

Sugar taxation policy and sugar consumption in Malaysia

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Abstract

Malaysia has been taking initiatives to combat obesity as well as non-communicable diseases. A sugar-sweetened beverage (SSBs) tax was proposed in 2014 and implemented in 2019 with an excise duty of RM0.40 per litre for ready-to-drink sugar content. This article aimed to spark a discussion about Malaysia's current sugar tax policies to reduce excessive sugar consumption among Malaysians. However, the alarming rise in the number of obesity and diet-related noncommunicable diseases indicates that the sugar tax control measures are less effective in combating health issues. This study compares Malaysia's neighbours' sugar tax policies and other sugar consumption-related measures. To combat the emerging sugar-related health issues in Malaysia, the government should collaborate with food manufacturers to reduce the amount of sugar in their food production, abate sugar-containing products' promotion, educate the consequences of excess sugar consumption at all levels of education, apply sugar taxes with lower tax base rate and specific tax rate depends on sugar addition, and form a regional policy between neighbours.

1. Introduction

A survey conducted by the Malaysian Ministry of Health to identify overweight and obesity among Malaysian young adults revealed that the health problem has been on the rise for the past two decades (Kasirye *et al.*, 2020). According to the National Health and Morbidity Survey (2015), the prevalence of obesity was 21% in 1996 and increased to 43.5% in 2006. It has more than doubled in a decade, and subsequent year surveys confirm that the problems are not under control (Lim, 2016). According to the most recent survey conducted in 2015, half (47%) of Malaysia's young adult population is affected by obesity-related health issues (Chan *et al.*, 2017). Malaysia is preparing for an economic transition over the next decade, and a debilitating and unhealthy young society may not be able to support the vision that has already been established (Sritharan *et al.*, 2022a). The Malaysian economy is the 6th (sixth) largest dominant economy in Southeast Asia and the 39th (thirty-ninth) largest economy in the world (Sritharan and Salawati, 2019a). Though obesity-related health issues are hereditary, the authorities ensure that Malaysian food consumption patterns are one of the main causes of

noncommunicable diseases among Malaysian young adults (Lee and Wan Muda, 2019).

Fast food restaurants and ready-made food packs are widely available throughout the country, and the consumption of those food items is relatively inexpensive for young adults (Larson *et al.*, 2011). Carbonated drinks and sugar-sweetened beverages (SSBs) are popular consumer items across the country, ranking the country as the eighth highest sugar consumer in the world (Consumers' Association of Penang, 2022). According to the Khazanah Research Institute (2022), Malaysia is the fattest country in Southeast Asia (Figure 1). However, relevant national and international health organisations warn young adults that drinking carbonated and sugar-sweetened beverages (SSBs) on a regular basis is linked to obesity and other non-communicable diseases related to nutrition (Malik and Hu, 2022). This is a basic fact: carbonated and sugar-sweetened beverages (SSBs) digest quickly and convert to energy. Regardless of age, at least 55.9% of Malaysians consume sugar every day in the form of 4 teaspoons of added sugar. Meanwhile, the average Malaysian consumes at least 3 tablespoons of condensed milk per day, resulting

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in at least 26 tablespoons of sugar (Figure 2). Sugar consumption in their daily food pattern is not intentional, and they are unaware of this massive consumption rate. This consumption level is significantly higher than the average daily sugar intake. Furthermore, Malaysia has the highest number of diabetics in Asia, as well as the highest per capita sugar consumption (50 kg) when compared to Thailand (35 Kg) and Indonesia (20 Kg) (The Edge, 2020).

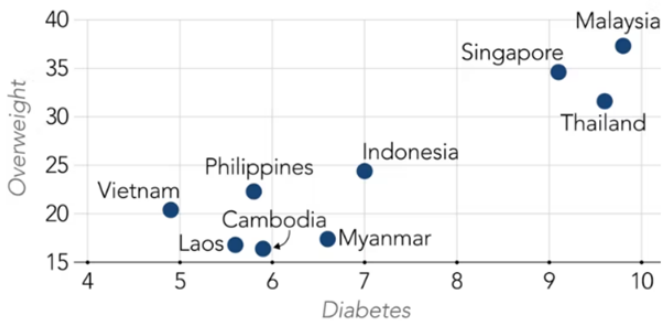


Figure 1. Share of population overweight and diabetes in Southeast Asia (World Health Organisation, 2016).

