

EVALUATING THE EFFECTIVENESS OF SUGAR TAX TO COMBAT SOUTH AFRICAN'S SWEET TOOTH

Joani Dahms

North-West University, South Africa

20034547@nwu.ac.za

—Abstract —

The former Minister of Finance, Pravin Gordhan, introduced the proposed sugar tax legislation for South Africa in the 2016 Budget Speech to address obesity in South Africa. The World Health Organisation (WHO) encourages more healthy behaviour and supports the implementation of sugar tax. Sugar tax is the tax levy on sugar-sweetened beverages (SSBs), such as soft drinks and energy drinks, and although the South African legislature has not yet formalised such into legislation, lessons can be drawn from foreign practices. An exploratory research study was conducted to explore how Finland, Hungary and the United Kingdom implemented their sugar tax legislation. These countries make use of the same tax base, namely the threshold approach, as the proposed sugar tax base for South Africa. South Africa's proposed sugar tax will be measured against the four maxims of a good tax policy (equity, certainty, economy and convenience). With this evaluation as benchmark, the main objective of the study is to determine whether the proposed sugar tax rate in South Africa will be effective and if the proposed sugar tax rate will be in line with the selected countries discussed in the paper. In order to reach the objective, a partially mixed sequential dominant status design was followed. This study finds that the four maxims are not met and the proposed sugar tax legislation require much needed amendatory action by the legislature. Also, the proposed sugar tax rate of 2,1 cent per gram of sugar content in excess of 4 grams of 100 millilitre is the second highest sugar tax rate when compared to the three selected countries but may not be enough to combat excessive SSBs consumption as consumers may choose cheaper alternative SSBs options.

Keywords: South Africa, Sugar tax, Sugar-sweetened beverages, World Health Organisation

JEL Classification: H20

1. INTRODUCTION

Obesity is a global epidemic and according to the Institute for Health Metrics and Evaluation (2014) approximately 30 per cent of the world's population form part of this category. Currently, the obesity ratio in South Africa is 68 per cent among woman and 31 per cent among men (Stats SA, 2017). The Department of Health's (2016) statistics for children between the ages of two and fourteen show that one out of four girls and one out of five boys are either overweight or obese. Obesity is responsible for many premature deaths (Department of Health, 2016). The World Health Organisation (WHO) (WHO, 2015) proposes that the "free sugars" intake in sugar-sweetened beverages (SSBs) must be reduced as it leads to a higher rate of obesity. "Free sugars" are used in a refined form for example glucose, fructose, sucrose or table sugar (WHO, 2015). According to the WHO (2015) the guideline for total energy intake per day consists of maximum 10 per cent sugar and is equivalent to 50 grams or 12,5 teaspoons of sugar. To put this into perspective: one 330 millilitre can of Coca-Cola contains 35 grams of sugar (9 teaspoons of sugar) (Coca-Cola Shanduka Beverages, 2014).

The South African Department of Health (2016) has implemented a "National Strategy for the Prevention and Control of Obesity 2015–2020" to reduce obesity by 10 per cent by 2020. In order to achieve this goal, the former Minister of Finance, Pravin Gordhan, proposed a sugar tax of 2,29 cents per gram of sugar on SSBs from 1 April 2017 in the 2016 Budget Speech (National Treasury, 2016a). However, in the 2017 Budget Speech, (National Treasury, 2017) the proposed sugar tax rate was reduced to 2,1 cent per gram of sugar content in excess of 4 grams of 100 millilitre and will be collected through the Customs and Excise Act 1964. Formal legislation governing sugar tax in South Africa has not yet been finalised.

Sugar tax is a levy on SSBs with the exclusive objective to address the excess sugar intake of consumers and to encourage the producers in the soft drink industry to reduce the added sugar content (Department of Health, Ireland, 2016). Internationally, sugar tax is not a new concept as it was implemented as early as 1916 in Ireland (Department of Health, Ireland, 2016). According to National Treasury (2016b) SSBs includes soft drinks, fruit drinks, sport and energy drinks, vitamin water drinks, sweetened ice tea and lemonade. Excluded from sugar tax are: unsweetened milk, milk products and 100 per cent fruit juices (National Treasury, 2016b).

