Developments in the implementation of sugar-sweetened beverage tax in Malaysia - A narrative review

Sangeetha Shyam, Snigdha Misra, Megan Hueh Zan Chong, Rokiah Don

ABSTRACT

The high and growing prevalence of obesity in Malaysia is a public health concern. There is a growing effort towards creating an environment that supports healthy lifestyles through instituting appropriate public health policies. The Sweetened Beverages Excise Duty is a recent initiative in this direction that was enforced on July 1st, 2019. In this status update, we trace the developments in the implementation of the tax. This paper collates the preparatory considerations preceding the implementation of the tax, the proposed objectives of the tax, its format as reported in the media. The early sentiments expressed by the stakeholders in the duration leading to the implementation and immediately after (10 days' post-implementation) the enforcement of the duty are also presented here. This preliminary information will be useful to evaluate the effectiveness of this newly introduced Sweetened Beverages Excise Duty in Malaysia.

Keywords: Sugar tax, obesity, Malaysia, sugar sweetened beverages, policy

Introduction

Malaysia's primary public health concern is the high prevalence of overweight and obesity. In terms of prevalence rates of overweight and obesity Malaysia ranks first in South East Asia and the sixth in Asia.[1] The series of Malaysian National Health and Morbidity Surveys (NHMS) document a drastic rise in the prevalence of obesity and overweight between 1996 to 2006. The NHMS 2015 showed that the national prevalence of overweight, obesity and abdominal obesity had increased by 0.6%, 2.6% and 2.0% respectively as compared to the previous findings of NHMS 2011.[2] In 2015, the prevalence of overweight and obesity in Malaysian adults has remained just below 30 and 18% respectively. Findings from the recent National Health and Morbidity Survey (NHMS) 2015, estimated that 5.6 million adults aged 18 and above were overweight and another 3.3 million were obese. According to NHMS 2015, the prevalence of obesity in Malaysia is also higher than the reported world prevalence of 13.0%. [2]

Furthermore, the prevalence of overweight and obesity among primary school children is equally alarming and was reported to be around 25% in 2008. The more recent NHMS 2015 reported a national prevalence of obesity (BMI for age >+2SD) of 11.9% among children.[3] NCD is also increasingly prevalent among Malaysian children.[4]

This rising prevalence of overweight and obesity are paralleled by consequent rises in non-communicable diseases (NCD) including coronary disease, type II diabetes mellitus, and cancers. The number of patients hospitalized due to diabetes in Peninsular Malaysia had increased by 56% from 1991 to 2001.[5] The findings from the NHMS series and WHO/IDF country statistics similarly document the increasing prevalence of diabetes mellitus in Malaysia. Malaysian Diabetic Association reports that type II diabetes accounts for 90% of adult diabetes cases in the country and is often associated with obesity.[6]

The Malaysian Institute of Public Health's Second Burden of Disease Study in 2012, identified overweight/obesity and associated metabolic risks such as high blood pressure, diabetes, hypercholesterolemia as the biggest contributors to disability and death.[2] Obesity-linked diseases reduce six to 11 productive years in Malaysian males and seven to 12 years in females.[7]

The arising public health challenges pose a stagge ring economic burden as the Malaysian healthcare system tries to cope with the increasing demand for treatment. The total (direct and indirect) costs of obesity of Malaysia are the highest in South- East Asia, accounting for 10-19% of national healthcare spending.[1] In 2017, overweight and obesity accounted for 13.3% of total health costs, 0.54% of GDP or USD 1.7 billion, and this did not account for the indirect costs of lost labour productivity due to absenteeism or medical leave.[8] Hence there is an increased focus towards health promotion and preventative care.[4] It has been proposed that stemming the obesity epidemic in Malaysia "does not only require immediate revision of public health

Division of Nutrition and Dietetics, School of Health Sciences, International Medical University, Kualal Lumpur, MALAYSIA

Received 22 July 2019; received in revised form 20 September 2019; accepted 23 Septemebr 2019

Corresponding author:
Dr Sangeetha Shyam, Division of Nutrition and Dietetics, School of Health Sciences, International Medical University, Kuala Lumpur, MALAYSIA
Email: SangeethaShyam@imu.edu.my
Contact: +603 2731-7600

policies, but (the provision) of supportive environment and communities for Malaysians to work towards practising healthier lifestyle".[2]

Over-consumption of sugar is a major contributor to obesity and diabetes and sugary drinks are a major source of sugar in the diet and its consumption is increasing in most countries. Thus the World Health Organization (WHO) has been promoting taxes on sugary drinks, as a way to curb obesity and associated non-communicable diseases.[9] In line with the proposed strategies for health promotion and improving the food environment to encourage healthy eating, Malaysia has also recently introduced the soft drinks tax. In this review, we aim to provide a status update on the announcement of the tax, details of the tax structure, early reactions to the imposition of the tax which came into force on July 1st, 2019, as reported in the popular print and digital media and information available in the public domain, from an unbiased stance.