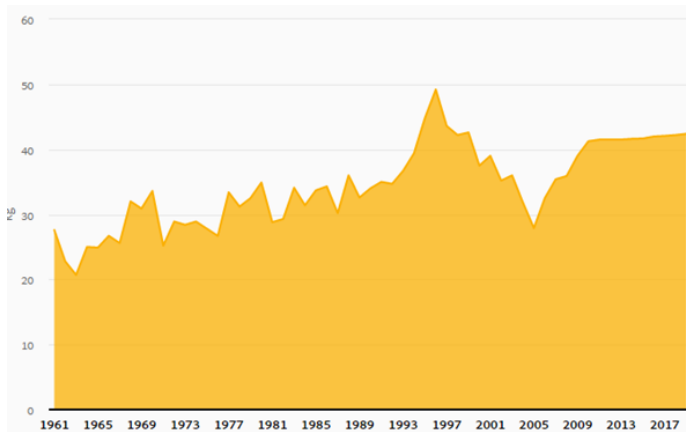


Figure 2. Sugar consumption per capita in Malaysia (Helgi Library, 2022).

According to the Food and Agriculture Organization (2022), 120 countries produce 166 million tonnes of sugar each year. The majority of sugar is extracted from sugarcane and is primarily from Asia (Figure 3). As previously stated, Malaysia has the highest sugar consumption rate in Southeast Asia (Figure 2). Malaysia increased its sugar consumption per capita to 42.4 kg, a 0.45% increase over the previous year (Auto, 2022).

Sugar taxes have been in effect in other parts of the world for a long time (Figure 4) (Sritharan et al., 2022b). Table 1 shows the countries and tax rates that apply to SSBs, with the currencies converted to Malaysian Ringgit for standardisation. According to Singaporean health sector expenditure, healthcare costs account for at least 15% of total national expenditure (Iwamoto, 2019). In 2016, the country declared tough measures against diabetics. According to the World Health Organization, at least 9% of Singaporeans are diabetics, and at least 35% are overweight (Ow Yong and Koe, 2021).

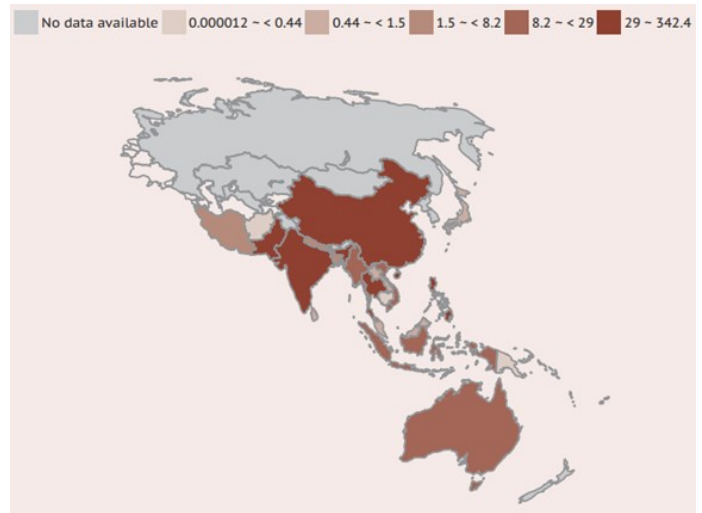


Figure 3. Sugar-cane producing countries (Food and Agriculture Organization, 2022).