According to the South African Revenue Service (SARS, 2017), excise duties are mainly introduced on products that are used in large quantities, for example tobacco and alcohol, as well as luxurious items such as electronic equipment and cosmetics. Coetzee, Bruwer, De Hart, Koekemoer, Oosthuizen and Stedall (2017) state that excise duties are an indirect tax and is levied on consumption, which means the taxpayer carries the burden of products consumed. The main purpose for these excise duties and levies are a continuous stream of revenue of around 10 per cent for the South African fiscus (SARS, 2017). In addition, these excise duties and levies attempt to discourage the use of these products such as SSBs that are regarded to be unhealthy (SARS, 2017).

Research conducted by the Centre for Public Health (2013) indicate that Norwegians used less lemonade and SSBs during 2001 to 2008 after the implementation of sugar tax. According to The Lancet (2017), Mexico introduced a sugar tax in 2014 and experienced a drop in SSBs sales of 5,5 per cent in 2014 and 9,7 per cent in 2015. Only time will determine if sugar tax will have a conclusive health impact, but it will be difficult to prove (The Lancet, 2017). The research outcome of the Bull World Health Organ (2016) indicates that the reduction in SSBs in Mexico was mostly detected under the low-income groups. The Mexican Government applied the collected sugar tax revenue to supply clean drinking water to less privileged schools. It is still early to draw conclusions if sugar tax on SSBs decreases the obesity rate (Bull World Health Organ, 2016). BMJ Publishing Group Ltd (2015) conducted a research study on the SSB consumption after one year of the implementation of sugar tax in Mexico and, it revealed that there is no conclusive evidence to show the comparability of sales data on SSBs. Also in France, where a similar sugar tax approach has been implemented than in Mexico, no research data are available on household consumption to determine the impact on SSB purchases (BMJ Publishing Group Ltd, 2015). The Institute of Economic Affairs's (IEA) (2016) research with regard to sugar tax concluded that the results of hypothetical models and factual data on SSBs differ and the outcome was not always the same.

The following countries revealed the reasons for the abolishment of sugar tax: The Department of Health, Ireland (2016), concludes that sugar tax may be regressive as the low-income groups spend a larger percentage of their income on SSBs. A regressive tax is not fair and indicate inequality. Producers of certain SSBs can be more affected than others as consumers will use alternative SSBs (Department of Health, Ireland, 2016). Possible job losses are unavoidable according to the Department of Health, Ireland (2016). Job losses have a negative effect on the

economy. The Danish Government also abolished sugar tax due to job losses, SSB cross border trade and because of the poor paying a bigger percentage of their income than the rich (UNESDA, 2017). According to Haines (2017) the government's major concerns were the increasing expenses for administrating sugar tax by the industry and forfeiting approximately €39 million in VAT due to unlawful SSBs sales. High administration expenses is an inconvenience for the taxpayer.

The basic criteria of a good tax policy as classified by Smith (1776) are referred to as the four maxims namely, equity, certainty, economy and convenience, which are discussed in the literature review.

The National Treasury's (2016b) Policy Paper on sugar tax evaluated nine countries. However, this study focuses on the countries that implemented the same tax base as the proposed sugar tax base for South Africa, namely the threshold approach. These countries are Finland and Hungary that already implemented sugar tax and the United Kingdom who will implement sugar tax in 2018.

Based on the aforementioned discussion on SSB consumption, the exploratory study aims to evaluate if the proposed sugar tax rate in South Africa will comply with the four maxims of a good tax policy and whether the proposed sugar tax rate will be comparable to the countries selected. If the sugar tax of South Africa comply with the four maximums and is internationally comparable it will be an effective tax.

