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TAXATION OF SUGAR SWEETENED BEVERAGES

Policy Paper

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Economics Tax Analysis Chief Directorate

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Executive Summary

The Minister of Finance announced in the February 2016 Budget a decision to introduce a tax on sugar-sweetened beverages (SSBs) with effect from 1 April 2017 to help reduce excessive sugar intake. This announcement came against the backdrop of a growing global concern regarding obesity stemming from the overconsumption of sugar. Obesity is a global epidemic and a major risk factor linked to the growing burden of non-communicable diseases (NCDs) including heart diseases, type 2 diabetes and some forms of cancers. NCDs are the leading causes of mortality globally, resulting in more deaths than all other causes combined, and the world's low and middle-income populations are the most affected. The problem of obesity has grown over the past 30 years in South Africa resulting in the country being ranked the most obese country in sub-Saharan Africa.

The Department of Health developed a Strategic Plan for the Prevention and Control of NCDs 2013 – 2017, and National Strategy for the Prevention and Control of Obesity 2015 – 2020. These strategies set an ambitious target of reducing obesity prevalence by 10 per cent by 2020. The latter strategy has identified that taxes on foods high in sugar is a very cost-effective strategy to address diet related disease.

Globally, fiscal measures such as taxes are increasingly recognised as effective complementary tools to help tackle the obesity epidemic at a population level. Taxes / levies can play a key role in correcting for market failures and act as a price signal that could influence purchasing decisions of consumers. In this context, countries such as Denmark, Finland, France, Hungary, Ireland, Mexico, Mauritius and Norway have levied taxes on SSBs, while other countries such the United Kingdom, Thailand and Australia have recently announced their intention to introduce such taxes. These taxes are differently structured in each country; and have reduced SSB consumption and increased health outcomes at various levels.

A key consideration in the implementation of taxes on SSBs is its design with specific focus on its coverage, defined base, tax rate and administration. The following is proposed:

Scope of the Tax on SSBs

SSBs are beverages that contain added caloric sweeteners such as sucrose, high-fructose corn syrup (HFCS), or fruit-juice concentrates, which include but are not limited to:(i) soft drinks, (ii) fruit drinks, (iii) sports and energy drinks, (iv) vitamin water drinks, (v) sweetened iced tea, and (vi) lemonade, among others.[1]Any beverage that only contains sugar naturally built (i.e. intrinsic sugars)

[1]Pediatric Annals: January 2012 - Volume 41 · Issue 1: 26-30

into the structure of the ingredients should be excluded from the tax (e.g. unsweetened milk and milk products and 100 per cent fruit juice).

Tax Base: Sugar Content of SSBs

The most accurate proxy for harm caused by SSBs is its (added) sugar content. The advantage of this approach is that it is better targeted and the tax is in direct proportion to the level of added sugar in SSB.

Tax Rate:

Literature suggests that a 20 per cent price increase of SSBs may be required to have a significant impact on purchases, consumption, and ultimately on obesity and population health.[2]It is therefore proposed that a tax rate of R0.0229 (2.29 cents) per gram of sugar be implemented based on the current product labelling framework. This rate roughly equates to a 20 per cent tax incidence for the most popular soft drink (i.e. Coca Cola, averaging 35 g / 330 ml).

For SSBs that currently do not apply nutritional labelling, it is proposed that a relatively higher fixed gram of sugar be assumed (i.e. 50 grams per 330ml) as an incentive for producers to move towards nutritional labelling until mandatory labelling legislative framework is put in place.

Administration:

Like the other excise duties and product specific levies, the proposed tax on SSBs will be implemented through the Customs and Excise Act (Act 91 of 1964). An additional category for SSBs would have to be created under the Schedules to the Act as a levy on selected SSBs. The general principle for excise administration (i.e. duty-at-source (DAS)) will be applied for ease of administration.

[2]Public Health England (2015). Sugar Reduction: The evidence for action Annexe 2: A mixed method review of behaviour changes resulting from experimental studies that examine the effect of fiscal measures targeted at high sugar food and non-alcoholic drink

1. Background

1.1. Non-communicable diseases (NCDs) are the leading causes of mortality globally, resulting in more deaths than all other causes combined, and the world's low and middle-income populations are the most affected. These diseases cause enormous human loss, impose heavy costs on public health systems and reduce overall productivity by the premature death and / or disability of people during their productive years. The four main types of NCDs are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and type 2 diabetes (NDoH, 2013).[3] NCDs are related to the interaction of various genetic, environmental and especially behavioural risk factors, including tobacco use; harmful alcohol use; physical inactivity and eating unhealthy diets (WMA, 2016).[4]

1.2. Obesity is a global epidemic and a major risk factor for the growing burden of NCDs including heart diseases, diabetes, stroke and some cancers. Globally, overweight and obesity are responsible for 5 per cent of deaths, whilst high blood pressure is responsible for 13 per cent, tobacco use 9 per cent, raised blood glucose 6 per cent, physical inactivity 6 per cent, and alcohol 3.8 per cent.[5] The prevalence of overweight and obesity is measured using the Body Mass Index (BMI) (i.e. weight (kg)/ height^2 (m)). A BMI level of 25 or more is classified as overweight and 30 or more is classified as obese. In South Africa, obesity has grown in the last 30 years and the country is now considered the most obese in sub-Saharan Africa. Over half of the country's adults are now overweight and obese with 42 per cent of women and 13 per cent of men obese.[6]

1.3. Overweight and obesity occur when more energy (measured in calories) is consumed than is spent. Diets which are high in fat and sugar are "energy-dense", and contribute to obesity and overweightness.[7] Increased consumption of free sugars, particularly in the form of sugar sweetened beverages (SSBs), is associated with weight gain in both children and adults. While sugars are found naturally in many foods, including fruits and milk, the addition of sugars to food products adds to the total energy content of the product. SSBs contain added sugars such as sucrose or high fructose corn syrup and a 330ml or 12oz

[3]National Department of Health. (2013). Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013-17. Pretoria, South Africa: NDOH.
[4]World Medical Association (WMA). Accessed at http://www.wma.net/en/20activities/30publichealth/10noncommunicablediseases/ on 15/04/2016
[5]National Department of Health. (2013). Strategic Plan for the Prevention and Control of Non-Communicable Diseases 2013-17. Pretoria, South Africa: NDOH.
[6] The GBD 2013 Obesity Collaboration, Ng, M., Fleming, T., Robinson, M., Thomson, B., Graetz, N., Gakidou, E. (2014). Global, regional and national prevalence of overweight and obesity in children and adults 1980-2013: A systematic analysis. *Lancet (London, England)*, *384*(9945), 766–781. http://doi.org/10.1016/S0140-6736(14)60460-8
[7]http://www.world-heart-federation.org/fileadmin/user_upload/children/documents/factsheets/Factsheet_Obesity.pdf accessed on 19 April 2016

portion of sugar-sweetened carbonated soft drink typically contains some 35g (almost nine teaspoons) of sugars and provides approximately 140 kcal of energy, generally with little other nutritional value.

1.4. Furthermore, consumption of sugary foods and drinks is the primary cause of tooth decay. Dental extraction is the major cause of general anaesthesia in young children, affecting particularly children from deprived households. At an extreme, it can cause malnutrition for both children and adults and significantly reduce quality of life due to pain and discomfort.[8] The report on the National Children's Oral Health Survey indicates that the mean national caries prevalence in 4-5 year olds is 50.6 per cent and in 6 year olds is 60.3 per cent. The burden of untreated dental caries in South Africa according to the national survey was reported to be 46.6 per cent in the 4-5 year olds and 55.1 per cent in the 6 year olds.

