food packaging	1
Adverts for gyms on TV	1
TV adverts about reduced sugar content/no added sugar products	1
Adverts about balanced diet wheel	1
The avondvierdaagse	1
Council survey about children's exercise levels	1

Reduced salt content in a lot of products in the last couple of years	1
More rules about clear, visible labels	1
Plastic free shopping – more conscious of the contents	1
Lower sugar in Albert Heijn products	1
Many municipalities offer free or reduced-price sport options for low-income households e.g. the Ooeievaarspas in The Hague	1
Big Move	1

*Aside from the Soft Drinks Industry Levy, have you heard about or seen any evidence of other initiatives to combat obesity in the UK within the last year?*

<b>Initiative</b>	<b>Frequency mentioned</b>
TV adverts, including those linking obesity to cancer(s), exercise promotion, apps for increasing physical activity. Mainly NHS-produced	8
Change4Life / “The campaigns with the plasticine people”	6
Couch25K (NHS program to get people able to run 5 kilometers)	6
Slimming World groups/free doctor referrals to weight loss groups	4
NHS Choices website (healthy eating information, low GI information, BMI calculator)	4
Any response referencing apps	3
Billboards/posters	2
Encouraging walking and cycling to work/ City cycling schemes like London’s ‘Boris bikes’	2
TV programs/documentaries	2
BMI measurements at schools	1
Fanactiv – London-based competitive physical activity for football fans.	1
Jamie Oliver social media campaign about reducing sugar content	1
Social media influencers (health/fitness based)	1
News reports	1
GP referrals for (free) gym memberships	1
The Daily Mile (15-minute daily run for children in primary schools and nurseries)	1
Strength and Flex NHS podcasts (exercise plan)	1
More children’s sports clubs	1
Outdoor gyms installed in parks	1
Banning junk food outlets near schools	1
Banning multibuy deals of certain unhealthy foods	1
Healthy start – Families on certain benefits can get free milk, fruit and vegetables with <i>Healthy Start</i> vouchers	1
Compulsory publishing the percentage of recommended daily allowances (RDA) on foods	1
‘Traffic light’ food labelling	1
Public menu information for schools and hospitals	1