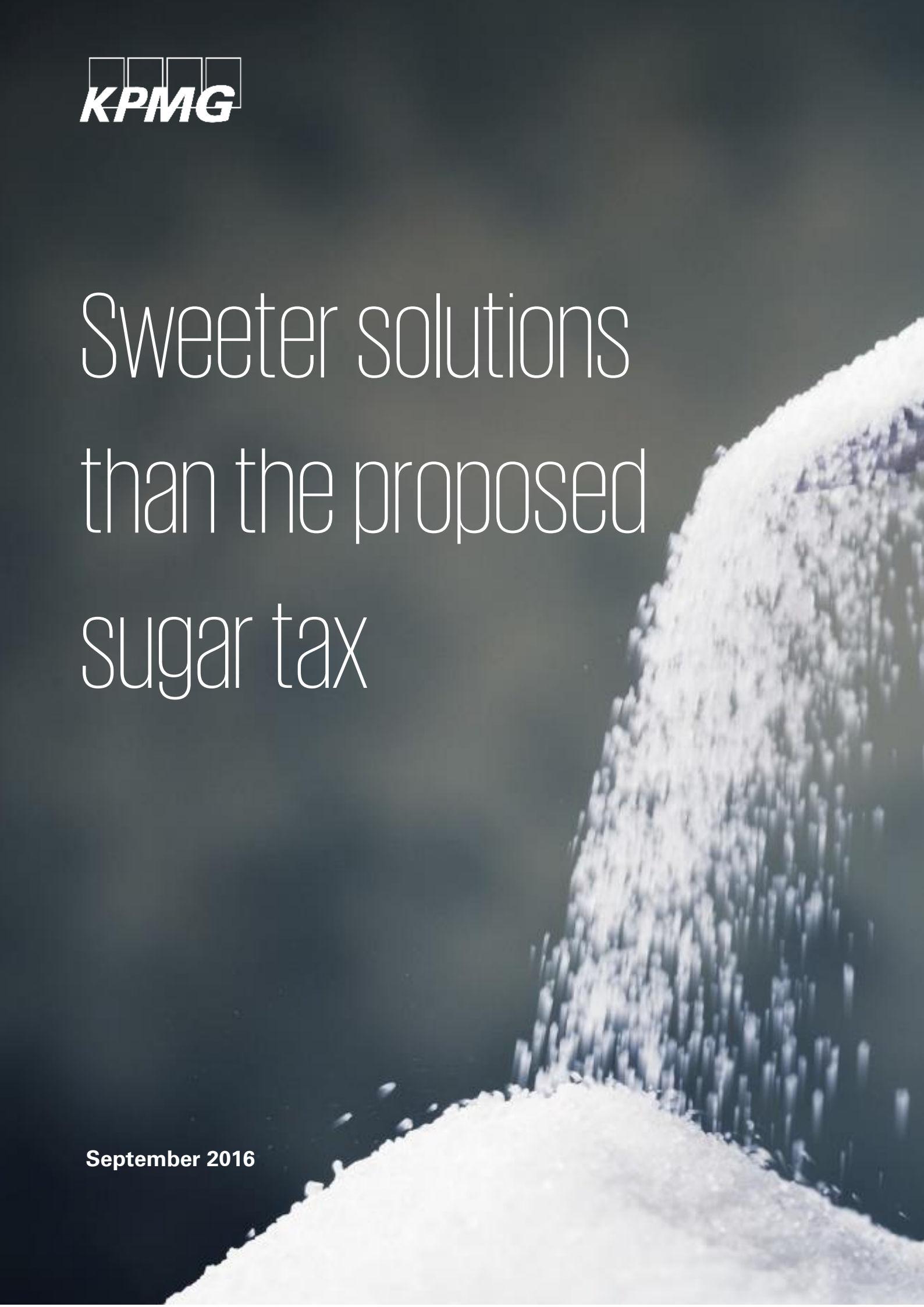
KPMG

Sweeter solutions than the proposed sugar tax



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Introduction

Introduction

South Africa is facing a problem with rising levels of obesity. With obesity rates increasing to 10.6% in men and 39.2% in women between 2003 and 2012, South Africa must shoulder a growing public health burden and face the consequences of a reduced quality of life for a large portion of its population.[1] The National Treasury is now proposing a tax on sugar-sweetened beverages (SSBs), singling out added sugar in SSBs as a significant contributor to the obesity problem in South Africa.