This review collates three aspects with respect to Sweetened Beverages Excise Duty in order to furnish a holistic understanding of the context and content of its implementation in Malaysia. First, information relating to international, SE Asian and national events and positions preceding and leading to the introduction of the tax. Information regarding these elements was collated from the World Health Organization's (WHO) Nourishing database and a search of secondary sources listed in the database and academic journals. Second, information on the proposed duty's structure, format and objectives were collated from preliminary announcements on the introduction of the tax in the country as reported in major print and digital media published in the English language and government documents available in the public domain. Third, early sentiments expressed on the implementation of the tax were collated from reports published in the print and digital media from the time of announcement of the tax in the parliament on November 18, 2018, until ten days post- implementation of the tax (July 12, 2019) using google news alerts. The structure of this review is presented in figure 1.

Section 1

The sequence of Events Preceding the Introduction of the Sugar-Sweetened Beverage (SSB) Tax in Malaysia

On 21 – 22 September 2016, the World Health Organization (WHO) Regional Office for the Western Pacific convened a technical workshop in Manila to share updates on recent evidence and experiences on implementing taxes on SSBs and to identify specific actions for the Western Pacific Region. Malaysia was among the delegation represented in this convention. The workshop was reported to be "the first in a series of activities to support countries and areas in the region with respect to advocacy, development and strengthening of SSB tax policies". Key elements critical to the successful implementation of an SSB tax were emphasized in the workshop. These included: the socio-political context, essential data for advocacy and action, the importance of strategic partnerships, the evaluation of the tax, and responses to political and industry opposition. Brief situational and stakeholder analyses were performed to identify necessary stakeholders and assess the capacity of their country in five key areas. The assessment was done on a scale from 1 to 10, with 1 denoting not ready/no action and 10 being very ready/good implementation.[10] The scores for Malaysia from this workshop are shown in Table 1.

The overall readiness score for Malaysia and Samoa were the highest for the WHO Region at 8 out a maximum possible score of 10, with scores for other countries in the region ranging between 3 and 7. [10]

The plan to introduce sugar-sweetened beverage (SSB) tax in Malaysia from April 1, 2019, was announced by the Finance Minister Lim Guan Eng during the tabling of the 2019 budget on November 2nd, 2018. The Malaysian government has since then decided to postpone the implementation of the sugar tax on soft drinks and juices to July 1, 2019. The Customs Department director-general Datuk Seri Subromaniam Tholasy has said the decision was made after taking into account feedback from stakeholders.[11] It has been reported that the postponement would "give manufacturers and the Customs Department ample time to make the necessary preparations". Furthermore, the postponement was thought to enable the Customs Department "to conduct roadshows and issue licenses to sugar-based beverage manufacturers."[11, 12] It was added that they (the Customs Department) "are now at the stage of educating consumers to drink less coloured, sugary drinks". The minister expressed that this (the tax?) "is the only way at the moment that we can discourage consumers from these drinks."[12]

Section 2

Implementation of Sugar-Sweetened Beverage (SSB) Tax in Malaysia

The Malaysian Customs Department in a statement issued on June 30th announced that the import and manufacturing of sugary drinks were subject to excise duty effective July 1st 2019.[13] The sugar tax is officially known as the Sweetened Beverages Excise Duty.[14] The statement of the Customs Department also outlined the procedures involved in the implementation of the excise tax on sugary beverages during the two-month transition period. The guidelines and implementation procedure of the excise duty on sugary drinks for the transition period are available at www.customs.gov.my [13]. It is learnt that the new tax falls under the responsibility of the Domestic Trade and Consumer Affairs Ministry, as the latter is privy to prices of goods in the country.[14]

The department requires that licensed importers of sweetened beverages are required to submit a letter of undertaking and lab reports disclosing the sugar contents of their products. If the total sugar content of their drinks exceeds the threshold or if the reports are not submitted, the importers will need to make payment of the duties involved. The lab reports have been mandated as compulsory for exempted goods and importers have been granted until 31st August 2019 to submit the required lab reports. Furthermore, the procedure mandates that the import of sugary drinks must be declared in Form K1 (declaration of goods imported) in-line with the requirement for other imported products and the lab reports are required to be submitted within 30 days from the date of the K1 clearance.[13]

The Customs Department also has declared that for domestic sales of dutiable sugary drinks, licensed manufacturers would be required to declare the same using the Excise Form No.7 and the declaration will be for one calendar month. The declaration is to be made "no later than the last date of the following month". "Declaration for the local sales of products exempted from the duty will also use the Excise Form No.7," it said.[13]