In the remainder of this article, a literature review of the four maxims of a good tax policy, the sugar tax legislation for the selected countries and the proposed sugar tax rate in South Africa are considered in part 2. Part 3 provides an overview of the methodology. Part 4 evaluates the results and discussion. The article concludes with the findings and recommendations based on the exploratory research study in part 5.

2. LITERATURE REVIEW

In the literature review the four maxims of a good tax policy, namely equity, certainty, economy and convenience are discussed. The three selected countries, namely Finland, Hungary and the United Kingdom that implemented or proposed the sugar tax legislation, applying the threshold approach, are explored.

Furthermore, the proposed sugar tax legislation in South Africa is analysed. The findings in the literature review are applied to the four maxims in part 4.

2.1. Four maxims of a good tax policy

2.1.1. Maxim 1 – Equity

Smith (1776) concludes that all citizens of a country are required to make a sensible contribution towards government for the benefits they receive. Nellen (2002) states that the equity in a tax system is based on: politics, society and the economy. All taxpayers need to be treated equally as explained by the Experimental Economics Centre (2006): taxpayers with the same income pay the same tax rate (horizontal equity), and taxpayers with more income pay more tax (vertical equity).

2.1.2. Maxim 2 – Certainty

According to Smith (1776) a taxpayer needs to be certain of the tax payable and the tax should not be arbitrary, which means that the amount, manner and the timing of payment needs to be clear. Nellen (2002) stresses the importance of calculating the tax base, tax rate and tax outcome correctly to provide certainty for the taxpayer.

2.1.3. Maxim 3 – Economy

Smith (1776) states that administration cost should be low for the taxpayer if compared to the specific tax payable but still provide necessary income for the treasury of a country. Smith (1776) argues that the number of tax collectors should be minimised to minimise administration cost.

2.1.4. Maxim 4 – Convenience

The payment method and timing of any tax should be convenient for the taxpayer (Smith, 1776). Nellen (2002) assesses that the convenience contributes to the tax compliance depending on the method of payment and collection. The collection tax structure must determine for example whether the manufacturer or end-user should be liable for the tax, as well as the most convenient way to frequently collect the tax (Nellen, 2002).

2.2. Countries that implemented the sugar tax applying the threshold approach

The countries, Finland, Hungary and the United Kingdom that implemented the same tax base as the proposed sugar tax base for South Africa, namely the threshold approach are evaluated in the following section.

2.2.1. Finland

Finland introduced an excise tax on sweets, ice cream and soft drinks in 2011 to encourage a healthier lifestyle (Paloheimo, 2012). The implemented sugar tax rate on SSBs is 0.220 euro (€) per litre beverages with more than 0,5 per cent sugar and €0.11 per litre for other non-alcoholic beverages (National Treasury, 2016b). The South African National Treasury (2016b) states that Finland struggled to collect taxes as the government experienced problems to determine the tax base of sugar tax. The cost increase of SSBs were 5,8 per cent more in 2011 and 6,4 per cent more in 2012, as anticipated (National Treasury, 2016b). According to National Treasury (2016b) a decline in SSBs influenced production and job creation in the manufacturing sector and the impact of sugar tax show little change between competitors.

2.2.2. Hungary

The Hungarian government implemented a public health product tax in 2011 on sugar, salt and methylxantine content in products to promote healthier and more nutritional options (National Treasury, 2016b). The sugar tax applicable on SSBs with more than 8 gram per 100 millilitre is 0.02 US dollar (\$) per litre (National Treasury, 2016b). National Treasury (2016b) states that prices increased and that resulted in a decline in demand. The IEA (2016) states that consumers in Hungary changed their preference to more affordable products after the implementation of sugar tax.

2.2.3. United Kingdom

The United Kingdom will introduce a sugar tax, of 18 British pennies (p) per litre for drinks with 5 to 8g of sugar per 100 millilitre and 24p per litre for drinks with more than 8g of sugar per 100 millilitre, in 2018 (National Treasury, 2016b). The proposed sugar tax in the United Kingdom will be of a more constructive nature to encourage the SSB industry to reduce added sugar content, rather than targeting the end-consumer of SSBs (Haines, 2017). The United Kingdom SSB industry is

in the process to reduce added sugar content, i.e. Coca-Cola started an intensive advertisement campaign to promote their Diet Coke and Coca-Cola Zero range (Haines, 2017).