Many South African stakeholders have recently weighed in on the sugar tax debate putting forward their opinions about the efficacy of the proposed sugar tax. However, little has been discussed about what alternatives there are to curb obesity. Research from Cornell University indicates there is no link between the frequency of consuming soft drinks, fast food and candy and Body Mass Index (BMI).[2] This finding suggests a holistic approach to managing total calorie consumption is more likely to be effective in curbing obesity, rather than an approach that solely targets the consumption of a particular product group such as SSBs.

We provide a short overview of some nudges that South African policymakers can consider to help consumers reign in on mindless eating and growing levels of obesity. In addition, we propose some tax-based solutions which National Treasury can consider in order to maximise industry's incentive to reformulate the nutritional content of SSBs to guide consumers towards reduced sugar consumption.

[1] Manyema, M., Veerman, M., Chola, I., Tugendhaft, A., Sartorius, B., Labadarios, D. and Hofman, K. (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).

[2] Just, D. and Wansink, B. (2015). Fast Food, Soft Drink, and Candy Intake is Unrelated to Body Mass Index for 95% of American Adults. *Obesity Science & Practice,* 1(2), 126-130.

Nudging across the consumer journey

Across the consumer journey: nudging to curb obesity from shelf to stomach

Design for health: updating environmental cues in the retail space

Nudges, or small behavioural cues, can be designed and introduced in the retail space where consumers are guided to choose portion sizes depending on the image displayed on the packaging. The intuition behind this policy proposal is to leverage off the connection between the portion size displayed on the packaging and the portion size eventually consumed.[3] For example, if a consumer sees a smaller slice of cake displayed on the packaging, she will automatically match her behaviour to this cue, opting to consume an equally smaller slice. As part of this nudge, we suggest incentivising industry to align the product's nutritional information and how the product is displayed to influence the consumer's purchasing and consumption decisions.

Portion segmentation to help consumers keep track

Another option for industry to help mitigate mindless eating is to rethink packaged portion sizes. Studies show when consumers are presented with two different portion sizes, one smaller and one larger, they consume different amounts. However, when asked about their levels of satisfaction, their responses are the same. Industry can take a decision to reduce portion sizes and market itself accordingly in order to empower consumers to curb their own consumption.[4]

In addition to the size of packaged portions, the designs thereof are relevant too. Research shows that taller, thinner glasses tend to provide consumers with greater insight on the volumes poured and consumed, and thus help to regulate consumption.[5] The opposite, however, is true for wider glasses, which can lead to both over-pouring and over-consumption (see figure on page 5).[6] A simple nudge could therefore entail that industry shifts to the use of taller, thinner bottles to enable consumers to regulate their own consumption. Additionally, markers for every 250ml or 500ml on a bottle could help consumers keep track of consumption and kilojoules consumed. Such segmentation introduces decision points that allow consumers to reconsider whether to continue their consumption, or to pause.[7]

[3] Brand, J., Wansink, B. and Cohen, A. (2016). Frosting on the Cake: Pictures on Food Packages Bias Serving Size. *Public Health Nutrition,* 19(12), 2128-2134.