Objectives of the SSB tax

The government is said to have proposed the idea to impose the sugar tax as part of its efforts to promote a healthy lifestyle.[11] In his keynote address at the 15th edition of Invest Malaysia (IMKL2019) on March 19th, 2019, Prime Minister Tun Dr Mahathir Mohamad outlined the objective of the proposed SSB tax as "primarily to meet our (nation's) health objectives.[15] The Malaysian Prime Minister has divulged that "beginning next year, the government will use the revenue collected from this tax to provide free and healthy breakfast programme for all primary school children. We want our kids to be strong and healthy to perform in school." [15]

However, the Customs Department assistant director-general (internal tax division) declined to comment on the suggestion that the funds could be used for food programmes for schoolchildren. He positioned that revenue was not the main purpose of this tax.[14]

The finance minister has reiterated post-implementation of the tax that the "goal of the sugar tax was to create awareness among manufacturers and consumers on the global trend of reducing sugar intake." He also added that this was a "preventive measure to help curb the rise in obesity, diabetes and related non-communicable diseases. " [16]

Coverage of the SSB tax

The proposed tax in Malaysia would apply to carbonated drinks, or flavoured and other non-alcoholic beverages. Categories of beverages that will be affected by the imposition of SSB tax in Malaysia is shown in Table 2.

A report on June 12th 2019 quotes the Health Minister Dzulkefly Ahmad as saying that the "proposed sugar tax will be limited to manufacturers for the time being, and that there are no plans to extend it to eateries and restaurants selling sugary drinks."[12]

The same message has been reiterated by the Customs Department assistant director-general (internal tax division) who has said that a new tax, which involves duties that needed to be paid by manufacturers and importers of beverages, would not affect the price of teh tarik or kopi-o served at eateries and also would not affect alcoholic beverages, cordials and unsweetened milk products. He said the list of drinks that would be affected by the tax would include non-alcoholic beverages, fruit or vegetable juices as well as sweetened dairy-based beverages.[14]

When answering the parliament on July 11th, the Finance Minister Lim Guan Eng suggested that "Small and medium enterprises (SMEs) involved in beverage manufacturing should lower the sugar content in their products to avoid paying sugar tax". He opined that the tax "should not be a big problem for SMEs as they are able to make adjustments (to sugar content). He also added that it "is more of a problem for producers of the larger branded beverages as they have requirements to meet for their drinks." [16]

Sugar and sugar-sweetened beverage consumption in Malaysia

Though the sugar tax is identified as a medium to stem the growing epidemic of obesity in Malaysia, it is interesting to note that national data on sugar consumption is far from robust. A review was undertaken in 2016 "to present the best available evidence regarding consumption of 'free' or 'added' sugars in Malaysia" collated data from the Food and Agricultural Organization (FAO) Food balance sheets, nationally representative Malaysian Adult Nutrition Survey (MANS) and other smaller studies.[17] Presently, this review provides the most comprehensive data on sugar consumption pattern in Malaysia. The FAO food balance sheet data showed that total per capita supply of sugar (from sugar crops comprising cane and beet sugar, and sugar and sweeteners comprising raw sugar, honey, other sweeteners) available for consumption in Malaysia increased from 297 kcal/day in 2005 to 385 kcal/day in 2009, representing 10.5 and 13.3 percent of total available calories for the two periods.[18] The authors of the review additionally deduced from the 2003 Malaysian Adult Nutrition Survey (MANS) data that on an average, Malaysian adults consumed 30 grams of sweetened condensed milk (equivalent to 16 grams of sugar) and 21 grams of table sugar per day[19], and these amounts, when summed together, were still below the WHO recommendation of 50 grams of sugar for every 2000 kcal/day to reduce risk of chronic disease (< 10 en %).[20]

However, the authors also pointed out that evidence among children aged 3-6 years was more disturbing with the reported mean sugar consumption of 94.7 ± 65.1 grams per child daily, contributing to approximately 29% to total energy intake. They further note that 91% of schoolchildren aged 9 to 10 years in Selangor state consumed canned/bottled drinks weekly, with approximately 10% of these consumers ingesting these drinks more than 4 times a week. [17] More recently the NHMS (2017) reported that 47% of rural and 34% of urban adolescent consumed carbonated soft drinks, with one in three Malaysian schoolchildren consuming soft drinks at least once a day (NHMS 2017). [3]

The major sources of sugar in Malaysian diets differ considerably from those reported for the western countries. Sugar-containing foods that contributed most to energy intakes of Malaysian adults were beverages to which sugar is added (cordial syrup, tea, coffee, chocolate flavoured beverages), condensed milk (added to beverages) and local kuih (starchy traditional cakes). Interestingly, less than 1.2% of the daily caloric intake was obtained from jam, carbonated drinks, and "ABC ice" (shaved ice topped with syrup, nuts and beans). In Malaysia, both adults and elderly frequently consumed sweetened foods, in the form of beverages (tea or coffee) with sweetened condensed milk and added sugar. [17] These findings are in-line with the Euromonitor International 2017 report that produced similar estimates. This report estimated the overall daily per capita sugar consumption (from packaged and fresh foods, soft drinks and alcoholic drinks) in Malaysia to be 75.6 g, while the amount that came solely from soft drinks was restricted to 10.04 g.[21] Thus soft drinks account for less than 10% of the total sugar intake. However, the need for robust data on the national average intake for added and total sugar has been expressed by experts' time and again.[10, 17]

Current SSB Pricing and Proposed Tax amount

Malaysia has amongst the lowest price(USD) per litre for soft drinks among the south-east Asian countries. A comparison of the pricing of SSB across South-East Asian nations is presented in Figure 2.