2.3. Sugar tax in South Africa

Three possible sugar tax methods were mentioned in the Policy Paper (National Treasury, 2016b):

- Flat levy on all SSBs (e.g. R1,00 per litre of SSB)
- Levy based on absolute sugar content (e.g. R0,01 per gram of sugar contained in SSBs)
- Threshold approach (e.g. R0,03 per gram of sugar above 6 grams per 100 millilitre of SSB)

The threshold approach of 2,1 cent per gram of sugar content in excess of 4 grams of 100 millilitre was selected in the 2017 Budget Speech (National Treasury, 2017).

The Business Report (2017) states that the Beverage Association of South Africa (BEVSA) is in favour of the new announced sugar tax of 2,1 cent per gram of sugar content in excess of 4 grams of 100 millilitre. However, the initial threat to the economy and insufficient research results on the impact of sugar tax are still a major concern (Business Report, 2017). BEVSA makes an urgent plea to the government in the Business Report (2017) to postpone legislation until unequivocal research results are available and a more structured plan of action could be implemented to address added sugar in SSBs. In a policy paper from BEVSA (2016) several concerns were highlighted for the implementation of the initial 2,29 cents per gram of sugar on SSBs, namely job losses, decline in gross domestic product (GDP), the effect on informal outlets, i.e. Spaza shops, decrease in tax revenues, limiting competition in the industry and the impact on the poor. In studies conducted by Gardiner (2016) and Finkelstein, Zhen, Bilger, Nonnemaker, Farooqui and Todd (2012), they concluded that a 20 per cent sugar tax on SSBs may have a positive impact on SSB consumption, however, lower rates can have an insignificant or no impact on SSB sales.

The Association for Dietetics in South Africa (2016) states that sugar tax is one of the possible options to combat obesity in South Africa, but the education for a healthier lifestyle that consists of better diet options is fundamental. Genesis Analytics (2017) concludes in their survey that 70 per cent of the correspondents

were in favour of the proposed sugar tax with the reservation that the revenue collected should be reinvested in health educational programmes.

National Treasury (2016b) draws attention to key conditions that need to be considered when sugar tax is implemented, namely to reduce administration expenses, easy access of submission for taxpayers and limited number of agents who are responsible to pay the sugar tax over to SARS. A more regulated approach for labelling is needed to successfully implement sugar tax and hold the industry accountable for the sugar content in SSBs (National Treasury, 2016b). Research conducted by Econex (2016) indicates that sugar tax will result in a decline in the GDP, job losses, higher production cost of SSBs with less production, decrease in SSB consumption and the fact that the impact on the economy will be broader than only the SSB industry.

The findings in a follow-up research study by Econex (2017) emphasise that sugar tax will not have the same impact on all SSB brands and that the price variance will impact every consumer of SSBs. The poor will be significantly affected by sugar tax and therefore the tax is regressive in nature.

Stacey, Tugendhaft and Hofman (2017) concluded in their study that the SSB consumption form part of the most popular drinks in South Africa and that a sugar tax may have the desired outcome to address health issues in South Africa. Myers, Fig, Tugendhaft, Mandle, Myers and Hofman (2017) propose in their study that the media onslaught on the SSB consumer must be stricter regulated and more health educational programmes must be launched to increase awareness among consumers of the danger of the over consumption of SSBs.