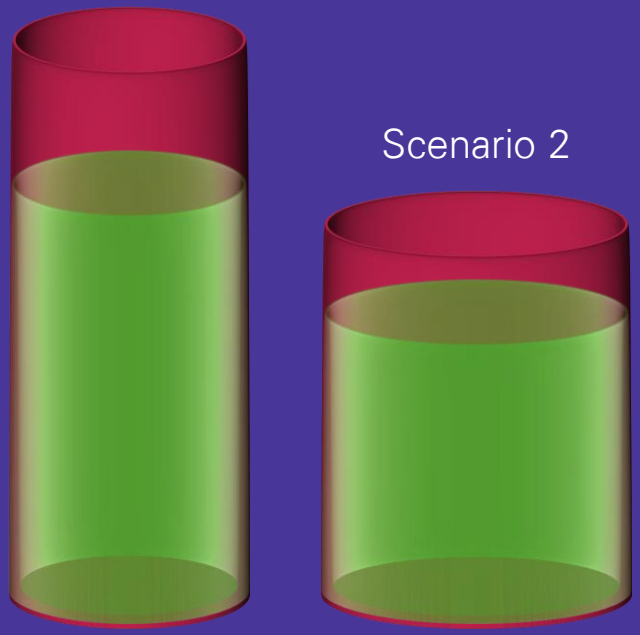
[4] Van Kleef, E., Shimizu, M. and Wansink, B. (2013). Just a bite: Considerably smaller snack portions satisfy delayed hunger and craving. *Journal of Food Quality and Preference,* 27(1), 96-100.

[5] Wansink, B. and van Ittersum, K. (2005). Amount of Alcohol Poured: Comparative Study of Effect of Practice and Concentration. *British Medical Journal,* 331(7531), 1512-1514; Wansink, B. and van Ittersum, K. (2003) Bottoms Up! The Influence of Elongation and Pouring on Consumption Volume. *Journal of Consumer Research,* 30(3), 455-463.

[6] *ibid.*

[7] Geier, A., Wansink, B. and Rozin, P. (2012). Red Potato Chips: Segmentation Cues Can Substantially Decrease Food Intake. *Health Psychology,* 31(3), 398-401.

Glass design can help portion control



Scenario 1: Consumers are given a tall, thin glass. They believe this glass can hold a lot of liquid and so they pour less and consume less. With a taller glass, it is easier to monitor how much they are consuming. The ability to monitor empowers consumers to regulate their calorie intake.

Scenario 2: Consumers are given a short, wide glass with the same volume capacity, but they perceive this volume to be less than the taller glass. As a result, they tend to pour more liquid into this glass. This perception bias therefore leads consumers to drink more. It is also harder for consumers to monitor how much they drink from a short, wide glass adding to the effect of over-consuming.

Takeaway: Consumers in Scenario 1 are likely to have greater insight on the amount poured, as well as amount consumed, empowering them to take greater control of their consumption and calorie intake. Industry can therefore assist consumers by packaging their beverages in taller, thinner containers.

Sources: Caljouw S.R. and van Wijck R. (2014). Is the Glass Half Full or Half Empty? How to Reverse the Effect of Glass Elongation on the Volume Poured, *PLoS ONE*, 9(10); Wansink, B. and van Ittersum, K. (2005). Amount of Alcohol Poured: Comparative Study of Effect of Practice and Concentration. *British Medical Journal*, 331(7531), 1512-1514; Wansink, B. and van Ittersum, K. (2003). Bottoms Up! The Influence of Elongation and Pouring on Consumption Volume. *Journal of Consumer Research*, 30(3), 455-463.

Furthermore, labelling can help alert consumers to additional calories. To help consumers consider the nutritional content information on beverage labels, the use of front-of-pack labelling, as opposed to back-of-pack labelling can prove effective. Evidence suggests that front-of-pack labelling incentivises producers to reformulate, with front-of-pack labelling producing successes in salt reduction strategies.[8] Indeed, the Department of Health's Strategy for the Prevention and Control of Obesity in South Africa 2015-2020 outlines the importance of creating an enabling environment in which consumers can make informed choices. The Department of Health suggests the implementation of a front-of-pack food labelling education tool as a measure to create awareness of nutritional content and thereby control the spread of obesity.[9]