It had been widely reported before July 1st 2019 that a tax of 40 Malaysian sen (approx. USD 10 cents) per litre would be imposed on soft drinks with more than five grams of sugar or sugar-based sweetener per 100ml. For juice or vegetable-based drinks, a tax of 40 Malaysian sen per litre will be imposed on drinks with more than 12g of sugar per 100ml.

Post-implementation of the tax, Finance Minister Lim Guan Eng Lim has acknowledged in the parliament on July 11th 2019 that the "sugar tax would see an increase in prices for manufactured beverages by 40 sen per litre, 20 sen for 500ml and 10 sen for 250ml drinks. "[16]

Section 3

Early Sentiments Post-implementation of SSB Tax

The opinion of consumers, public health researchers and professionals expressed in print media has been divided on the impact of the tax. Before the imposition of the tax, the Secretary-general, Federation of Malaysian Consumers Associations (Fomca), supported the move in a letter featured in the New Strait Times dated January 21st, 2019. The letter discussed the impacts of such a tax. It was expressed that apart from reducing sugar consumption among consumers, the measure would also encourage food manufacturers to reduce sugar content in their food and drinks, and provide healthier food choices to consumers. The letter documented that in April 2018, the year preceding the implementation of the tax, some food manufacturers changed recipes ahead of the tax so that the sugar content would be below the threshold. Additionally, the impact of such measures on healthcare cost savings was also used to justify the tax. Yet, the letter also argued that a more comprehensive approach apart from the taxation was needed to promote healthy living and change eating behaviours. [22] For instance, the need for stricter regulation to reduce the marketing of unhealthy products, especially, to children who are the high-end consumers of SSB was recognized. The letter also expressed the need for the ban on marketing and sale of sugary drinks in schools, government offices and hospitals. The organization also put forth the need for simplified nutrition information and food labels that could help with healthier food choice. Finally, the letter argued for "campaigns to highlight the risks of unhealthy food" and "to promote healthy eating habits and healthy lifestyle". Fomca expressed hope that the taxes collected from the sugary tax will be channeled to healthy living campaigns.[22]

The Malaysian Association of Tax Accountants (MATA) has expressed that the implementation of the sugar tax in Malaysia "will not generate significant revenue for the government but will help in reducing the medical cost arising from the unhealthy habits of consuming excessive sugar". The President of the Association, Datuk Abdul Aziz Abu Bakar has said that "the government will not get much revenue from the manufacturers because in any country that introduced soda tax, (as) the manufacturers will change their product mix so that they can produce products that can avoid from having to pay the sugar tax," He has urged "people to understand that the government has considered this possibility and has provided ample time for the business community to strategise their products and production methods. [23]

While cautioning that the price of sugar-related products would increase following the implementation of the tax, he opined that the manufacturers would not absorb the additional cost due to the tax and would pass the same on to the retailers and consumers. He emphasized that though the sugar tax may have a negative impact it would be "positive in the perspective of preventive medical cost". He predicts this as leading to the creation of a healthy society practising a healthy lifestyle, with an acute reduction in individuals spending on sugar but as accruing long term savings to the government in terms of hospitalisation cost. He expressed that it was important that the government would do well to communicate this move as an "alternative way to reduce sugar consumption" rather than as meaning to "generate a significant income for the country". [23]

Two opinion articles one in the South Morning China Post[24] and another in the New Strait Times[25] expressed concern for the lack of evidence for such state-initiated regulation in changing consumer behaviour and adoption of a healthy lifestyle. An alternative solution this paper suggested was "to give manufacturers room to come up with solutions to health problems, and to ensure consumers can access information that enables them to make informed choices". Interestingly both these opinion articles were penned by the same author. However, a few days since then, an academic opined in the same news portal that "sugar tax is a blessing" as it safeguards a healthier lifestyle. [26]

Early Reactions from the Industry and Small and Medium Enterprises

Nestle Malaysia Bhd, Fraser & Neave Holdings Bhd and Dutch Lady Milk Industries Bhd recorded losses in the Malaysian stock exchange (Bursa) a day after the tax was introduced. However, MATA president expressed confidence that "the impact of the sugar tax on the capital market would be for the short to medium term as it is an adjustment period". [23]

Kuching Coffee Shop and Restaurant Owners Association Chairman Teo Giat Liew has expressed that it was "too early to tell if the new tax on sugary drinks would affect both beverage manufacturers and consumers". He said that the association would not be able to control price increases embraced by its members to deal with increased costs. [27]