3. METHODOLOGY

For the purpose of the paper, an exploratory research study was conducted to determine if the proposed sugar tax rate in South Africa complies with the four maxims of a good tax policy (Smith, 1776) and if the proposed sugar tax rate is comparable to the sugar tax legislation of the selected countries identified in this paper. According to Brown (2006: 43) an exploratory research study has a tendency to put the emphasis on problematic issues on which limited or no previous research has been conducted and Singh (2007:64) reasons that it forms a foundation or platform for future conclusive research. This paper can add value to the current available information by exploring the feasibility of a sugar tax in South Africa and could be elaborated on in future studies. For the purpose of this study, three countries were selected, namely: Finland, Hungary and the United

Kingdom. These countries were exclusively analysed due to the fact that the National Treasury (2016b) used them as their guideline in the Policy Paper and that these countries already use or will make use of the threshold approach. By selecting these countries a conceptual framework was developed to shed more light on the South African proposed sugar tax legislation based on a literature review.

In this study a partially mixed sequential dominant status design was followed. Literature regarding the four maxims of a good tax policy, the three selected countries' sugar tax legislation and the proposed sugar tax legislation for South Africa were reviewed. A quantitative approach was followed to determine whether the proposed sugar tax rate will be in line with the selected countries discussed in the paper.

The paper consists of two parts:

- First, the four maxims of a good tax policy are explored by considering the selected countries' experiences, including the proposed legislation in South Africa.
- Secondly, a case study was conducted making use of the retail price of a two litre bottle of Coca-Cola due to the fact that this was the only available data for the purpose of this case study. The retail price on 10 July 2017 and the sugar tax rate of the selected three countries were converted into the South African Rand, on the same date, to calculate a percentage of sugar tax per two litre bottle of Coca-Cola and were compared to the proposed sugar tax rate for South Africa.

4. RESULTS AND DISCUSSION

4.1. The four maxims of a good tax policy

The findings in the literature study were measured against the backdrop of the four maxims below.

4.1.1. Equity

Sugar tax tends to be regressive in nature as the low-income groups spend a larger percentage of their income on SSBs, which occurs as horizontal equity. A regressive tax is not fair and does not take into account the taxpayers' ability to pay. There is no definite indication of who will benefit from the revenue collected

through the sugar tax. Will it be the fiscus or the Department of Health who will receive the revenue collected from sugar tax?

4.1.2. Certainty

Finland for example experienced difficulty to determine the sugar tax base on the threshold approach, which is an indicator of uncertainty. South Africa's proposed sugar tax base is 2,1 cent per gram of sugar content in excess of 4 grams of 100 millilitre. This may also be problematic as it will be difficult to calculate the amount for each SSB brand according to their sugar content and volume for example a 330 millilitre, 500 millilitre, 1 litre and 2 litre Coca-Cola need to be calculated separately. The United Kingdom SSB industry will carry the burden of the sugar tax and will pay it over to the National Treasury that will provide certainty to the taxpayers. However, in South Africa it is still uncertain who will be liable for paying the sugar tax over to SARS and the frequency of the payments.

4.1.3. Economy

In Hungary it was evident that the decrease in SSB consumption will have a definite negative effect on the economy. Sugar tax can have a negative effect on the South African economy, including possible job losses and a decline in the GDP due to a decline in the sales of SSBs. The complexity of the threshold approach calculating the tax base can increase the administration cost for SARS as well as it will be difficult to assess the accuracy of the sugar tax rate calculations in the industry.

4.1.4. Convenience

Difficulty to determine the tax base of sugar tax and high administration cost are an inconvenience to the taxpayer. However, a simplified method of payment and timing will be more convenient for the SSB industry for example to complete a sugar tax return on e-filing. The most appropriate method will be where the manufacturer will be liable to pay the tax over to SARS as the system to pay taxes for example excise duties are already intact.

4.2. Case study

In the table below the retail price on 10 July 2017 of a two litre bottle of Coca-Cola and the sugar tax rate of the selected three countries were converted into the South African Rand, on the same date, to calculate the percentage of sugar tax. This was compared to the proposed sugar tax rate for South Africa.