1.5. The World Health Organisation (WHO) has expressed concern that the increasing intake of free sugars, particularly in the form of sugar-sweetened beverages (SSBs), increases overall energy intake and may reduce the intake of foods containing more nutritionally adequate calories, leading to an unhealthy diet, weight gain and increased risk of NCDs. The 2013 WHO's Global Action Plan encourages Member States to, as appropriate within the national context, consider the implementation of such as taxes and subsidies, that:

- Create incentives to encourage behaviours associated with improved health outcomes,
- Improve the affordability and encourage consumption of healthier food products, and
- Discourage the consumption of less healthy options.

1.6. The WHO's guideline on sugar intake recommends that adults and children restrict sugar intake to less than 10 per cent of total energy intake per day (i.e. 50 grams of sugar equivalent to around 12.5 teaspoons), and suggests a further reduction to below 5 per cent of total energy intake per day for additional health benefits (i.e. 25 grams of sugar equivalent to around 6 teaspoons).[9] In this context, Member States need to develop guidelines, recommendations or policy measures to reduce the content of free and added sugars in food and non-alcoholic beverages.[10]

1.7. The Department of Health (DoH) developed a Strategic Plan for the Prevention and Control of NCDs 2013 – 2017, and National Strategy for the Prevention

[8] Watt R, Rouxel P. (2012). Dental caries, sugars and food policy. Arch Dis Child. 2012;97(9):769-72.
[9] WHO (2015): Guideline: Sugars intake for adults and children. Geneva: World Health Organization; 2015.
[10] WHO (2013).Global action plan for the prevention and control of non-communicable diseases 2013-2020.

and Control of Obesity 2015 – 2020. These strategies set an ambitious target of reducing obesity prevalence by 10 per cent by 2020. In its Action Plan, the DoH has identified unhealthy diets as one of the four major risk factors.[11] The major contributing factors to weight gain, in adults and children, are excess sugar consumption from sugar sweetened beverages and high caloric energy dense foods.[12] SSBs have high sugar content, no nutritional value and are processed differently by in the body when consumed compared to food. It should also be noted that fluid calories are not accounted for in the same way as calories from solid foods.[13] Evidence suggests that SSBs are generally consumed quickly and do not provide the same feeling of fullness that solid food provides such that consumers tend not to reduce intake of other foods sufficiently to compensate for the extra calories provided by sugar-sweetened beverages. Excess calories contribute to overweight and obesity as they can be readily converted to body fat and stored within various tissues.[14]

1.8. The DoH has identified a number of measures, which includes regulations and taxes to address NCDs, and more especially unhealthy diets which lead to obesity and related diseases. Table 1 below suggests that taxes on foods high in sugar are potential cost-effective strategies for addressing diet and obesity.

Table 1: Best Buys for Tackling Diet, Physical Activity and Obesity

	Cost in Rand per Head (2010)
Fiscal measures (e.g. taxes)	R0.20
Food advertising regulation	R0.90
Food labelling	R2.50
Worksite interventions	R4.50
Mass media campaigns	R7.50
School-based interventions	R11.10
Physician counselling	R11.80

Source: *Table 7 of Strategic Plan for the Prevention and Control of NCDs 2013 – 2017& Table 2 of National Strategy for the Prevention and Control of Obesity 2015 – 2020*

1.9. In general, the governments' interventions in the market are mainly characterised in three different forms, namely, appropriate regulations, information strategies and price instruments or a combination of these instruments. Over the last few years, fiscal measures have increasingly been recognised as a plausible intervention to tackle the obesity epidemic at a population level and as an integral part of comprehensive intervention to improve diets and prevent non-communicable diseases (NCDs).[15]

[11] Others include tobacco use; physical inactivity and harmful use of alcohol
[12]Hofman, KJ. &Tugendhaft, A. (2014).Empowering healthy food and beverage choices in the workplace. Occupational Health Southern Africa. Vol. 20 No 5 September/October 2014
[13]Lavin, R & Timpson, H. (2013).Exploring the Acceptability of a Tax on Sugar-Sweetened Beverages. *Centre for Public Health.*
[14] WHO technical staff. Reducing consumption of sugar-sweetened beverages to reduce the risk of unhealthy weight gain in adults. Biological, behavioural and contextual rationale. WHO, September 2014).
[15] EU Food Policy, 2012; Mytton, Clarke &Rayner, 2012; Popkin, 2012 ???????

1.10. A number of countries have implemented fiscal measures such as SSB taxes. Some researchers argue that most of the current nutritional policies relying only on information strategies for the consumers have had a weak impact on consumer choices.[16] The proposed fiscal intervention in the form of a tax on SSBs is just one tool in South Africa's strategy of a comprehensive package of measures. Other planned interventions in the strategy include the following:

- Creation of an institutional framework to support inter-sectoral engagement;
- Creation of an enabling environment that supports the availability and accessibility of healthy food choices in various settings;
- Increasing the percentage of the population engaging in physical activity;
- Supporting obesity prevention in early childhood (in-utero – 12 years);
- Communicating with, educate and mobilise communities; and
- Establishing a surveillance system, strengthen monitoring and evaluation, and research.

2. Sugar Sweetened Beverages Market in SA

2.1. The non-alcoholic beverage industry in South Africa is made up of products such as juices, carbonated drinks, energy drinks, bottled water, ice tea, dilutable beverages etc. however, it is dominated by carbonated drinks. This market predominantly consists of multinational beverage companies with large market share (*see Annexure I for list of role-players*).

2.2. Growth in the non-alcoholic beverage sector has increased significantly since the early 1990's. From 1998, the market for soft drinks in South Africa has more than doubled from 2 294 million litres to 4 746 million litres in 2012.[17]In 2007 a study on the diets of young children (ages 12 to 24 months) in urban South African communities found that carbonated drinks were one of the most consumed drinks/foods among young children. The consumption of carbonated drinks was less than maize meal and brewed tea, but more than milk.[18] Consumption of SSBs at an early age sets a pattern for unhealthy dietary habits leading to early onset type 2 diabetes and obesity which require chronic care over the child's lifetime. This as a result will increase public healthcare costs in the long term.

2.3. The soft drink market has been able to expand through increasing the affordability, availability as well as acceptability of these products. Availability has been increased through strategic links with large supermarket outlets, convenience stores and the informal sector and small "spaza" stores in rural

[16]Réquillart, V & Bonnet, C. (2015).Taxes to fight obesity?*The Toulouse School Of Economics Magazine, Spring Issue No. 8*
[17] Glob Health Action 2015, 8: 28338 - http://dx.doi.org/10.3402/gha.v8.28338
[18]Igumbor *et al.* http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001253#pmed.1001253-Greenberg1

villages. There has also been an increase in the serving sizes of SSBs over the last several years. Table 2 below is a summary of non-alcoholic beverage consumption by expenditure decile.