Business opinion from Sibu, Sarawak has also been cautious. It has been expressed that "under the current economic climate, businesses and consumers would be hard-pressed by this tax". The implementation of excise tax on sweetened beverages it has been opined would bring about "domino effects" as it would have a "direct impact on consumer spending" and its impact on the business community. He has gone on to express that taxes are "burdensome to the people" and the need for the Ministry of Domestic Trade and Consumer Affairs to conduct an in-depth study on the impact on the market as a result of the tax imposition. He suggested that "goods be repackaged into smaller packets to reduce cost." [28]

Nestle Malaysia has conveyed that most of its products will not be hit by the sugar tax as they "are within the threshold limits for most of our products". Their chief executive officer Juan Aranols has expressed confidence in that they would "find a way to absorb it", "so that the largest possible number of consumers can benefit from them" and at this point they don't see a price hike on their products as the financial consequence of the tax "within the limits" of what they could "absorb without impacting the consumers". Furthermore, he has conveyed that Nestle "will continue to work to bring the remainder products that are impacted by the sugar tax to be within the (non-taxable) limit". Commenting on its outlook moving forward, Aranols said that there were still ample growth opportunities within the Malaysian market for the company. [29]

Expected outcomes and way forward

UNICEF and WHO subsequent to their preliminary analysis in Malaysia have expressed confidence that the existing proposal should reduce SSB consumption and raise significant revenue that can be re-invested in programmes to improve nutrition and health.[8]

The chief executive officer Lim Yew Hoe of Fraser & Neave Holdings Bhd (F&N), 90% of whose product range would become taxable with the implementation of the SSB tax in Malaysia, has publically disclosed that about 70% of their products would be reformulated. He pointed out that "while it was still early to quantify the tax implications, there would be an additional cost when it reformulated its products". But it is interesting to note that he has also mentioned that "the increase in prices, however, will be the last resort." [30] Hence the actual impact of the proposed SSB tax on retail SSB price remains to be seen.

More recently, the CEO of the Galen Centre for Health and Social Policy in Kuala Lumpur pointed to the similarity between the SSB tax system proposed for Malaysia and that of UK and foresees efforts by the food industry to reformulate. He has opined that taxing at the manufacturing level rather than at retail, increases the tax system's effectiveness. This is thought to intentionally result in "manufacturers taking the initiative and being incentivized to reformulate, reduce the sugar content, reduce portion sizes and even introduce healthier alternatives to avoid being taxed". Furthermore, it was thought to be "by far a better and sustainable approach." [12]

However, the need for additional measures to tackle public health issues have been felt and widely expressed in Malaysia. Several media reports have quoted that the Health Ministry and other related agencies have welcomed the tax as a step towards addressing issues such as obesity, though critics argue that it will not be enough to make a difference.[12]

In the short-term, UNICEF and WHO recommend that the Government explores extending a special excise taxes to other sugar-sweetened drinks and review the sugar content thresholds for taxable goods as, in some cases, these may still be too high. Milk-based drinks and fruit juices that contain high amounts of sugar also contribute to overweight and obesity and consumption of these also needs to be limited. They have also proposed that in the long run, the adequacy of the tax may need to be reviewed to achieve at least an RM1 per litre tax rate, which would be more in line with international benchmarks and the available evidence on the effectiveness of SSB taxes.[10]

Other measures that could be beneficial in Malaysia are thought to include: providing high-quality, healthy school meals, compulsory nutrition labelling on food and drink products, health communication campaigns, and more stringent regulation of food and drinks marketed to children. [10]

Concluding Remarks

Evaluation of media reports is an efficient way to evaluate public discourse with respect to governance and policy issues. While this review is an effort to capture the discourse with respect to the implementation of the Sweetened beverage Excise duty in Malaysia, it is acknowledged that information is predominantly collated from available media reports may be subject to bias arising from misreporting and misrepresentation. Another limitation of this review in evaluating stakeholder perspectives is that it only collates available information from English language print and online media. Thus, any unique views expressed in the vernacular press may not be captured by this review. Views expressed in social media are also not documented here, However, it is noted that the media included in this review represent the narrative from agencies that have the maximal reach in the country across Malay and English Language readers. It also includes reporting from alternative media sources that do not align to the ideologies subscribed to by the majority media. Therefore, the review is likely to document perspectives from media catering to a few different segments of the society.

The Malaysian sugar consumption sources vary from that of the countries that have proven the effectiveness of an SSB tax. Furthermore, he level of tax proposed and the current pricing may not cause a considerable impact on the price. Thus, an evaluation of the impact of Sweetened Beverages Excise Duty is imperative. A sub-analysis of the impact of the tax among children and adolescents who are frequent consumers of SSB and for whom the price hike may affect their affordability is also required. This evidence collated here may also be useful to conduct such evaluations of the Malaysian Sweetened Beverages Excise Duty in due course, as it records the objectives proposed prior to the implementation of the Duty in the public domain. By doing so, the review identifies the goals of the initiative against which an evaluation can be conducted.