Bringing portion control into households

In households, the choice of crockery can play a large role in curbing excessive consumption. If consumers drink or eat from a glass or bowl, where it is easy to gauge the quantity consumed, consumers are more mindful about their consumption and tend to consume less.[10] The size of crockery also presents an environmental aid, with research showing a smaller bowl allows consumers to rethink whether or not to continue eating once reaching the bottom of the bowl. One study showed that a group given larger plates, bowls or packages consumed an average of 31% more food than the control group, with 73% in the experimental group not believing they had consumed more than they generally do. This points to a general unawareness of how environmental cues influence consumption choices.[11]

Through changing the choice architecture associated with our consumption choices, policymakers and industry are in a strong position to empower consumers to make healthier, more conscious eating choices that help curb obesity and the rising burden on public health.

If National Treasury is seeking a tax-based solution, we advise that they consider the following proposals. These proposals are designed to mitigate the risk of unintended consequences to both the beverage industry and the consumer.

[8] Webster, J.M.A. (2009). Reformulating food products for health: context and key issues for moving forward in Europe. *The George Institute for International Health.* [Online] Available: http://ec.europa.eu/health/nutrition_physical_activity/docs/ev20090714_wp_en.pdf [Accessed 1 September 2016].

[9] Department of Health. (2015). Strategy for the Prevention and Control of Obesity in South Africa, 2015-2020. Pretoria. [Online] Available: https://www.health-e.org.za/wp-content/uploads/2015/12/National-Strategy-for-prevention-and-Control-of-Obesity-4-August-latest.pdf. [Accessed 1 September 2016].

[10] Wansink, B. and van Ittersum, K. (2005). Amount of Alcohol Poured: Comparative Study of Effect of Practice and Concentration. *British Medical Journal,* 331(7531), 1512-1514; Wansink, B. and van Ittersum, K. (2003). Bottoms Up! The Influence of Elongation and Pouring on Consumption Volume. *Journal of Consumer Research*, 30(3), 455-463.

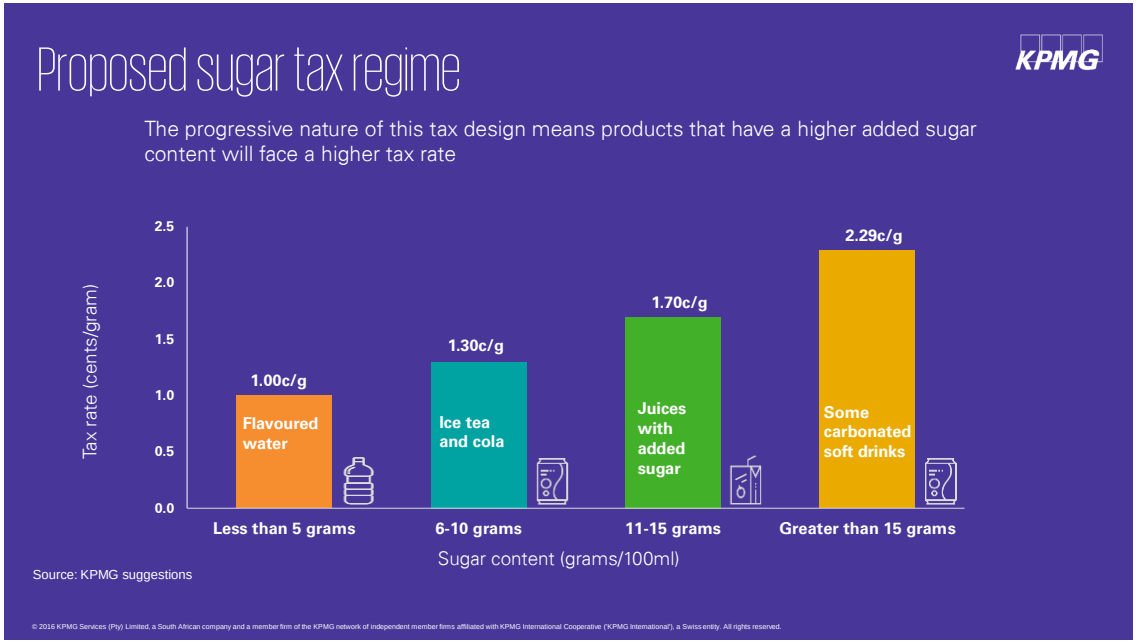
[11] Wansink, B. and Sobal, J. (2007). Mindless Eating: The 200 Daily Food Decisions We Overlook. *Environment and Behavior,* 39(1), 106-123; Van Kleef, E., Shimizu, M. and Wansink, B. (2012). Serving Bowl Selection Biases the Amount of Food Served. *Journal of Nutrition Education and Behavior,* 44(1), 66-70.