Table 2: Expenditure on non-alcoholic beverages by expenditure decile

Percentage distribution of annual household consumption expenditure of mineral water, soft drinks, fruit and vegetable juices by expenditure group and expenditure deciles (IES 2010)											
	Lower decile									Upper decile	
Expenditure deciles	1	2	3	4	5	6	7	8	9	10	Total
1: Mineral water (Aerated & still)	0.02	0.02	0.02	0.02	0.04	0.02	0.03	0.02	0.03	0.03	0.03
2: Aerated cold drinks	0.92	0.86	0.95	0.89	0.84	0.91	0.74	0.58	0.43	0.18	0.43
3: Energy drinks	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.02	0.02
4: Fruit & vegetable juices	0.17	0.17	0.15	0.19	0.16	0.20	0.19	0.18	0.18	0.12	0.15
5: Concentrates & powders	0.19	0.19	0.19	0.19	0.15	0.15	0.13	0.07	0.06	0.02	0.07
Sub-total - home cons (1:5)	**1.30**	**1.25**	**1.32**	**1.30**	**1.20**	**1.30**	**1.11**	**0.88**	**0.73**	**0.38**	**0.70**
6: Mineral water (Aerated & still)	0.002	0.004	0.003	0.002	0.003	0.005	0.007	0.006	0.004	0.003	0.004
7: Aerated cold drinks	0.12	0.15	0.12	0.14	0.14	0.18	0.13	0.11	0.07	0.04	0.08
8: Fruit & vegetable juices	0.04	0.05	0.05	0.05	0.03	0.04	0.03	0.02	0.02	0.01	0.02
Sub-total restaurants_cons (6:8)	**0.16**	**0.20**	**0.18**	**0.19**	**0.17**	**0.23**	**0.16**	**0.13**	**0.10**	**0.05**	**0.10**
Total (home plus restaurants)	**1.46**	**1.45**	**1.50**	**1.49**	**1.37**	**1.53**	**1.28**	**1.01**	**0.83**	**0.43**	**0.80**

Average annual household consumption expenditure of mineral water, soft drinks, fruit and vegetable juices by expenditure group and expenditure deciles (IES 2010) - RANDS											
Sub-total - home cons (1:5)	121	203	291	368	436	619	726	882	1 263	1 666	657
Sub-total restaurants_cons (6:8)	15	32	39	53	63	109	108	134	173	228	95
Total (home plus restaurants)	**136**	**235**	**330**	**421**	**499**	**728**	**834**	**1 015**	**1 435**	**1 893**	**753**
Total expenditure	**9 457**	**16 534**	**22 365**	**28 859**	**37 000**	**48 467**	**66 446**	**101 897**	**175 168**	**445 409**	**95 161**

Source: constructed from IES 2010[19]

2.4. Annual household consumption of mineral water, soft drinks, fruit and vegetable, both at home and restaurants, represent 0.81 per cent of total household expenditure. Consumption expenditure on aerated cold drinks is higher of both home consumption and hotel and restaurants compared to other categories of drinks.

2.5. As expected, relative consumption as a percentage of expenditure on aerated cold drinks by the lower expenditure deciles exceed the consumption on similar beverage types by higher expenditure deciles. Total consumption on non-alcoholic beverages as a percentage of expenditure is also higher in the lower expenditure deciles.

2.6. In absolute term, lower expenditure decile on average spends about R136 per annum on non-alcoholic beverages compared to R1 893 by higher expenditure decile.

[19]Income and expenditure household survey (IES 2010) data used to calculate the proportional expenditure on each sugar related beverage as a percentage of expenditure. The data combines both on-trade (wholesale and retail level) and off-trade consumption (restaurants, bars etc.). Percentage distribution of annual household consumption expenditure (as a percentage of total expenditure) as follows: Percentage distribution_i= consumption_i/ total expenditure per expenditure decile

3. Policy Context and Rationale

3.1. The literature establishes the link between consumption of SSBs with obesity and increased prevalence of type 2 diabetes, coronary heart disease (CHD), other cardiovascular diseases (CVD), several cancers and other NCDs. SSBs are beverages which contain added naturally-derived caloric sweeteners such as sucrose (table sugar), high-fructose corn syrup, or fruit juice concentrates, all of which have similar metabolic effects.[20]

3.2. Using fiscal measures to promote health, prevent disease and raise revenue is not a new idea. Standard economic theory suggests that prices do influence the level or quantity of demand of products.[21]Fiscal intervention can play a key role in correcting for market failures, and can also create incentives to reduce dietary risk factors for NCDs through the established influence of prices on the quantity demanded / consumed. Prices act as signals for consumers and have an important role in purchasing decisions. In the context of SSBs, the market failure[22] is manifested in the following ways:

3.2.1. Consumers make consumption decisions with imperfect information, failing to fully appreciate the link between consumption and health consequences;
3.2.2. Consumers' intertemporal or time-inconsistent preferences regarding short-term gratification and long-term consequences (i.e. potential harm); and
3.2.3. Consumers do not bear the full costs of their consumption decisions (i.e. externalities) given the impact of obesity related diseases on the health care costs on the general public.

3.3. Government could use fiscal policy intervention, amongst other instruments, as a mechanism to influence consumer behaviour at the point of purchase, by changing the relative price of healthy compared to less healthy products.The main fiscal policy interventions that have been proposed for NCD control and prevention are: taxes on SSBs, unhealthy nutrients (i.e. saturated/trans fats, salt and sugar) and unhealthy foods (defined through nutrient profiling); and subsidies on fruits, vegetables and other healthy foods.[23]Selected levies or excise duties can correct for market failures by internalising the socio-economic costs (i.e. negative externalities) and reduce the risk of obesity related to SSBs

[20]Brownell et al. (2009).The Public Health and Economic Benefits of Taxing Sugar- Sweetened Beverages. *The New England Journal of Medicine*.
[21]Public Health England (2015). Sugar Reduction: The evidence for action Annexe 2: A mixed method review of behaviour changes resulting from experimental studies that examine the effect of fiscal measures targeted at high sugar food and non-alcoholic drink
[22]Brownell et al. (2009).The Public Health and Economic Benefits of Taxing Sugar- Sweetened Beverages. *The New England Journal of Medicine*
[23]Thow, AM and Downs, S ()**.** Fiscal policy options with potential for improving diets for the prevention of non-communicable diseases (NCDs). *Menzies Centre for Health Policy, University of Sydney*

consumption. By so doing, some of the various related externalities, such as increased healthcare costs are re-assigned from the broader society to SSBs producers and consumers.

3.4. An increase in the prices of SSBs due to taxes is likely to encourage consumers to reduce their demand, which may lead to less production or changes in the formulation of the product. The extent of this impact is dependent on the price elasticity of demand, the degree to which manufacturers and retailers pass through the tax to consumers and the potential substitution effects, amongst others. One study[24] estimated the price elasticity for all soft drinks in the range of −0.8 to –1.0. A South African study[25] estimate an own-price elasticity of -1.299 for SSBs, from pooled results derived from a systematic review and meta-analysis[26] to estimate the expected shift in daily energy consumption resulting from increased prices of SSBs due to SSB taxes. This study and others[27] suggest that a 10 to 20 per cent price increase of SSBs may be required to translate into a meaningful impact on health outcomes.

3.5. Some opponents of a tax on SSBs sometimes argue that the introduction of such a tax will be regressive and cause harm to those most vulnerable in society, since lower income households spent a relatively higher proportion of income on SSBs (see Table 2). However, measuring tax regressivity only focuses on tax payments made and do not consider the benefits to the same lower income households as a result of implementing the price policy.[28] When the goal of the tax is to reduce the consumption of unhealthy "foods", regressivity is minimized when the low-income group purchases less of the unhealthy item, thereby potentially improving health outcomes.[29]

3.6. Obesity itself is a regressive disease that disproportionately affects those in lower socio-economic groups than those in higher socio-economic groups. The tax on SSBs therefore has the potential to be beneficial to low-income people who may currently consume more SSBs and may be more sensitive to higher prices and therefore may benefit most from reducing consumption of SSBs.[30] Furthermore, low income groups are mostly dependent on the provision of public healthcare and reduction of SSBs consumption by this sector of the population will reduce pressure on State resources in the future.