REFERENCES

1. Milton L, 14 August 2018. Malaysia is Asia's fattest country. https://www.star2.com/health/2018/08/14/fat-state-of-affairs/ Accessed: 18 Jan 2019.
2. Institute for Public Health (IPH), 2015. National Health and Morbidity Survey 2015 (NHMS 2015). Vol. II: Non-Communicable Diseases, Risk Factors & Other Health Problems.
3. Institute for Public Health (IPH), 2017.Adolescent Nutrition Survey, National Health and Morbidity Survey (NHMS).
4. Mansor M, Harun NZ. Health issues and awareness, and the significant of green space for health promotion in Malaysia. Procedia-Social and Behavioral Sciences. 2014;153: 209-20.
5. Ministry of Health Malaysia (2011). Annual report Ministry of Health Malaysia 2011. Retrieved June 28, 2019, from http://www.moh.gov.my
6. Hussein Z, Taher SW, Singh HK, Swee WC. Diabetes care in Malaysia: Problems, new models, and solutions. Annals of Global Health. 2015 Nov 1;81(6):851-62.
7. The Economist Intelligence Unit, 2017. Tackling obesity in ASEAN. Prevalence, impact, and guidance on interventions. An Economist Intelligence Unit report commissioned by the Asia Roundtable on Food Innovation for Improved Nutrition. http://www.eiu.com/industry/article/605525844/white-paper---tackling-obesity-in-asean/2017-06-12 Accessed: 18 Jan 2019.
8. WHO/UNICEF Malaysia, 3 May 2019. Sugary drinks tax important first step, but obesity in Malaysia demands further action. https://www.unicef.org/malaysia/press-releases/sugary-drinks-tax-important-first-step-obesity-malaysia-demands-further-action Accessed: 3 May 2019.
9. Datuk Dr Paul Selva Raj, Secretary General, Federation of Malaysian Consumers Associations, 18 Jan 2019. Healthier with less sugar. https://www.thestar.com.my/opinion/letters/2019/01/18/reducing-lifestyle-diseases-through-reduction-of-sugar-consumption/#ujgHqSu8kSkuA03g.99 Accessed: 18 Jan 2019.
10. WHO Regional Office for the Western Pacific. 2016. Technical workshop on taxing sugar-sweetened beverages. Meeting report. Report series number: RS/2016/GE/42(PHL). Manila, Philippines.
11. New Strait Times (NST), 7 March 2019. Customs Dept: Sugar tax for beverages postponed to July 1. https://www.nst.com.my/news/government-public-policy/2019/03/466993/customs-dept-sugar-tax-beverages-postponed-july-1 Accessed: 7 March 2019.
12. Free Malaysia Today, 12 June 2019. Good start but long way to go, experts say ahead of sugar tax. https://www.freemalaysiatoday.com/category/nation/2019/06/12/good-start-but-long-way-to-go-experts-say-ahead-of-sugar-tax/ Accessed: 12 June 2019.
13. Star Online, 1 July 2019. Sugar tax kicks off today. https://www.thestar.com.my/news/nation/2019/07/01/sugar-tax-kicks-off-todaycustoms-sweetened-beverage-importers-must-submit-lab-reports/#qGH2wm5RyEjODcVk.99 Accessed: 1 July 2019.
14. New Strait Times, 3 July 2019. Sugar tax not so bad after all, says Customs. https://www.nst.com.my/news/nation/2019/07/501076/sugar-tax-not-so-bad-after-all-says-customs Accessed: 3 July 2019.
15. New Strait Times (NST), 19 March 2019. Sugar Tax revenue to provide for free breakfast for primary school children. Available at: https://www.nst.com.my/news/nation/2019/03/470787/sugar-tax-revenue-provide-free-breakfast-primary-school-children Accessed: 19 March 2019.
16. New Strait Times, 11 July 2019. Lower sugar content to avoid sugar tax, SMEs told. https://www.thestar.com.my/news/nation/2019/07/11/lower-sugar-content-to-avoid-sugar-tax-smes-told/#qvcPRBc7VhWYjGu8.99 Accessed: 11 July 2019.
17. Amarra MS, Khor GL, Chan P. Intake of added sugar in Malaysia: a review. Asia Pacific Journal of Clinical Nutrition. 2016; 25(2):227-40.

18. Food and Agricultural Organization of the United Nations. http://www.fao.org/faostat/en/#data/FBS/report
Accessed: 7 March 2019.