Tax design considerations

Tax design considerations

Progressive tax option

According to the National Treasury, the proposed sugar tax of 2.29 cents per gram of sugar has been designed to alter consumer behaviour to shift away from beverages with a high added sugar content.[12] However, consumers face very limited alternative choices to SSBs.[13] In the absence of immediate alternative beverage options, there is a risk that consumers might be structurally inelastic or face very weak cross price elasticities. As a result, consumers are not as responsive to price changes as expected, which means the proposed tax could generate excise revenue without changing consumer behaviour as policymakers desire.[14] In order to mitigate this risk, KPMG proposes that National Treasury implement a progressive sugar tax regime, for example, as shown in the image below.



[12] National Treasury. (2016). Taxation of Sugar Sweetened Beverages. Pretoria. [Online] Available: http://www.treasury.gov.za/public%20comments/Sugar%20sweetened%20beverages/POLICY%20PAPER%20AND%20PROPOSALS%20ON%20THE%20TAXATION%20OF%20SUGAR%20SWEETENED%20BEVERAGES-8%20JULY%202016.pdf [Accessed 1 September 2016].

[13] Krugel, L., Samuel, C., Feddersen, M. and Mofulatsi, T. (2016). *The cost of the healthier choice*. Moneyweb. [Online] Available: http://www.moneyweb.co.za/mymoney/moneyweb-tax/the-cost-of-the-healthier-choice/ [Accessed 19 August 2016].

[14] Feddersen, M., Lloyd, K. and Krugel, L. *Unorthodox economics: why the proposed sugar tax on SSBs may be less effective than expected.* KPMG South Africa Blog. [Online] Available: https://www.sablog.kpmg.co.za/2016/08/unorthodox-economics-proposed-sugar-tax-ssbs-may-less-effective-expected/ [Accessed 1 September 2016].

The progressive nature of this tax design means products that have a higher added sugar content will face a higher tax rate. Furthermore, the tax rates associated with the four bands of added sugar content increase at growing increments to maximise this effect.[15] Currently, National Treasury proposes a flat tax rate which treats all SSBs equally regardless of their added sugar content.

Shifting the burden of responsibility

The SSB industry is more likely to reduce its tax liability than consumers are to reduce their sugar consumption. This is because the excise tax may have a tangible impact on industry, while only having a negligible impact on consumers' buying power. Hence, this proposed structure of the tax can help, at least partially, shift the heavy responsibility of making consistently health-oriented decisions away from consumers. They, for various reasons, may not be in a position to react as intended by policymakers by reducing their consumption. Instead, the tax will incentivise producers to take responsibility, for example through the reformulation of existing SSBs and the development of lower sugar alternatives. Arguably, the prevalence of very sweet tasting beverages entrenches consumers' desire for a high-sugar diet – a trend, which the beverage industry could help reverse over time.

Revenue neutral tax option

Alternatively, the National Treasury can design this tax to meet the externality of the cost of diabetes currently facing South Africa.[16] This revenue neutral tax design is rooted in the understanding that the market for SSBs operates best at a socially optimal equilibrium, where prices reflect their true costs and benefits to society. When there are external costs, as arguably SSBs may have depending on their role in contributing to the obesity problem in South Africa, a tax can help internalise the external costs of SSBs by raising prices, reducing consumer demand and thus moving the market back to its socially optimal outcome.

