

Thinking Beyond Taxation: What It Takes to Truly Promote Healthy Behaviours

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Introduction

An 80% increase in the excise tax rate for sugar-sweetened beverages (SSBs), from 50 sen per litre to 90 sen per litre, has been implemented since January 1 following the Budget 2025 announcement. This drastic increase in the SSB tax rate, the second adjustment since the 2024 hike, is one of the latest approaches to raise government revenue and support the 'War Against Sugar' movement.

While this measure signifies the government's determination to address the growing problem of diabetes and other non-communicable diseases (NCDs), focusing on sticks or deterrents, such as the taxation of unhealthy foods, will be neither an effective nor sustainable approach. To significantly foster and sustain healthy food behaviours at the population level, we also need carrots—incentives that motivate consumers to make healthier choices—and nudges—behavioural tools that steer people towards healthier diets and lifestyles.

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In this article, we discuss why focusing on unhealthy food taxes, such as SSB taxes, will not be effective in promoting healthy food behaviours and the potential of incentives and nudges as policy tools to drive healthy behaviours.

Unhealthy Food Taxes in Practice

Excise duties refer to consumption taxes imposed on goods or services that are typically passed on to consumers in the form of higher prices¹. They are commonly used as a public health tool to deter unhealthy behaviours, such as cigarette smoking and the consumption of unhealthy food and drink, normally high fat, salt or sugar (HFSS) foods and alcohol².

Worldwide, many countries have implemented excise duties on several categories of food and drink deemed unhealthy. The SSB tax is the most popular type of excise tax on food and drink, with at least 108 countries implementing such measures to date³. While less widely implemented, excise taxes on other categories of food that contribute to unhealthy diets, such as those high in saturated fat, trans fat, free sugar and salt, have also been introduced in several countries. Foods that fall under these categories include processed meat, margarine, confectionery, salty snacks and condiments⁴.

For example, in 2011, Denmark became the first country to introduce a fat tax—an excise tax on food containing high levels of saturated fat. This measure was implemented as a part of a bigger economic reform package primarily aimed at increasing the government’s fiscal revenue⁵. Under this tax, food products with saturated fat content exceeding 2.3g per 100g, which included meat, dairy products, animal fat, edible oils, margarine and spreads⁶, were taxed at a rate of DKK 16 (approximately RM10 based on current exchange rate) per kg of saturated fat, on top of a 25% value-added tax (VAT)⁷. However, the tax was repealed shortly after 14 months due to its perceived impact on increasing food prices and strong criticism from the food industry, retailers and health experts concerning its necessity⁸.

2011 also saw the introduction of the Public Health Product Tax (PHPT), also known as the “junk food tax”, in Hungary to promote healthier diets⁹. The tax applies to products high in salt, sugar or caffeine, including SSBs, syrups, confectionery, salty snacks, condiments and energy drinks as well as alcoholic beverages¹⁰. The revenue generated is earmarked for public health use, including for raising the wages of healthcare workers¹¹.

¹ WHO (2022)

² Ibid.

³ WHO (2023)

⁴ Pineda et al. (2024)

⁵ Vallgård, Holm, and Jensen (2015)

⁶ Pineda et al. (2024)

⁷ Jensen and Smed (2018). Value-added tax (VAT) is a consumption tax on goods and services levied at each stage of the supply chain where value is added. The VAT is borne by final consumers.

⁸ Vallgård, Holm, and Jensen (2015)

⁹ WHO (2016)

¹⁰ Jensen and Smed (2018)

¹¹ WHO (2016)

In Malaysia, the focus of unhealthy food taxes remains on SSBs, though there has been a rising call for an additional “fat tax” to include foods high in fat and calories in light of the increasing rates of obesity and NCDs¹². First introduced in 2019, the SSB tax applies to beverages with sugar content exceeding certain levels¹³ (see Table 1) and later expanded to pre-mixed two-in-one and three-in-one powdered drinks in 2024¹⁴. Based on the Budget 2025 announcement, the revenue generated from the SSB tax will be used to support diabetes treatment, enhance dialysis centres and increase access to dialysis¹⁵. More information about the SSB tax and its rationale were discussed in a previous [article](#).