[24] N Engl J Med. 2009 October 15; 361(16): 1599–1605. doi:10.1056/NEJMhpr0905723
[25]Manyema M, VeermanLJ, Chola L, Tugendhaft A, Sartorius B, et al. (2014) The Potential Impact of a 20% Tax on Sugar-Sweetened Beverages on Obesity in South African Adults: A Mathematical Model. PLoS ONE 9(8): e105287. doi:10.1371/journal.pone.0105287
[26] It did not account for the differential effects in price elasticities between carbonated SSBs, drinks from concentrates, and sweetened fruit drinks due to the unavailability of this data
[27]WHO (2015). Using price policies to promote healthier diets
[28] Brownell et al. (2009).The Public Health and Economic Benefits of Taxing Sugar- Sweetened Beverages. The New England Journal of Medicine
[29] Jennifer L. Pomeranz, *Taxing Food and Beverage Products: A Public Health Perspective and a New Strategy for Prevention*, 46 U. Mich. J. L. Reform 999 (2013).
[30] Friedman, R.R. & Brownell, K.D. (2012) Sugar-Sweetened Beverage Taxes. An Updated Policy Brief. *Yale Rudd Centre*

3.7. It should be noted that a tax on soft drinks and mineral water was implemented in South Africa until 2002. At that time the tax was imposed primarily for revenue reasons and was phased out after lobby efforts by the industry. The tax was levied on volume or per litre basis and was not related to any health benefit objectives or externalities. The rate ranged from 10.36c/litre in 1993/94, peaking at 14.83c/litre in 1997/98 and scaled down to 6c/litre in 2001/2002, before it was abolished with effect from 1 April 2002 (at an estimated revenue forgone to the fiscus amounting to R135 million).

Table 3: SA Excise Duty & Revenue on Soft drinks (1993 – 2002)

	1993/ 1994	1994/ 1995	1995/ 1996	1996/ 1997	1997/ 1998	1998/ 1999	1999/ 2000	2000/ 2001	2001/ 2002
Rate (c/litre)	10.36	12.36	13.60	13.60	14.83	14.83	12.00	8.00	6.00
Revenue (Millions)	181.3	214.0	232.2	248.0	298.4	290.0	236.6	151.6	120.7

Source: Budget Reviews (1995-2003)

4. International Experience with Fiscal Measures

4.1. A tax on sugar sweetened beverages has been implemented in various countries (*see Annexure II*). This is in reaction to the growing concern that SSBs have an adverse effect on people's health. The consumption of SSBs has been linked to increased risks of individuals developing non-communicable diseases such as type 2 diabetes, high blood pressure, cholesterol and cardiovascular disease. Taxes on SSBs have been implemented in countries in Europe, South America and North America. These taxes tend to have different bases, structures and impacts in each country (*see Annexure III*):

4.1.1. In 2014 a tax on SSBs and calorie rich foods was introduced in Mexico as part of a strategy to decrease obesity and the effects of non-communicable diseases. After its implementation, purchases of taxed beverages decreased by an average of 6 per cent (−12 mL/capita/day), and decreased at an increasing rate up to a 12 per cent decline by December 2014. All three socioeconomic groups reduced purchases of taxed beverages, but reductions were higher among the households of low socioeconomic status, averaging a 9 per cent decline during 2014, and up to a 17 per cent decrease by December 2014 compared with pre-tax trends. Purchases of untaxed beverages were 4 per cent (36 mL/capita/day) higher mainly driven by an increase in purchases of bottled plain water.[31]

[31] Colchero, A., et al. (2016). Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study. *BMJ,* **352** (h6704).

4.1.2. Mauritius[32] introduced an excise tax on the sugar content of soft drink in February 2013. The rate was set at 2 cents per gram. It was increased to 3 cents per gram from 1 January 2014. In terms of Mauritius' legislation, sugar includes sucrose, lactose, maltose, fructose and glucose. The tax (excise duty) covers soft drinks which include: (i) any aerated beverage (such as colas, soda water, etc.); (ii) any syrup for dilution; and (iii) any fruit squash, cordial or fruit drink (including blends and juice with added sugar). It excludes (i) bottled water, (ii) pure fruit juice and blends thereof, (iii) pure vegetable juice and blends thereof, and (iv) dairy milk and products thereof.

4.1.3. The UK government, in the 2016 Budget[33], proposed the introduction of a new soft drinks industry levy from April 2018 on soft drinks that contain added sugar but will exclude milk-based drinks and pure fruit juices with no added sugar. The levy is aimed at the producers and importers of added sugar soft drinks but will exclude small operators. The levy will be charged on volumes according to total sugar content, with a main rate charge for drink above 5 grams of sugar per 100 millilitres and a higher rate for drinks with more than 8 grams of sugar per 100 millilitres. Based on the Government's revenue target of +£520m in 2018-19, the rate is estimated at 18 pence and 24 pence per litre unit charge according to sugar content on the two bands, respectively.[34,35]The levy is intended to encourage producers to reformulate their overall product mixes by (1) reducing added sugar content, (2) helping their customers to choose low sugar and sugar-free brands, and (3) reducing the portion sizes for high sugar drinks.[36]

4.1.4. Ireland was one of the first countries to implement a tax on SSBs. The country levied a tax on soft drinks from 1916 and went through various changes during those years until it was abolished in 1992. It was replaced with a top-tier VAT rate. It is reported that the principal reason of the tax was to generate revenue, however new proposals for the reinstatement of the tax is to change consumer behaviour due to population health concerns.[37]

4.1.5. In 2012, France adopted a levy on beverage and liquid preparations for beverages for human consumption containing added sugar or artificial sweeteners. Price of taxed products increased by 5 per cent in 2012 and by 3.1 per cent in 2013 and the demand for taxed products reduced by 3.3 per cent and 3.4 per cent, respectively.[38]

[32]Mauritius Revenue Authority. Accessed at http://www.mra.mu/index.php/importexport-a-others/331-soft-drinks on 06 June 2016.
[33] HM Treasury (2016). Budget 2016
[34] Smith, K (2016). Presentation: The Soft Drinks Levy. *Institute for Fiscal Studies*
[35]HM Government (2016). Budget 2016: Policy costing
[36] HM Treasury (2016). The soft drinks industry levy
[37]IPH (2012). Proposed Sugar Sweetened Drinks Tax: Health Impact Assessment (HIA). Technical Report
[38] Cornelsen, L., Carreido, A., (2015). Health-related taxes on food and beverages. 20th May 2015. *Food Research Collaboration Policy Brief*

4.1.6. In 1981, Norway introduced an excise duty on domestically produced and imported SSBs and other "luxury" products. A review of adolescent diets done in the early 2000's found that adolescents and young children consumed relatively high amounts of carbonated drinks and not an adequate intake / consumption of fruits and vegetables. The government subsequently decided to have a more focussed approach in improving the health of Norway citizens, especially the youth. This led to an increase in SSB taxes, as well as the use of complimentary measures such as banning the advertisement of unhealthy foods and drink products to children. A study done in 2013 showed that Norway saw a drop in frequency of consumption of lemonade (i.e. 4.8 to 2.5 times per week) and regular soft drinks (i.e.2.3 times a week to 1.6 times per week) in the period 2001 to 2008. This was contrary to other European countries, as consumption went up in the same period.[39]