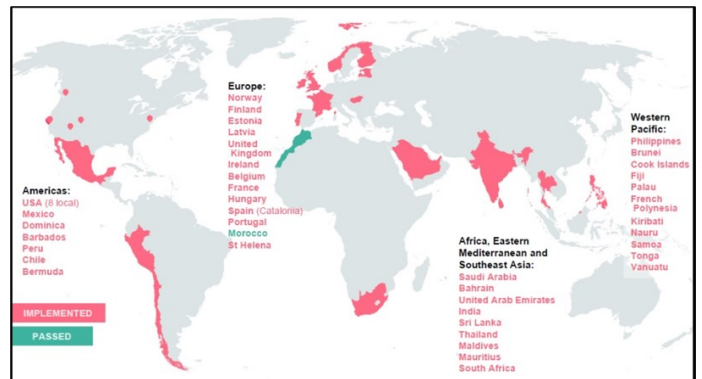


Figure 4. Sugar drink taxes around the World (Taylor, 2019).

Table 1. Current tax rates by countries.

Country	Introduced Year	Tax Rate*
Samoa	1984	0.70 MYR (0.40T)/L
Fiji	2006	10.08 MYR (5D)/L
Nauru	2007	30% pre-tax sale price
Hungary	2011	2.79 MYR (250 HUF)/L
France	2012	0.34 MYR (€0.0745)/L
Mexico	2013	0.23 MYR (1 MXN)/L
Barbados	2015	10% pre-tax sale price
United Arab Emirates	2017	50% of price
Norway	2018	2.11 MYR (Kr4.75)/L
South Africa	2018	0.0054 MYR (R0.021)/L
Ireland	2018	9.54 MYR (£1.8)/L
UK	2018	9.54 MYR (£1.8)/L
Philippines	2018	0.48 MYR (6.00P)/L

*Currencies converted on 20th October 2022.

Thailand has a similar feature in that 10% of its population is diabetic, and 32% is overweight. Malaysia shares the same characteristics as its neighbours, with 10% of the population being diabetic and 37% being overweight. In comparison to other Southeast Asian countries, the aforementioned countries are dealing with an increase in noncommunicable diseases among their young adult citizens. Countries' governments are making

numerous efforts to develop strategies to control sugar consumption and related health issues (Sriharan *et al.*, 2021). To direct the governments on choosing the appropriate strategies, the World Health Organisation (2016) reports that “Fiscal policies that lead to at least a 20% increase in the retail price of sugary drinks would result in proportional reductions in consumption of such products”. As a result, the mentioned countries have taken initiatives in economic approach to see the trend of sugar consumption in the near future.

Singapore is the nation that initiated the island's tax measures against sugar consumption. Singapore's government took drastic measures to broaden its regulations, making it mandatory for beverage sellers to label drinks that are high in sugar (Ministry of Health Singapore, 2019). Singapore's government is planning to launch a government-developed grading system to measure the sugar content of beverages sold to the general public (Falak, 2022). The system will generate a Nutri-grade mark, which will be used to assess the amount of sugar added to beverages or food products. Failure to comply with the aforementioned regulation may result in a complete ban on advertising their products in the country. Malaysia's government has taken the necessary steps to reduce sugar consumption in Malaysians' daily diets (Sriharan *et al.*, 2022c). Malaysia's government has pursued a variety of strategies to control sugar-containing food items without imposing restrictions on the sale of production in public markets (Sriharan and Salawati, 2019b). The Malaysian government is currently considering raising the price ceiling for sugar items, and the Malaysian Bakery, Biscuit, Confectionery, Mee and Kuay Teow Merchants Association will have a minor impact on production (Auto, 2022). Meanwhile, the president of the Consumers Association of Penang urges the government to reconsider the sugar tax, which was implemented in 2019.

The Thai government imposed a sugar tax in 2017, which had a direct impact on beverage exports worth at least USD 9 million (Prentice, 2017). The ultimate goal of imposing a sugar tax in Thailand is to control sugar consumption among Thai citizens, as the country also has a high number of diabetics and obesity problems. Thailand is a major importer of sweetened beverages such as PepsiCo Inc., Coca-Cola Co. and Dr Pepper, and its exports from the United States are directly impacted (USDA Foreign Agricultural Service, 2017). The Thai government amended its existing import tax duty by lowering it from 20% to 10%, but the tax jurisdiction was further amended with the addition of a tariff for sugar consumption (PricewaterhouseCoopers, 2022). The Thai government has adopted a new approach known as

"Two-Chosen-One" to deal with sugar taxes, in which the previous ad valorem tax is reduced by half and a new specific tax is added (Sornpaisarn *et al.*, 2015).