Hence, if diabetes-driven medical costs incurred by South African households amount to R1.1 billion in 2017[17] and the current proposed tax regime generates approximately R8.2bn[18], then the tax would generate more than 7 times the diabetes-driven medical costs. In addition, we must take account of the risks to industry performance and the possibility of little consumer change.[19] KPMG's revenue neutral option proposes a reduced tax rate and if correctly earmarked, this proposal may be less costly to industry and can still meet the external cost of diabetes.

According to KPMG calculations, an effective tax rate of 3%, compared to the current proposed tax rate of 20%, could be sufficient to recoup the external cost of diabetes to the South African economy.[20]

[15] A banded approach is also under consideration in the United Kingdom. Here, drinks would fall into two tax bands: those with 5-8g of sugar per 100ml, and 8g (or more) of sugar per 100ml. An additional tax of £0.18 and £0.24 per litre will be applied to these, respectively. Petersson, S. (2016). New Soft Drinks Sugar Levy in the UK: Successful Obesity Strategy or Punishment to Some? *Euromonitor International.* [Online] Available: http://blog.euromonitor.com/2016/04/new-soft-drinks-sugar-levy-in-the-uk-successful-obesity-strategy-or-punishment-to-some.html. [Accessed 9 September 2016].

[16] This assumes that there is a direct link between obesity and diabetes. We understand that obesity is linked to other non-communicable diseases, however due to data limitations we focus on diabetes.

[17] Manyema, M., Veerman, L., Chola, L., Tugendhaft, A., Labadarios, D. and Hofman, K. (2015). Decreasing the Burden of Type 2 Diabetes in South Africa: The Impact of Taxing Sugar-Sweetened Beverages, *PLoS ONE*, 10(11). Figure discounted to 2017 prices. The report currently states that it will cost SA R2.0 billion per annum in 2030 (KPMG calculations).

[18] Krugel, L., Samuel, C. and Feddersen, M. *OPINION: Sugar tax may eat into the economy.* CNBC Africa. [Online] Available: http://www.cnbcafrica.com/news/southern-africa/2016/08/25/opinion-sugar-tax-may-eat-into-the-economy/ [Accessed 1 September 2016].

[19] *ibid.*

[20] For data sources and assumptions please see the following link: Krugel, L., Samuel, C. and Feddersen, M. *Sugar tax may eat into the economy.* KPMG South Africa Blog. [Online] Available: https://www.sablog.kpmg.co.za/2016/08/sugar-tax-may-eat-economy/ [Accessed 1 September 2016].

Conclusion


SPINACH FOUR
CHEESE TORTELLINI
TORTELLINI EPINARD
AVEC QUATRE FROMAGE

Conclusion

In conclusion, there are a number of alternative solutions for National Treasury and industry to consider. They range from behavioural nudges, where choice architecture plays an important role in how people consume, to alternative tax design options, including progressive and tax neutral regimes. These interventions allow industry to play a greater role in mitigating the negative externalities associated with obesity and empower consumers to make more conscious consumption choices. The proposed solutions also mitigate the economic risks associated with the design of the current proposed tax of a 20% flat rate on SSBs.

As a firm firmly rooted in local realities and offering an extensive global footprint with a multitude of areas of excellence, KPMG is positioned to be the preferred partner in business for behavioural economics solutions.

As KPMG Economics, we partner with KPMG Data Analytics, People and Change, Ethics, as well as various industry-oriented teams to be a market leader in behavioural economics solutions.

Contact us

Lullu Krugel
Chief Economist and Director
T +27 (0)82 708 2330
E lullu.krugel@kpmg.co.za

Muziwethu Mathema
Economist, Tax Policy
T +27 (0)60 980 0435
E muziwethu.mathema@kpmg.co.za

Cézanne Samuel
Economist, Behavioural Economics
T +27 (0)76 521 8406
E cezanne.samuel@kpmg.co.za

Maura Feddersen
Economist, Behavioural Economics
T +27 (0)82 719 3812
E maura.feddersen@kpmg.co.za

www.kpmg.com