4.1.7. Hungary introduced a public health product tax (PHPT) in 2011; taxing non-staple food products based on sugar, salt and methylxantine content in pre-packaged food products. The tax was introduced to encourage healthier eating habits by increasing the availability of healthy choices, product reformulation; and to increase revenues for public health fund.One year later, an impact assessment was conducted which showed the reduction in consumption of products subject to PHPT by about 25 to 35 per cent and food manufacturers also started reformulating their products.[40]

4.2. Taxes on SSBs are structured differently. Some taxes are based on the sugar content of products with a flat tax rate across the different products. Other structures include a weighting to the different types of sugars, while others uses thresholds. Denmark for example used to tax according to the weight or volume of a product, rather than taxing according to the sugar content of the product. Countries such as Hungary and Finland use thresholds according the sugar content, different tax rates are applied to products, while other products may not be taxed if they are below certain thresholds.

4.3. Some of the challenges that have faced the imposition of a tax on sugar products include administrative considerations, job loses, product substitution by consumers and tax evasion because of classification anomalies. Finland has experienced tax evasion challenges due to problems in classifying the tax base. Denmark had experienced cross-border trade distortions which were part of the reason for the abolition of the tax on sugar-sweetened and artificially-sweetened beverages in 2014 and this has also been highlighted as a potential problem in Ireland. Some experts have however refuted this concern by arguing

[39]Lavin, R. & Timpson, H (2013).Exploring the Acceptability of a Tax on Sugar-Sweetened Beverages. *Centre for Public Health* Liverpool John Moores University
[40]WHO (2014). Global status report on non-communicable diseases 2014

that SSBs are relatively inexpensive, and so a marginal increase in price will not create enough incentive for significant cross-border shopping.

4.4. There has clearly been increasing interest in the use of a tax on SSBs and although taxes on consumption have been contested by various stakeholders, taxes are likely to have a role to play in mitigating the effects that are related to non-communicable diseases.

5. Policy Design Options

5.1. One of the key considerations with the implementation of selective consumption based taxes (excise taxes) is the design with specific focus on the coverage, defining the base, and the rate. Excise taxes are selective on products in terms of coverage, discriminate in intent and often have some form of quantitative measure linked to the tax liability. Excise tax rates could be levied on specific (e.g. cents per gram) or ad valorem (% of value) terms, and is usually guided by controls over production and classification for enforcement purposes.[41] Specific rates (e.g. cents per gram) are often much easier to administer but require regular updates / increases in the rate, to at least keep up with inflation. Ad valorem excise duties can be partly avoided through under-invoicing and can become complex if there is no agreement of the value of the goods at the point of taxation. Ad valorem excise duties is also a challenge where less expensive (and lower quality) products are deliberately introduced with the intention to undermine the intent of the tax, to correct for market failures.

5.2. In designing a selective health-related tax, it is important to consider whether to apply the tax to a specific product (e.g. quantity or price of a SSB) or to nutrients contained in products (e.g. quantity of sugar).[42]

5.3. Applying a flat rate per beverage would not support Government's objective of encouraging producers and consumers to switch to lower sugar content beverages. Table 4 below gives a short summary of the advantages and disadvantages with each of the possible tax design features.

[41] African Tax Institute, 2013. Excise taxation.
[42]OECD (2016). Health-Related Taxes on Food and Non-Alcoholic Beverages in OECD Countries: Key Design Issues. *Working Party No. 2 on Tax Policy Analysis and Tax Statistics for the meeting to be held on the 24-26 May 2016.*

Table 4: Tax options – specific rates

Excise regime	Advantages	Disadvantages
1. Flat levy on all SSBs. **(e.g. R 2.00 per litre of SSB)**	▪ Easy to administer, ▪ Capture all SSBs, including those with lower sugar content.	▪ Tax low sugar content SSBs at the same rate as high sugar content SSBs. ▪ No incentive for manufacturers / consumers to decrease tax liability by shifting to lower sugar content SSBs.
2. Levy based on absolute sugar content. **(e.g. R 0.02 per gram of sugar contained in SSBs)**	▪ Closest proxy for targeted external harm ▪ Provides incentive for manufacturers / consumers to decrease tax liability by shifting to lower sugar content SSBs.	▪ Administratively slightly more complex.
3. Threshold approach **(e.g. R0.04 per gram of sugar above 5 grams per 100 ml of SSB)**	▪ Provides incentive for manufacturers / consumers to decrease tax liability by shifting to lower sugar content SSBs.	▪ Administratively more complex. ▪ Need to adjust the threshold over time.

5.4. It is important that the specific tax rate(s) be adjusted annually, to at least take account of inflation. An ad valorem tax rate structure (% of value) is not considered as it would not be fully in line with the health outcome objectives and could actually undermine the intent of the tax, by the introduction of cheaper products with higher added sugar contents.

5.5. An important requirement of the tax system is to minimise the costs of administration and compliance for taxpayers. The key variable affecting the administrative costs of any tax instrument is the number of agents (taxpayers) liable for payment of the tax to SARS. A tax of this nature that covers many producers may be associated with high administrative costs. The duty-at-source (DAS) system eases the administration of excise type taxes. It should be noted that the economic incidence (burden) of the tax and the legal incidence thereof are not necessarily the same. Producers or importers might be legally required to pay the tax to SARS but they can, in many instances do, pass the tax on to consumers. For the tax to have the desired behavioural impact on consumption there has to be a pass through of the excise tax, otherwise it reduces profit margins if it is absorbed by businesses. This could

also encourage producers to reformulate their products in order to reduce the tax liability. The following design features are considered in the context of feasibility, the ability to create and maintain incentives to change behaviour and achieve actual reductions in sugar consumption related to SSBs.

Scope of the Tax

5.6. In defining the tax base consideration should be given to the scope of beverages included, ease of administration and to limit tax arbitrage. Sugar (i.e. intrinsic sugar) is naturally built into the structure of most foods such as fruits, vegetables and even dairy products. However, it is sugar added to drinks during processing and preparation that increases the total sugar content. Such "free sugars"[43] in most cases provide limited nutritional benefits and are therefore targeted from a public health perspective.[44]

5.7. Sugar sweetened beverages are beverages that contain added caloric sweeteners such as sucrose, high-fructose corn syrup (HFCS), or fruit-juice concentrates, which include but are not limited to soft drinks, fruit drinks, sports drinks, energy and vitamin water drinks, sweetened iced tea, and lemonade, among others.[45]

5.8. Free sugars do not include sugar that is naturally built into the structure of foods or to sugars naturally present in food products. Thus any beverage that only contains sugar naturally built into the structure of the ingredients will not be covered by the tax (examples of this include unsweetened milk and milk products and 100 per cent fruit juice).