While countries work to reduce sugar consumption through the imposition of sugar taxes, the Finnish Financial Parliamentary Committee has decided to repeal the previously imposed sugar taxes (Hofverberg, 2015). Previously, Finland imposed a tax of €0.11 per litre (0.51 MYR) on items such as candy, ice cream, and soda. The Finnish government has been chastised for applying different sugar taxes to different products, particularly those imported from abroad. In the local market of Finland, a flat sugar tax imposition that did not differentiate between beverage items with higher levels of sugar addition and lower levels of sugar addition has pushed back sweet products and given substitute products such as biscuits a competitive advantage to take over in the local market. The imposition of sugar taxes on imported sweet items was implemented to discourage sugar consumption by Finland residents while also encouraging domestic industries (Pfinder *et al.*, 2020). However, the recent repeal of sugar taxes in Finland confirms the existence of the lobbying theory. Lobbying theory simply states that organisations make efforts to influence public policy in their favour (Lowery, 2007). Therefore, the objective of this study is to critically evaluate the efficacy of Malaysia's existing sugar tax policies in reducing excessive sugar intake and addressing the increasing prevalence of obesity and diet-related non-communicable diseases. Furthermore, the study aims to compare Malaysia's sugar tax policies with those of neighbouring countries and suggest comprehensive strategies, such as government cooperation with food manufacturers, education on the consequences of excessive sugar consumption, and the establishment of a more efficient sugar tax system, to tackle the emerging health concerns associated with sugar in Malaysia.

2. Methodology

2.1 Cap and trade model

In this study, the Cap-and-Trade model was used to analyse Malaysia's sugar tax policy and its impact on sugar consumption. By considering sugar consumption as a negative externality, akin to carbon emissions, the model was employed to assess the effectiveness of sugar taxes in reducing excessive sugar intake. The principles of the model were used to evaluate how setting a "cap" on sugar content in beverages and imposing a "trade" or tax on amounts exceeding this cap could influence consumer behaviour and the market dynamics of sugar-sweetened products. The Cap-and-Trade model, also known as the carbon pricing model or the emission

trading scheme, was developed to combat global warming (Environmental Defense Fund, 2022). The scheme was implemented to make carbon consumers and producers pay for the negative externality caused by their consumption or production. This scheme's efficient and effective draught is widely accepted for implementation. Many countries charge the cost of carbon emissions indirectly through carbon taxes. At the moment, the carbon tax revenue is addressing at least 21% of the greenhouse gas emission issues. Carbon taxes generated an estimated USD 53 billion in revenue in 2020. (Black et al., 2022).

One of the efficient models for dealing with market events that have a negative externality on society is the cap-and-trade model. A cap-and-trade model is intended to operate automatically, adjusting the price level until it reaches the cap (Ford, 2008). Most carbon taxes are flat rates; however, in some applications, different rates are applied. Carbon tax revenue is used to return to the public on a per capita basis. Furthermore, taxes fund initiatives to promote renewable energy. While the scheme was debated to be postponed due to the high surge in natural gas prices and commodities, the per-capita basis still allows carbon taxes to be implemented without imposing a significant burden on poor people who use less energy (Penang Institute, 2019). Overall, economics comments on the carbon emission pricing model that it is the most efficient approach to reducing and controlling carbon emissions, which eventually causes a negative externality. This means that it seeks the lowest possible cost while attempting to reduce or control carbon emissions.