19. Norimah AK, Safiah M, Jamal K,Siti Haslinda, Zuhaida H, Rohida S, Fatimah S3, Siti Norazlin, Poh BK, Kandiah M, Zalilah MS, Wan Manan WM, Fatimah S2 and Azmi MY. (2008). Food Consumption Patterns: Findings from the Malaysian Adult Nutrition Survey(MANS). Mal J Nutr 14 (1): 25 - 39, 2008

20. World Health Organization, 2015. Guideline: Sugars intake for adults and children.

21. Strait Times, 11 February 2018. Taxman leads the charge in South-east Asia's war on sugar. 2018.
https://www.straitstimes.com/asia/taxman-leads-the-charge-in-south-east-asias-war-on-sugar
Accessed: 18 Jan 2019.

22. New Strait Times, 21 January 2019. Can sugar tax stop us from getting fatter?
https://www.nst.com.my/opinion/letters/2019/01/453017/can-sugar-tax-stop-us-getting-fatter
Accessed: 7 March 2019.

23. (Bernama) Malay Mail, 1 July 2019. Sugar tax implementation poised to reduce medical costs. https://www.malaymail.com/news/malaysia/2019/07/01/mata-chief-sugar-tax-implementation-poised-to-reduce-medical-costs/1767217
Accessed: 2 July 2019.

24. South China Morning Post, 1 July 2019. Sugar tax and other punitive measures won't help Malaysians become healthier. https://www.scmp.com/comment/opinion/article/3016674/sugar-tax-and-other-punitive-measures-wont-help-malaysians-become
Accessed: 2 July 2019.

25. New Strait Times, 4 July 2019. Sugar tax doesn't work. https://www.nst.com.my/opinion/letters/2019/07/501601/sugar-tax-doesnt-work
Accessed: 4 July 2019.

26. New Strait Times, 10 July 2019. Sugar tax is a blessing. https://www.nst.com.my/opinion/letters/2019/07/502985/sugar-tax-blessing
Accessed: 10 July 2019.

27. Borneo Post, 2 July 2019. Too early to know impact of new sugar tax on manufacturers, consumers.
https://www.theborneopost.com/2019/07/02/too-early-to-know-impact-of-new-sugar-tax-on-manufacturers-consumers/
Accessed: 2 July 2019.

28. Borneo post, 2 July 2019. Excise tax on sweetened beverages will have domino effects-Businessman.
https://www.theborneopost.com/2019/07/02/excise-tax-on-sweetened-beverages-will-have-domino-effects-businessman/
Accessed: 2 July 2019.

29. The Star Online, July 4th 2019. Nestle to absorb sugar tax. https://www.thestar.com.my/business/business-news/2019/07/04/nestle-to-absorb-sugar-tax/#xGm0ATwBMT1PoRdi.99
Accessed: 4 July 2019.

30. New Strait Times (NST), 3 May 2019. F&N executes plan to mitigate risk of sugar tax. 2019 May 3.
https://www.nst.com.my/business/2019/05/485149/fn-executes-plan-mitigate-risk-sugar-tax
Accessed: 3 May 2019.

31. Blecher E, Liber AC, Drope JM, Nguyen B, Stoklosa M. Peer Reviewed: Global Trends in the Affordability of Sugar-Sweetened Beverages, 1990–2016. Preventing chronic disease. 2017;14.

Key area	Scores for Malaysia (Max =10)
Availability of data (economic and epidemiologic);	8
Support from the Ministry of Health	10
Support from the Ministry of Finance	8
Implementation of other obesity/NCD prevention measures;	9
Public support; and	9
Strategic partnerships.	8

Table 1: Malaysia's scores for the readiness of SSB implementation

Source: WHO Regional Office for the Western Pacific. 2016.[10]

Table 2: Categories of beverages that will be affected by the imposition of SSB tax in Malaysia

	Beverage category	Available No of products	Sugar Content (g/100 ml)			No of products taxable	Products taxable (%)*
			Min	Max	Average		
1.	Herbal beverages	16	0	20	7	11	68.8
2.	Coffee drinks	14	4.1	8.9	6.4	11	78.6
3.	Flavoured carbonated drinks	42	0	13.5	10.3	40	95.2
4.	Flavoured drink non-carbonated	54	5	22.5	9.9	53	98.1
5.	Fruit drinks	72	2.9	16.3	10	69	95.8
6.	Isotonic drinks	9	6.6	6.9	6.8	9	100.0
7.	Malted Chocolate ready to drink beverages	5	6.9	11	8.2	5	100.0
8.	Tea drinks	39	0	11.4	7.7	36	92.3
9.	100% fruit juice without added sugar*	37	5.05	17.7	12	19	51.4

Source: Unpublished data

Legend: *Fruit and vegetable based drinks and other soft drinks are taxed based on different cut-offs for sugar content.