Table 1: Taxable sugar thresholds for beverages affected by the SSB tax

Categories	Taxable sugar thresholds
Soft drinks	>5g per 100ml
Flavoured UHT milk-based beverages	>7g per 100ml
Fruit or vegetable juice drinks	>12g per 100ml
Pre-mixed powdered beverages	>33.3g per 100g

Source: MOH (2022), The Edge (2024)

Note: UHT = Ultra High Temperature.

The Limitations of Unhealthy Food Taxes

The use of excise taxes as an instrument to influence food choices is based on the ‘law of demand’ in economics; it says that price is inversely correlated with demand—higher prices should, therefore, lead to lower consumption¹⁶. Such taxes create price differences between unhealthy products and healthier, untaxed alternatives, making customers less likely to opt for the higher-priced but less healthy products.

While unhealthy food taxes can deliver significant impacts, such as reduced intake of unhealthy foods or nutrients of concern¹⁷, these taxes can be short-lived¹⁸, especially when they are not coupled with strong public health messaging and initiatives that increase the availability of healthier options¹⁹. This is because, as household income rises over time, consumers may become less sensitive to higher prices of taxed products and return to previous consumption levels.

Take Hungary as an example: the initial impact of PHPT, cited by the World Health Organisation (WHO) as a best practice, diminished over time, even when the prices of taxed products have been rising in line with or above inflation²⁰. The consumption of certain unhealthy foods, such as soft drinks, chocolates and salty snacks, was found to increase across all income deciles seven years

¹² Utusan Malaysia (2024); The Star (2024)

¹³ MOH (2022)

¹⁴ The Edge (2024b)

¹⁵ Ibid.

¹⁶ Cornelsen et al. (2015)

¹⁷ Pineda et al. (2024); Caro et al. (2017); Niebylski et al. (2015)

¹⁸ Berezvai et al. (2024); Csákvári et al. (2023); Bíró (2021)

¹⁹ Berezvai et al. (2024)

²⁰ Ibid.

after the introduction of the tax²¹. In addition, the awareness of PHPT among Hungarians, which correlated with the consumption of certain PHPT-affected products, also declined over the same period²².

The effectiveness of unhealthy food taxes also depends on their pass-through rate, i.e., the amount of tax passed on from the manufacturers to the consumers. Given the price elasticity of unhealthy foods²³, these taxes are most effective when they are passed on to the consumers at a high or full rate, leading to retail price increases. When such taxes get fully or partially absorbed by the producers, it results in minimal impact on the targeted unhealthy food prices and, possibly, little influence on consumption patterns. Avoiding the unintended consequences of the substitution effect is also equally important, where consumers shift to untaxed but similarly unhealthy products from different categories, such as switching from SSBs to ice cream or confectionery.

According to the Impact and Effectiveness Assessment of the Sugar-Sweetened Beverage Tax conducted in 2022, an unpublished study by the Ministry of Health (MOH) of Malaysia, at least 242 SSBs have been reformulated to lower sugar levels²⁴. A separate annual report published by MOH shared that 344 beverages had been reformulated two years after the tax was implemented²⁵. The former study also showed that the SSB tax led to a price increase of 2.24%, much lower than the anticipated impact of 8.83%. This suggests that the SSB tax had minimal effect on prices²⁶, possibly due to the low pass-through rate, which may affect the tax's effectiveness in reducing SSB consumption.

To date, no local study has monitored the actual change in SSB consumption levels or the presence of substitution effect following the SSB tax rollout. The National Health and Morbidity Survey (NHMS), Malaysia's nationwide population-based health survey, showed that the consumption of carbonated soft drinks among adolescents aged 5-17 has dropped from 36.9% in 2017 to 32.4% in 2022, 3 years after the SSB tax was introduced. However, the extent to which the decline in soft drink consumption among adolescents was associated with the SSB tax is unclear.

Considering the minimal impact on prices yet effectiveness in driving product reformulation, the SSB tax may be more useful in reducing sugar intake than significantly discouraging SSB consumption. While product reformulation is a practical way to increase healthier options, its benefits can be easily offset by more frequent consumption, which may eventually result in similar sugar intake.