2.2 Command-and-control regulation approach

In this study, we utilised the Command-and-Control (CAC) regulation approach to analyse Malaysia's sugar tax policy. Specifically, we focused on the direct regulation of sugar content in beverages and its impact on public health. By applying the CAC model, our study examined how the government could set strict limits on the allowable sugar content in products (the command component) and enforce penalties or sanctions for non-compliance (the control component). The command-and-control regulation approach (CAC) is an application through legislation to directly regulate an event or an industry in its operation, directing what is allowed to be done and what is prohibited (O'Sullivan and Flannery, 2011). This is not the same as the previously mentioned cap and trade model, which focuses on the economic approach. The model is made up of two parts: the command component and the control component. In general, the command component depicts the operational zones in which the activity or industry should operate. Meanwhile, the control component depicts the penalties

that apply once the command is violated (O'Sullivan and Flannery, 2012). The control component that focuses on the penalty may be related to permit cancellation or via monetary incentives. Though the command-and-control regulation was originally applied to environmental issues, it is now also used in health-related issues (Britannica, 2022). While command and control regulation is an effective method for controlling the negative externalities caused by industries, it should be noted that this method does not generate large amounts of revenue, as the cap-and-trade model does. The countries that are currently implementing command-and-control regulations report that the cost of implementing the regulation is far greater than the sanction earned through penalties. Countries with emission taxes debate the economic approach over the commanding approach.

3. Results

3.1 Gains and losses of sugar taxes

Sugar excise taxes can be levied on either the producer or the consumer (Anwar Mohamed and Fatin Razanah, 2021). In either case, the imposition of sugar taxes raises the purchase price. If taxes are levied on producers, sugar exports to other countries may suffer; if taxes are levied on consumers, the purchase price will rise. Malaysia, for example, has not implemented a specific sugar tax based on the amount of sugar added. Rather, a sugar tax is a standard formula that takes into account all types of sugar products, regardless of whether they are high in added sugar or low in added sugar. Sugar taxes are only implemented to inform producers to reduce the amount of sugar added to products and to discourage consumers from purchasing highly sugared products (Brownell et al., 2009). This scenario, however, does not correspond with the current sugar tax imposed in Malaysia, where a standard sugar tax rate is used.

The negative externalities caused by producers will be responded to by producers or consumers to balance the cost incurred under the carbon emission pricing model (European Parliament Research Service, 2020). Similarly, to the carbon emission pricing model discussed above, excise taxes collected could be used to fund the government's health-care costs (Sritharan et al., 2021). Governments are currently taking steps to encourage young adults to drink more water instead of carbonated beverages. Sugar tax revenue could be used to fund the installation of free water dispensers in public places for young adults. The revenue generated by sugar taxes could be used to incentivize ongoing efforts to prevent diabetes and obesity.

Sugar taxation may result in job losses in the

beverage industry. According to Russel (2022), the recent imposition of sugar taxes resulted in the loss of 16,000 jobs in the beverage industry. Aside from employees losing their jobs, sugar cane farmers may suffer from selling their yield to manufacturers. Reduced beverage consumption may result in lower operating expenses for beverage industries. The consumption of raw materials used to make beverages may slow, affecting farmers in the country (Ngcobo, 2022).

3. Discussion

Sugar taxes based on the cap-and-trade model create barriers to imported sugar products, and the command-and-control regulation approach is limited to domestic manufacturers, making it inapplicable to imported goods. This leakage poses a challenge for adopting these methods in Malaysia. Countries with strict sugar consumption policies eventually reduced sugar imports and supported local markets. However, the negative impact on international relations due to sugar-related product purchases may pressure international authorities, such as the European Union, to lobby the Malaysian government to relax sugar tax policies. Failure to comply could eventually affect Malaysia's export market, as seen in Finland, where the government repealed sugar taxes after EU lobbying, and has yet to devise an alternative strategy.

The Malaysian government should collaborate with food manufacturers to reduce the amount of sugar used in their products. Products should include labels indicating sugar content and informing consumers about the recommended daily intake. This is directly related to the cap-and-trade model, where consumers pay for the negative externalities of products, such as obesity, diabetes, and other non-communicable diseases. Higher-sugar products should be distinguished by distinct labels, with higher taxes applied to them. While a flat rate for sugar taxes may not be ideal, a cap-and-trade model, combined with a Nutri-grade system that adjusts taxes based on sugar content, can effectively target sugar consumption without focusing solely on revenue generation. This approach can help control the health consequences of sugar consumption and reduce government healthcare costs.