Tax Base: Sugar Content of SSBs

5.9. One of the major contributing factors to weight gain and related health problems is excess sugar consumption from SSBs. The actual or absolute levels of free sugar should be the base or proxy for taxing SSBs. It is the excessive consumption of sugar within SSBs, rather than the volumes / quantities of SSBs that leads to significant negative long term-health effects.[46]

5.10. The policy advantage of an SSB levy rate structure based on sugar content is that it is better targeted and clearly promotes government's public health policy objectives. A tax directly in proportion to the sugar levels of SSB would

[43] 'Free sugars' are defined by the WHO as including monosaccharides and disaccharides added to foods and beverages by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates".
[44] World Cancer Research Fund International: Curbing global sugar consumption.
[45] Pediatric Annals: January 2012 - Volume 41 · Issue 1: 26-30
[46] OECD (2016). Health-Related Taxes on Food and Non-Alcoholic Beverages in OECD Countries: Key Design Issues. Working Party No. 2 on Tax Policy Analysis and Tax Statistics for the meeting to be held on the 24-26 May 2016.

encourage a switch to lower sugar content beverages; encourage producers to reformulate their products and encourage a reduction in excessive free sugar intake / consumption.

Tax Rate:

5.11. Empirical evidence[47]confirms that health-related taxes do alter consumption behaviour and if introduced at sufficiently high levels, can positively impact health outcomes. Some studies suggests that a 10 to 20 per cent price increase of SSBs may be required to have a significant impact on production and consumption patterns and levels and ultimately on obesity and population health.[48]A South African study[49]estimated the effects of a 20 per cent tax on SSB on the prevalence of obesity and found a reduction in obesity of 3.8 per cent in adult males and 2.4 per cent in females.

5.12. If a specific tax rate (e.g. cents per gram) is implemented the rate should be adjusted annually in order to take account of inflation. An appropriate reference price also becomes important as one can either use a weighted average approach or most popular beverage. Carbonated soft drinks (CSDs) are a major category and are dominated by the premium brands. Various estimates indicate that premium equity brands may account for as much as 85 per cent of the total market.[50]Table 5 shows the prices and sugar content for different types of non-alcoholic beverages.

Table 5: Retail price and sugar content - May 2016

Beverage (examples)	Price per litre	Sugar Content (grams per litre)	Sugar Content (grams per 100ml)
Soft drink (e.g. Coca Cola)	R 11.45	106	10.60
Fruit juices 100% (e.g. Ceres)	R 18.67	104	10.40
Energy drinks (e.g. Red Bull)	R 50.87	110	11.00
Milk mixes (e.g. Tropica)	R 19.89	110	11.00
Flavoured waters (e.g. aQuallé)	R 9.10	60	6.00
Sweetened iced tea (e.g. Lipton)	R 22.48	53	5.30
Fruit-juice concentrates[51] (e.g. Hall's)	R 28.55	475	47.5

[47]WHO (2015). Using price policies to promote healthier diets
[48]Public Health England (2015). Sugar Reduction: The evidence for action Annexe 2: A mixed method review of behaviour changes resulting from experimental studies that examine the effect of fiscal measures targeted at high sugar food and non-alcoholic drink
[49]Manyema M, VeermanLJ, Chola L, Tugendhaft A, Sartorius B, et al. (2014) The Potential Impact of a 20% Tax on Sugar-Sweetened Beverages on Obesity in South African Adults: A Mathematical Model. PLoS ONE 9(8): e105287. doi:10.1371/journal.pone.0105287
[50]Industry Trends. *Supermarket & Retailer, August 2014*
[51] 'Fruit juice concentrates' have anything between 20% and 50% fruit juice content and are normally diluted on a 1:4 basis.

Ready-to-Drink (e.g. Oros)	R 27.63	100	10.00

Source: *Author's own calculations (2016 wholesale & retail information and food labelling)*

5.13. There are a number of tax rate options that could be explored:

Option 1: Flat levy on all SSBs

5.14. With this approach all the SSBs levy the same rate on a per litre basis regardless of the differences in the level of sugar content. From an administrative perspective, it would be simpler to administer compared to other approaches however, it does not provide incentive for manufacturers / consumers to decrease their tax liability by shifting to lower sugar content SSBs or reformulation of products. In that case, the excise tax becomes a revenue raising instrument without any specific connection to the externality associated with differences in the level of sugar in SSBs. From the estimate above, this would mean a tax rate in the region of R2.29 per litre of SSB using the soft drink (i.e. Coca cola) as a reference point.

Option 2: Tax every gram of Sugar in SSBs

5.15. This approach takes the view that SSBs have high sugar content but no nutritional value therefore every gram of sugar in SSBs should be taxed. Mauritius has taken such an approach by taxing every gram of free sugar in non-alcoholic beverages, excluding 100 per cent fruit juice.

5.16. By way of example, using the price of soft drinks (i.e. coca cola) in Table 5 as a reference price, an estimated tax rate in the region of R2.29 per litre of SSB, or R0.0229 (i.e. 2.29 cents) per gram of sugar contained in a litre of SSB would be a reasonable starting point.

Option 3: A Threshold Approach

5.17. This approach makes an allowance for a minimum sugar content to be tax free and only the added sugar content above this threshold to be taxed. In the UK example, there is a tax free allowance of 5 grams of sugar per 100ml (i.e. 50 grams of sugar per litre). Setting a minimum threshold may further encourage producers to reformulate towards low sugar content SSBs.[52]

5.18. There are administrative costs related to the application of a threshold due to the need to police this boundary between taxable and non-taxable products.

[52]OECD (2016). Health-Related Taxes on Food and Non-Alcoholic Beverages in OECD Countries: Key Design Issues.

5.19. In terms of maintaining a 20 per cent tax burden on SSBs, the application of the threshold using soft drinks as a reference translates to a tax rate of R0.041 (i.e. 4.1 cents) per gram of sugar above the 5 gram.

Default category

5.20. For SSBs that currently do not apply nutritional labelling, consideration should be given to assume a relatively high added (free) sugar content. The sugar content range of the products currently applying nutritional labelling (*Annexure IV*) could be used as reference. Assuming grams of sugar of say 50 grams per 330ml, which translates into 151.52 grams per litre (i.e. 15.15 grams per 100ml). This approach will encourage disclosure by way of labelling even in the absence of legislative requirements in this regard. In terms of the tax rate the estimated R0.0229 (i.e. 2.29 cents per gram) will apply.

6. Legislative and Administrative Considerations

6.1. The enabling legislative framework for the successful implementation of the tax on SSBs includes the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972; Agricultural Product Standards Act 119 of 1990and the Customs and Excise Act.

6.2. The sale, manufacture and importation of food stuffs (including SSBs) are guided by the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 and the Agricultural Product Standards Act 119 of 1990 which are administered by the National Department of Health and the Department of Agriculture, Forestry and Fisheries, respectively.

Food Stuff labelling:

6.3. In terms of the Foodstuffs, Cosmetics and Disinfectants Act, minimum mandatory nutritional information should be declared on the label of all foodstuffs and beverages (see Table 5 below). However, if any particular food or beverage does not make any claims with regards to nutritional or dietary value, such minimum nutritional information is not mandatory as stipulated in the current regulations to the Act (Regulations Relating to the Labelling and Advertising of Foodstuffs (R146)).

Table 5: Mandatory nutritional information declaration

	Per 100 g/ml	Per single serving	NRV per single serving (optional)
Energy (kJ)			
Protein (g)			
Total carbohydrates (g): *of which Glycaemic carbohydrates (g)* *of which total sugar (g)* **Dietary fibre (g)**			
Fat (g): of which Saturated fat (g)			
Total Sodium (mg)			

Source: *Foodstuffs, Cosmetics and Disinfectants Act, 1972 (ACT No.54 OF 1972) Annex 2 in Act*

6.4. The current South African Food Labelling Regulations (R146) was published in the Government Gazette, 1 March 2010. On 29 May 2014, draft amendments to the South African Food Labelling Regulations (R429) were published for public comment. The new draft regulation aims to have minimum mandatory nutritional information on all food stuffs, even for products / beverages that do not make any nutritional or dietary claims. Therefore, until draft regulation R429 is promulgated, minimum nutritional information labelling is optional for beverages that do not make any nutritional claims.