²¹ Berezhvai et al. (2024)

²² Zámbo et al. (2020)

²³ Andreyeva, Long, and Brownell (2010). Price elasticity refers to the proportional change in product demand for a given percentage change in price. Unhealthy foods are more price-elastic than healthier options, meaning that increases in the price of unhealthy foods are associated with decreases in demand.

²⁴ Malay Mail (2024)

²⁵ MOH (2022)

²⁶ Malay Mail (2024)

Food purchasing patterns are not solely determined by economic factors. They are also significantly influenced by the food environment, level of health knowledge, cultural backgrounds and other social determinants. For that reason, we should be looking at a multipronged approach to address the growing public health challenges. It is also important to note that obesity, diabetes and many other NCDs are not only related to food choices but also to lifestyle, including physical activity, which will not be affected by unhealthy food taxes. Thus, taxes alone are unlikely to substantially bring down diet-related health problems unless implemented as a part of a bigger public health policy package.

In many cases, complementing unhealthy food taxes with salient and strong public health messages that raise awareness about the taxes and their implications shows greater effects in changing consumers' food purchasing behaviours²⁷. Furthermore, when unhealthy food taxes are introduced alongside incentives that promote healthier options, such as nudges and healthy food subsidies, consumers not only reduce their purchase of taxed products but also increase their intake of healthier alternatives²⁸.

It is also equally important to ensure that other fiscal measures that influence dietary behaviours are designed to complement or reinforce, rather than contradict, health promotion efforts. The existing price ceiling on sugar, which keeps Malaysia's sugar price the lowest in ASEAN²⁹, may counteract the intended impacts of the SSB taxes. Expanding sales and services tax (SST) to nutritious foods labelled as premium, such as salmon and avocado³⁰, may make healthier choices even more expensive. We need to prioritise a well-rounded approach that discourages the purchase of unhealthy food and, at the same time, actively promotes and guides consumers toward healthier choices, whether common or premium options.

The Potential of Health-Promoting Nudges and Incentives

Many countries are increasingly exploring other approaches, particularly nudges and incentives, to increase health awareness and promote positive behavioural changes. While taxes can help deter unhealthy food consumption, their effectiveness in steering consumers towards healthier options is limited. This is where nudges and incentives come into play, serving as a policy tool to prompt healthier decisions or choices.

Nudges work like GPS devices; they steer individuals in a certain direction without restricting their freedom of choice or substantially altering their economic incentives³¹. Such approaches are behaviourally informed and designed to change the way choices are presented (i.e., the choice architecture³²) to an individual, prompting behavioural changes in a predictable manner³³. Simply put, nudges help make certain choices the easy or default choices for individuals.

²⁷ Pineda et al. (2024)

²⁸ Hoenink et al. (2020); Niebylski et al. (2015)

²⁹ MIDF Research (2019)

³⁰ The Edge (2024a)

³¹ Thaler and Sunstein (2008)

³² Choice architecture is defined as "organising the context in which people make decisions."

³³ UN Innovation Network (2021)

Nudges can be applied to various policy domains, including personal finance, education, environment, law and privacy³⁴, but are most commonly applied for public health purposes³⁵. Health-oriented nudges are used to steer individuals towards healthier eating and lifestyles, such as reducing unhealthy food intake, increasing physical activity and smoking cessation³⁶.

Given the low implementation costs, nudges can be more cost-effective than traditional policy tools like monetary incentives³⁷. Examples of nudges include warnings, reminders, information disclosure, simplification of information and choices, defaults, product placement in supermarkets and restaurants, and automatic enrolment³⁸. Table 2 summarises various nudging techniques and their applications in public health policy.