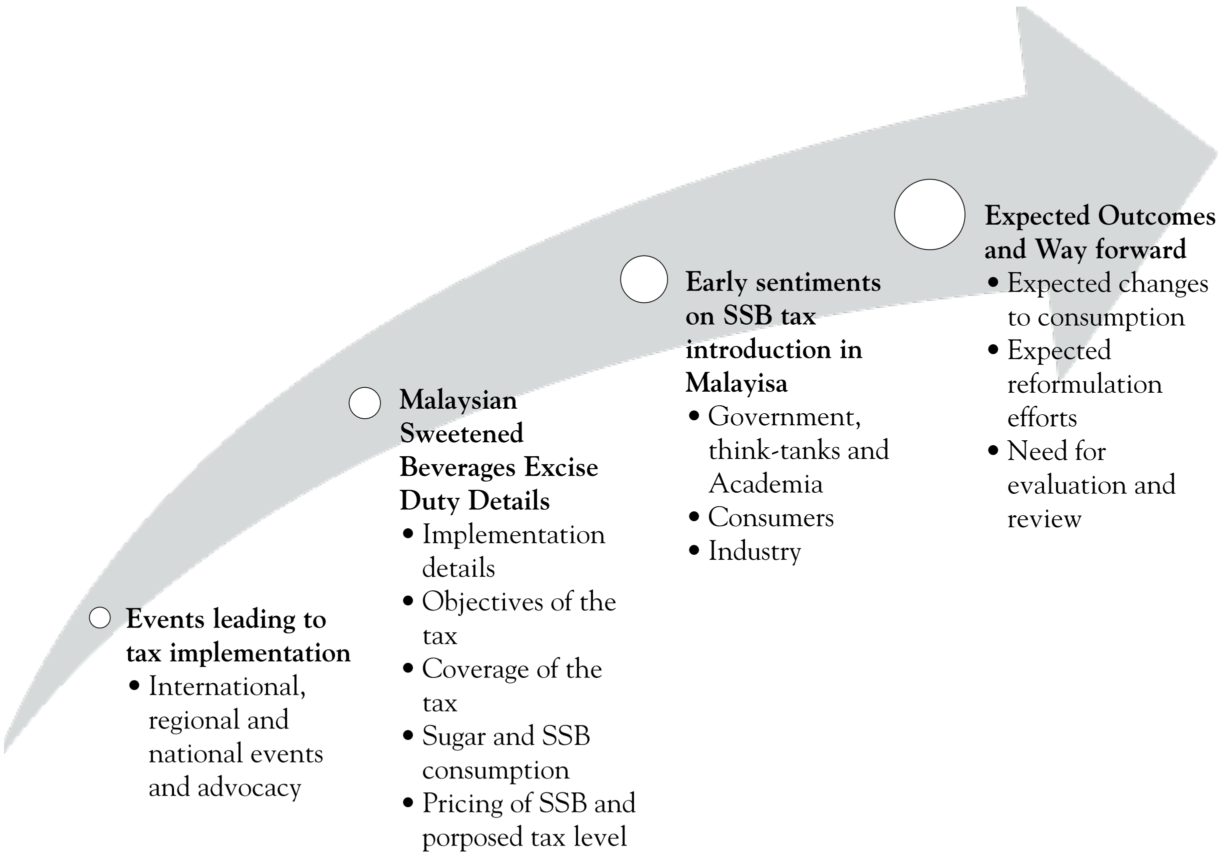

Figure 1: Framework of the review

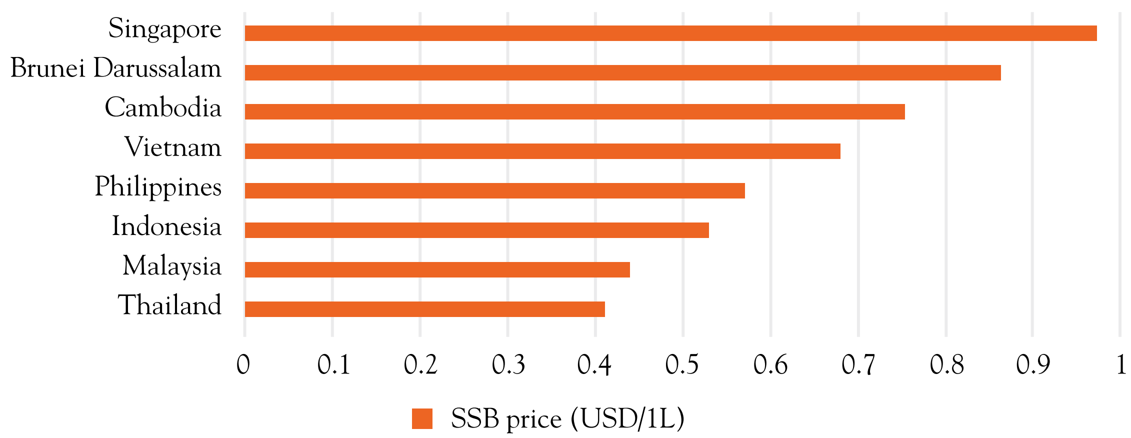

Figure 2: Comparison of SSB soft drink pricing among SE Asian countries

Source: Blecher et al., 2017 [31]