6.5. The finalisation of the food labelling Regulations (R429) will go a long way in assisting the implementation of the tax on SSBs however it is currently not an impediment

Customs and Excise Legislation:

6.6. The tax / levy on SSBs will be implemented through the Customs and Excise Act (Act 91 of 1964). An additional Schedule or parts to one of the current Schedules will be added.

6.7. In line with the current administration and collection of duties and levies imposed in terms of the Customs and Excise Act, the duty- at-source principle will apply. The SSB tax / levy will be collected at the factory gates or at the ports of entry.

7. Recommendation

7.1. It is recommended that a tax on sugar sweetened beverages based on sugar content be implemented. This approach takes the view that SSBs have high sugar content but no nutritional value and therefore every gram of - sugar in SSBs should be taxed.

7.2. Using the current available price and sugar content of soft drinks as a reference point, the estimated tax would be in the region of R2.29 per litre of SSB, or R0.0229 (i.e. 2.29 cents) per gram of sugar contained in a litre of SSB.

7.3. For SSBs that currently do not apply nutritional labelling, it is proposed that a relatively higher fixed gram of added (free) sugar is assumed, i.e. 50 grams per 330 ml or 15.152 grams per 100 ml or 151.52 grams per litre. This will hopefully act as an incentive for producers to move towards voluntary labelling in instance where a mandatory (legislative) labelling system is not yet in place.

7.4. 100 per cent fruit juice and unsweetened milk and milk products be exempted from the tax on SSBs.

Annexure I: Beverage Landscape in South Africa[53]

Company	Brands/Products	Distributors/Partners
Coca cola	Sparkling Beverages: Coca-Cola range, Fanta, Tab, Sprite, Sprite Zero, Stoney Ginger Beer, Sparletta, Twist, Schweppes. Still Beverages: BonAqua, Powerade, Valpre, Just Juice, Minute Maid, Minute Maid Nada, PowerPlay, Glaceau vitamin water Appletiser Beverages: Appletiser, Grapetiser, Peartiser	Amalgamated Beverage Coca Cola Fortune Peninsula Beverage Coca Cola Shanduka Beverages
Tiger Brand	Energade, Hall's Fruit Juice Rose's	Bromo Foods
Pepsi	Pepsi range, Lipton, Mountain dew, Mirinda, 7Up	SoftBev
Pioneer Foods	Ceres, Liqui Fruit, Fruitree, Lipton Ice Tea, Wild Island, Daly's	
Quality Beverages	Jive range, Dixi, Planet, Abua Blue, Vimto	SoftBev
Shoreline Beverages	Coo-ee range, Creras, Coo-ee Premium Soda Water, Coo-ee Premium Tonic Water	SoftBev
Soda King Franchising	Soda King range, Aqua range, Soraya, King Malta range, Jooz	

[53]Source: Company Websites

Red Bull South Africa	Red Bull Energy Drink Red Bull Sugarfree	
Mofaya	Mofaya Energy Drink	Inhle Beverages Nampak Bevcan
Lantes Beverages	Volt Energy Drink	
Scheckter's Organic Energy	Scheckter's Organic Energy Drinks range	
Chill Beverages	Score energy Drink Big Easy Iced tea and Lemonade	

Annexure II: International experience

Country:	Tax base	Tax rate
United Kingdom **Soft drinks industry levy:** **Implementation from April 2018**	• soft drinks that contain added sugar • will be charged on volumes according to total sugar content • exclude pure fruit juices and milk-based drinks with no added sugar • exclusion for small operators	Not yet finalised but estimated at: • Main rate charge:18p/litre for drinks with 5–8g of sugar per 100ml • Higher rate charge: 24p/litre for drinks with more than 8g per 100ml
Mauritius **Excise Tax on Soft Drinks:** **Introduced in 2013**	• soft drinks based on sugar content • excludes bottled water, pure fruit or vegetable juice and dairy products.	3 cents per gram of sugar content
Hungary **Energy and Soda Drinks:** **Introduced: 2011**	1.Soft Drinks Tax applicable for sodas with more than 8g/100ml 2. Energy Drinks a) Drinks with both Methylanthines more than 1mg/100ml and Taurine more than 100mg/100ml. b) Drinks with Methylanthines content more than 15mg/100ml	Soft Drinks[54] $0.02 per litre Energy Drinks 250 HUF per Litre
Products with high salt content	3. Salt Content Foods with salt more than 15mg/100ml	Salt content $0.85 per gram

[54] http://www.taxpolicycenter.org/UploadedPDF/2000553-should-we-tax-unhealthy-foods-and-drinks.pdf

Country:	Tax base	Tax rate
Mexico **Soft Drink and Junk Food tax:** **Introduced: January 2014**	1. Non-Alcoholic Drinks with Added Sugar. 2. Junk Food[55] Calorie Rich Food with more than 275 calories/100g	Non-Alcoholic Drinks: 1 peso per litre; 9% of price Junk Food 8% of price
Finland **Sugar tax:[56]** **Introduced: January 2011 (historically also taxed)** **Abolish: 2017** **Soft drinks will continue to be taxed after 2017.**	1. Sugar tax: Tax on sweets, chocolate ice cream, soft drinks and other sugary products.	Sugar tax: [57] € 0.95 / kg by weight for confectionery. € 0.11 / L of the product (e.g. ice cream). € 0.220 /L beverages with more than 0.5% sugar. € 0.11 / L for other non-alcoholic beverages.
Norway **Introduced: 1981**	1. Soda Tax Soda Drinks and concentrates 2. Chocolates and Sugar Products	Soda Tax[58] NOK 3.27/L for sodas NOK 19.92/L for concentrate (syrups) NOK 1.64/L for squash and syrups based on fruits, berries, vegetables (without added sugar) NOK 9.96/L for concentrate -syrup based on fruits, berries, vegetables. (without added sugar) NOK 19.79/L per kg for chocolates and sugar products

[55] http://www.taxpolicycenter.org/UploadedPDF/2000553-should-we-tax-unhealthy-foods-and-drinks.pdf
[56] http://www.foodnavigator.com/Policy/Finland-set-to-scrap-tax-on-sweets-and-ice-cream
[57] http://www.wcrf.org/int/policy/nourishing-framework/use-economic-tools
[58] https://www.regjeringen.no/contentassets/52300872ef08449b86e422d87f7726bd/chapter_1_prop1.pdf

Country:	Tax base	Tax rate
	3. Tax on Sugar	NOK 7.66/kg for sugar
France **Introduced:** **January 2012**	1. Soft drink tax: Drinks containing added sugar or sweetener as well as fruit drinks and flavoured waters.	Soft drink tax:[59] 2014: £0.059 per / L Energy drinks: £0.79 per / L Tax burden of about 6% of the average price of sodas.
Ireland[60] **Excise tax on soft drinks:** **Implemented 1916 – 1992**	• Sugar and artificially sweetened beverages • Aerated waters and any beverages (including syrups)	IRP 0.29 / gallon (in 1992)
Denmark **Saturated fat tax:** **Introduced: October 2011** **Abolished: January 2013** **Soft drink tax:[61]** **Introduced: 1930s** **Abolished: 1 January 2014**	1. Saturated fat: Tax on foods that are high in saturated fat (2.3 % threshold). 2. Sugar tax:[62] Confectionary (chocolate and candy), ice cream and soft drinks)	Saturated fat: DDK 16 (£1.78) / per kilogram of saturated fat on products which contain > 2.3g/100 g Sugar tax: Differential (DDK 14.20 & 17.75) rates for goods which content of added sugar are more or less than 0.5g pr. 100g. Soft drink tax: DDK 1.64 (€0.15 to €0.22) per litre of sugar sweetened soft drink.