Table 1: Sugar tax percentages of 2 litre Coca-Cola in selected countries

Country	Retail Coca-Cola price per country (2 litres) in foreign currency	Coca-Cola price per country (2 litres) in ZAR	Sugar tax rate per country	Sugar tax rate in ZAR	Sugar tax percentage (%) per country in ZAR
Finland	€2.70	R41,00	€ 0.220 /L beverages with more than 0,5% sugar	R6,70	16,34%
Hungary	385 Ft	R19,00	\$0.02 per litre	R0,53	2,79%
United Kingdom	£1.80	R31,00	Higher rate charge: 24p/litre for drinks with more than 8 gram per 100 millilitre	R8,27	26,68%
South Africa	R15,00	R15,00	2,1 cent in excess of 4 grams/100 millilitre	R2,77	18,47%

Source: Author's own compilation (Expatistan, 2017 and Oanda, 2017).

The calculations in Table 1 only account for the additional sugar tax payable and excludes any other input cost and taxes, for example VAT. The result of this case study indicates that South Africa has the second highest percentage proposed sugar tax rate when compared to the selected three countries. South African consumers will pay more for SSBs, therefore this finding can meet the desired outcome for the National Treasury if the price hike encourage consumers to make healthier SSB choices. It can also increase the consumption of cheaper SSB drinks, i.e. Coo-ee (Econex, 2017) that is not necessarily a healthier option for consumers.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The current proposed sugar tax of 2,1 cent per gram of sugar content in excess of 4 grams of 100 millilitre in South Africa did not comply with the criteria of the four maxims of a good tax policy. Since the tax is of a regressive nature, the poor will pay more tax in relation to the rich, which is inequitable. It is uncertain, unclear and difficult to calculate the tax base. Job losses and a decrease in the GDP will interfere with the bigger economic picture. High administration cost and difficult tax base calculations make it inconvenient and inefficient for the taxpayer.

As per the result of the case study, the 18,47 per cent of sugar tax payable on SSBs in South Africa can result in a decrease of SSB consumption or lead to purchasing cheaper SSBs with a higher sugar content. Referring to the literature review, previous studies concluded that a 20 per cent sugar tax rate will have a significant positive impact on the SSB consumption and health of the population. The proposed sugar tax rate in South Africa is currently lower than 20 per cent and could result in a shortfall for National Treasury.

In conclusion, the proposed sugar tax in South Africa will not be effective due to the fact that it did not meet the criteria of a good tax policy. Although it has the second highest tax rate in the case study, when compared to Finland, Hungary and the United Kingdom, it may not be enough to combat excessive SSBs consumption as consumers may choose cheaper alternative SSBs options. Unfortunately, the possibility of the abolishment after the implementation of the sugar tax exists.

5.2. Recommendations

The research data of the above selected countries in the literature review can be of value for the South African National Treasury to make an informed decision before drafting and ultimately implementing the sugar tax legislation. It is recommended that National Treasury will take the proposed sugar tax legislation into further consideration as it does not comply with the four maxims of a good tax policy. Labelling legislation needs to be revised and be better regulated. Furthermore, a simplified system to calculate the sugar tax base on each individual product must be made available to the SSB industry. National Treasury must oversee that the revenue collected through sugar tax will not just fill up the coffers of the fiscus, but will be earmarked for health education to combat obesity.

Government, SSB industry and other role-players' input are essential to successfully implement sugar tax in South Africa. The South African SSB industry can learn from the positive approach that the United Kingdom SSB industry follows to reduce added sugar and their aggressive advertising campaign to promote healthier options. The South African SSB industry needs to have a detailed action plan in place of how to cooperate with the government and other role-players to soften the blow of the proposed sugar tax. The effect on low-income groups needs to be closely monitored to prevent the regressive outcome of sugar tax.

Research performed on the initial proposed sugar tax of 2,29 cents per gram of sugar on SSBs must be amended to incorporate the new proposed 2,1 cent per gram of sugar content in excess of 4 grams of 100 millilitre on SSBs. International research studies are based on hypothetical data and not on concrete evidence. This creates a fundamental problem to determine the actual impact on the economy and obesity. Therefore, South Africa should exercise caution to implement the sugar tax legislation exclusively on available research data due to the fact that further research studies need to be conducted on sugar tax legislation to make it effective for South Africa.

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