The Thai government's approach of combining specific and ad valorem taxes on sugar has proven effective, earning significant tax revenue and allowing the government to subsidize initiatives aimed at reducing sugar consumption. Similarly, Mexico's sugar tax on sugar-sweetened beverages has generated substantial revenue, funding the provision of portable water to schoolchildren to discourage bottled water consumption. This demonstrates how sugar taxes can be used not just

for revenue but to support public health initiatives. However, it is important to recognize that obesity and other non-communicable diseases are not caused solely by sugar but also by other factors such as fatty foods. The United Kingdom's experience, where the government faced criticism for focusing only on sugar taxes, highlights the need for a comprehensive approach. In Malaysia, this could involve not only restricting sugar consumption but also implementing restrictions on fatty foods to avoid similar criticism.

Sugar-containing products should not be promoted by the media. The Malaysian government could adopt Thailand's classification of sugar-added beverages to limit such promotions. Education on sugar consumption and its consequences should be emphasized across all age groups, with a curriculum that includes both theoretical and practical knowledge. Additionally, authorities could develop sugar substitutes as part of broader efforts to reduce sugar consumption. On the other hand, obesity and other non-communicable diseases are caused not only by the consumption of sugar but also by other factors such as fatty foods. Thus, identifying health issues, particularly diseases such as obesity, may not be sufficient for authorities to implement sugar taxes or sugar concentrations. For example, the government of the United Kingdom was heavily criticised for imposing sugar taxes solely to combat obesity and other non-communicable diseases (University of Glasgow, 2017). The critics go on to say that fat, as opposed to sugar, is a major contributor to diseases like obesity. To support the statement, Dr Jason Gill, from the Institute of Cardiovascular and Medical Sciences mentioned that "People who are overweight and obese consume more calories than those who are normal weight. But they consume a smaller proportion of these calories from sugar and a larger proportion from fat. Thus, it is important not to simply focus on reducing sugar intake; we need to emphasise reductions in fat intake as well" (Chu, 2016).

Despite the heated debate over sugar taxes, sugar consumption is a major contributor to obesity, diabetes, and other non-communicable diseases. To address potential cross-border shopping triggered by sugar taxes, Malaysia should develop a regional policy in collaboration with neighbours such as Singapore, Thailand, Brunei, and Indonesia. This would help prevent tax avoidance and maintain the effectiveness of local sugar tax policies as sugar taxes discourage the consumption of sugary beverages. Because Malaysia is regarded as a fat country by its neighbours, the application and reduction in sugar consumption eventually reduce the number of young adults suffering from obesity. According to Sturm *et al.* (2010), imposing

a sugar tax of at least 18% could result in a 2.3 kg weight loss in a person each year.

5. Conclusion

In conclusion, the Malaysian government should collaborate with food manufacturers to reduce the sugar content in products. This can be achieved by implementing clear labelling that informs consumers about the sugar levels and provides daily consumption guidelines. A cap-and-trade model for sugar taxes, where higher sugar products are taxed more, could effectively reduce sugar consumption. The primary focus of this model should be on reducing sugar consumption rather than solely generating revenue. To further control sugar-related health issues, the Nutri-grade system could be used to vary taxes based on sugar content. Additionally, the government could adopt a classification similar to Thailand's to restrict the media promotion of high-sugar products. Educational initiatives should also be implemented across all age groups to raise awareness about the consequences of excessive sugar consumption. In addition to sugar taxes, command-and-control regulations could establish industry benchmarks for sugar levels. These regulations should be enforced through inspections and penalties. To address potential cross-border shopping driven by sugar taxes, Malaysia should collaborate with neighbouring countries to develop a regional policy that curbs the avoidance of local tax impositions.

Conflict of interest

The authors declare no conflicts of interest.

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