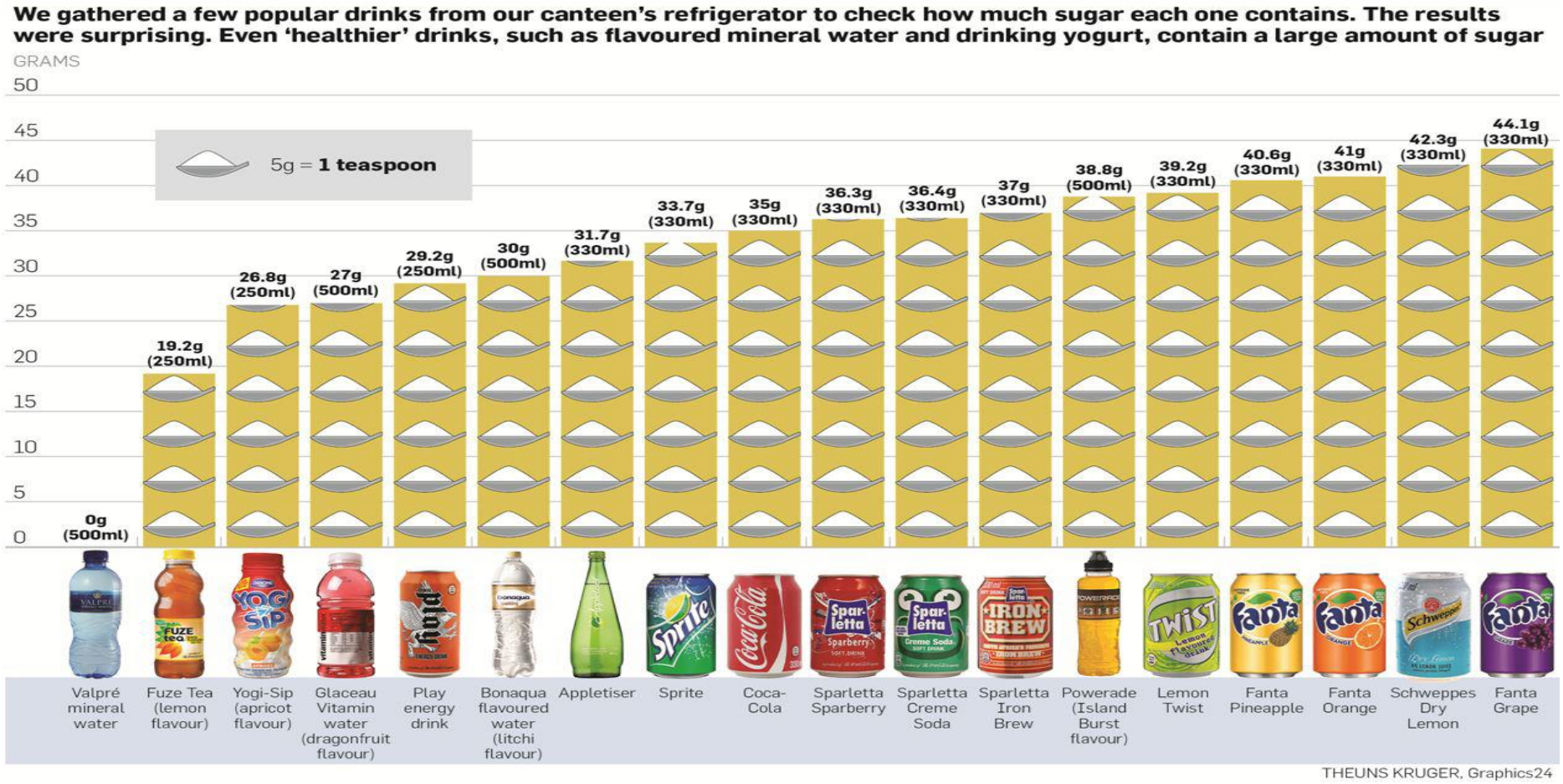
[59] https://www.banque-france.fr/uploads/tx_bdfdocumentstravail/DT-415_01.pdf
[60] OECD (2016). Health-Related Taxes on Food and Non-Alcoholic Beverages in OECD Countries: Key Design Issues. Working Party No. 2 on Tax Policy Analysis and Tax Statistics for the meeting to be held on the 24-26 May 2016.
[61] http://www.foodnavigator.com/Policy/Denmark-to-scrap-decades-old-soft-drink-tax
[62] Institute of food and resource economics (2013). Denmark's experience on food taxes and subsidies

Annexure III: Impact of SSB Taxes

Country	Impact
Finland (soft drinks)	• Price increased by 7.3% in 2011, by 7.3% in 2012, and by 2.7% in 2013, while the tax was expected to increase the price by 1.5% and 0.9% in 2011 and 2012, respectively. • Price increases led to a reduction in demand by 0.7% in 2011, by 3.1% in 2012 and by 0.9% in 2013. • Almost no change in the trends in competitiveness indicators. Some effects on labour productivity and employment in the industry linked to reduction in demand. Difficult to separate the impact of taxes on alcoholic and non-alcoholic drinks.
France (regular Cola)	• Price increased by 5% in 2012 and by 3.1% in 2013 while the tax itself was expected to increase price by 4.5% in 2012. Increase in the price in 2013 was very large given tax rate was only adjusted to inflation. • Demand reduced by 3.3% in 2012 and 3.4% in 2013. • Retail margins increase for diet cola, no change for regular cola. • Based on available data no changes in the indicators for competitiveness were noted.
Hungary (Cola)	• Price increased by 3.4% in 2011, 1.2% in 2012 and 0.7% in 2013 while tax alone was expected to raise price by 3.1% in 2011. • Demand reduced by 2.7% in 2011, by 7.5% in 2012 and by 6% in 2013. • Some evidence of substitution towards non-branded products. • Increases in competitiveness indicators but unclear how much, if any, can be contributed to the tax. • Retailer margins increased.
Mexico	• Tax on sugary drinks reduced consumption by 10% and increased the consumption of untaxed alternatives (milk and bottled water) by 7%. Consumer survey of 1,500 Mexicans reported that more than half of the sample reduced the consumption of sugary drinks since the tax was introduced (74). • In the first half of 2014, the biggest soft-drink bottler reported 6.4% reduction in sales while in the second half of 2014 the reduction slowed down to 0.3% (75). • Soft drink bottlers have registered a general fall in the volume of sales in North America, ranging from 0.1% to 3% across different companies (76).

- The value of the soda market in Mexico is estimated to increase by 9.6% by 2019 from its current value of $15,935m (76).

Annexure IV: SSBs Sugar Content



Source: http://carteblanche.dstv.com/sugary-drinks/