Table 2: Types of health nudging technique and their applications

Nudge technique	Description	Examples
Priming	The use of physical, verbal, sensational or environmental cues to nudge a particular choice.	<ul style="list-style-type: none"> • Repositioning of healthy foods at checkout or at eye level on supermarket shelves • Calorie labelling • Presenting food in smaller containers
Salience	The use of novel, personally relevant or vivid examples and explanations to attract attention to a particular choice. Also, it elicits emotional associations with the nudges.	<ul style="list-style-type: none"> • Verbal prompting by servers, such as “Would you like to add a fruit salad for 75 cents?” • Traffic light labelling to indicate the healthiness of the products • Tailoring labels to high-risk groups
Default	The use of a pre-set or default option, making it the easiest option to pick.	<ul style="list-style-type: none"> • Reducing the portion size of food • Putting wholegrain bread as the default option in a sandwich choice situation
Commitment and ego	It occurs when consumers make a commitment or promise publicly. Their desire to feel better about themselves nudges them to make choices consistent with their commitment or promise.	<ul style="list-style-type: none"> • Use of commitment device to stop smoking • Behavioural contract to reach exercise goals
Norms and messenger	Norms refer to the use of other people to establish a norm, as individuals tend to be strongly influenced by what others do and choose. Messenger means consumers are heavily influenced by the person who communicates the information to them.	<ul style="list-style-type: none"> • “Dish of the day” to highlight a target dish • Use of local food norms, e.g., “People at this store in this part of the city will order items with 250 calories on average.”

Source: Lindstrom (2023), Wilson (2016), Vlaev (2016)

³⁴ Banerjee and John (2022)

³⁵ Das and Dumortier (2024)

³⁶ Murayama et al. (2023)

³⁷ Benartzi et al. (2017)

³⁸ Thaler and Sunstein (2008); Wilson et al. (2016); Lindstrom, Tucker, and McVay (2023); Vlaev et al. (2016)

Similar to nudges, incentives make a particular choice more appealing but typically involve some form of monetary reward³⁹. Incentives include price reductions via subsidies, materials like vouchers and discounts, and health-promoting products like fitness trackers. Such approaches involve earning rewards contingent on specific behaviours of the individuals. For example, earning cashback for choosing healthier options or shopping vouchers for achieving daily exercise targets.

Incentives, unlike taxes, can have price reduction effects, either immediately (e.g., subsidised prices of fruits and vegetables and discounts for healthier options) or retrospectively (e.g., vouchers for purchasing healthier options and free fitness trackers for achieving fitness challenges). The effects of price reductions have been reported to be stronger than price increases induced by taxes.

In their review of the impact of price changes on diet, Afshin and colleagues found that a 10% reduction in price due to incentives resulted in a 12% increase in the purchase of healthy products⁴⁰. On the other hand, a 10% increase in price due to taxes only decreased the purchase of unhealthy foods by 6%⁴¹. The benefits of price reduction can be particularly significant for lower-income families since they are less able to afford healthy foods like fruits and vegetables, which tend to cost more than carbohydrate-rich and energy-dense processed foods⁴².

The types of incentives and nudge techniques used typically vary depending on the context in which they are implemented and the behavioural issues they intend to address. Regardless, public health-oriented incentives and nudges are generally implemented for a common objective: to steer consumers towards healthier diets and lifestyles. Using Singapore as a case study, the following section explores health promotion efforts that leverage nudges and incentives.

Singapore's Health Promotion Approaches

In Singapore, all national health promotion and disease prevention initiatives fall under the purview of the Health Promotion Board (HPB), a statutory board under the Ministry of Health. Its initiatives cover multiple domains, ranging from diets, physical activity and mental health to health screening, smoking control and communicable disease education. These programmes are implemented in communities, schools and workplaces.

Over the years, HPB has implemented various programmes that leverage behavioural insights, including nudges and incentives, to promote healthy eating and active lifestyles⁴³. In some cases, nudges and incentives are used in combination. The notable nudge- and incentive-based initiatives introduced by HPB are listed in Table 3 below.

³⁹ Viscusi (2023)

⁴⁰ Afshin et al. (2017)

⁴¹ Ibid.

⁴² Huangfu et al. (2024)

⁴³ Ministry of Health Singapore (n.d.); (2023); Health Promotion Board (n.d.)

Table 3: Notable nudge- and incentive-based health promotional initiatives implemented by HPB

Initiatives	Descriptions	Functions
Age Strong	A 12-week digital health programme on the Healthy 365 app for individuals aged 50 and above. It contains customised workouts, quizzes and daily guided tasks that reward users with Healthpoints.	Guides and incentivises older adults to build healthy habits and remain active.
Eat, Drink, Shop Challenge	A digital health programme on the Healthy 365 app that rewards users with every healthier purchase, i.e., products with Healthier Choice Symbols.	Incentivises consumers to choose healthier options when buying groceries.
Healthy 365 app	A mobile application that features goal setting and milestone-based challenges (e.g., step count tracking), Eat, Drink, Shop Challenge, Age Strong, directories of health activities and health tips. It rewards users with Healthpoints, eVouchers and HPB Credit\$.	Incentivises users to pursue healthier lifestyles and dietary choices; Empower users by increasing access to information.
Healthier Choice Symbols (HCS)	A front-of-pack labelling to guide consumers towards healthier alternatives lower in sugar, salt and fat and higher in dietary fibre, calcium and wholegrains. It is similar to Malaysia's Healthier Choice Logo.	Nudge consumers to purchase healthier options using the HCS visual identifiers.
Healthier Dining Programme	A voluntary programme to increase the availability of healthier out-of-home food and beverage (F&B) options, targeting restaurants, cafes, food courts, caterers, coffee shops and food stalls at institutes of higher education. It encourages F&B businesses to offer at least one healthier option (lower in calories, lower in sugar, higher in wholegrains, no added sugar, use healthier oil and wholegrain options).	Makes it easier for consumers to identify healthier options when dining out; Encourages F&B businesses to offer healthier choices.
National Step Challenge	An initiative aimed at addressing the rising rates of obesity in Singapore. It involves setting physical activity goals and offering rewards like air tickets or vouchers to users. It also offers free fitness trackers to encourage participation in the challenge.	Incentivises users to adopt a more active lifestyle.
Nutri-Grade	A further evolution of the HCS that rates beverages on a scale of "A to D" based on sugar and saturated fat levels. It is mandatory for Grade C and D products to carry the label. Grade D products are also subjected to advertising bans across all media platforms.	Nudges consumers to opt for healthier products; Reduces consumers' exposure to Grade D's advertising and promotion.
"Siu Dai by default" movement	An initiative that encourages F&B operators to offer beverages with less sugar, condensed milk and evaporated milk as the default. Kits containing recipe cards with reduced-sugar formulations and measuring spoons are distributed to help F&B operators reformulate.	Reduces overall sugar intake from drinks using healthier default options, making less sugar a norm among consumers

Source: Ministry of Health Singapore (n.d.); (2023); Health Promotion Board (n.d.)

Note: This is a non-exhaustive list.

It is noteworthy that Malaysia has implemented several programmes similar to those in Singapore, such as the Healthier Choice Logo (similar to Singapore's Healthier Choice Symbol), MyChoice (similar to the Healthier Dining Programme) and the *Kurang Manis* campaign (similar to the "Siu Dai by default" movement). This suggests the potential to further strengthen and expand these initiatives using data-driven nudges and incentives to drive significant behavioural changes among Malaysians without reinventing the wheel.

Concluding Remarks

The experiences of other countries may not be directly applicable to the Malaysian context, but they offer valuable insights that can help inform and refine our approach to tackle the current public health challenges. For example, Denmark's experience shows the need for strong political will and a clear intention to implement unhealthy food taxes as a public health initiative rather than a revenue-generating measure ⁴⁴. The Hungarian case highlights the importance of complementary policies and effective health communication to sustain the behavioural changes prompted by unhealthy food taxes. Singapore's health promotion strategies suggest the potential of nudges and incentives suited to local sociocultural contexts as policy tools to tackle behavioural issues associated with unhealthy diets and sedentary lifestyles.

While impactful as a public health tool, unhealthy food taxes alone cannot substantially address the growing health crisis and unhealthy eating behaviours. Rather, they must be implemented as part of a comprehensive, multipronged approach consisting of complementary policies that steer individuals towards healthier choices and serious efforts to address barriers to healthy eating within the food environment. Contradicting policies, such as the price ceiling on sugar and the expansion of SST to premium yet nutritious foods, should also be re-evaluated to drive a more coherent public health approach.

⁴⁴ Bødker et al. (2015)

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