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A ROLE FOR TAXATION IN REDUCING AUSTRALIA'S SUGAR CONSUMPTION

MATTHEW PARKES

Abstract: *A recent global trend of new taxes on sugary drinks and products now sees more than 40 countries with such taxes in place, and leading Australian health organisations have called for taxation to play a role in addressing obesity and related health problems.*

This paper evaluates an excise tax on sugar in the context of accepted tax policy principles in Australia, with reference to recent experiences from other countries introducing similar taxes. It concludes that an appropriately designed tax can be an appropriate policy measure to reduce sugar consumption in Australia, and explains a design preference for a broad scope of tax targeting all sugar consumption.

1. INTRODUCTION

Australia is suffering an acute and growing obesity problem. Leading public health bodies, including the Australian Medical Association (AMA)[1] and World Health Organisation (WHO)[2], give clear direction that the sugar intake in Australians' diets should be reduced to cut disease and save lives.

In this paper, I assess the potential role of taxation as a policy level to reduce sugar consumption. I assume an agreed health policy aim of reducing sugar consumption across the population and evaluate the likely outcomes from applying excise tax to sugar (henceforth "sugar tax"). I evaluate two proposed models: firstly, taxing sugar sweetened beverages (SSBs) only, and secondly, a broader tax on added sugar (within all foods and beverages). This is intended as a contemporary analysis which applies documented outcomes and policy lessons from sugar taxes introduced in comparable countries in the last five years, together with tax design principles established from the Henry Review[3] and other leading contributions on Australian tax policy.

This paper explains that the major aim of sugar taxation in Australia would be the public health benefits associated with sustained reductions in sugar consumption. Much of the published literature on this topic rightly concentrates on the health aspects and outcomes of this policy. This paper instead focusses on the tax policy and administration aspects of such a measure: to analyse whether excise taxation would be an appropriate measure within Australia's taxation framework.

This paper proposes that an excise taxation regime can be an appropriate policy measure for use in Australia to reduce sugar consumption. This is based on:

- findings that international sugar taxes have already proved an effective market intervention to achieve meaningful behavioural change,
- modelling predicting meaningful reductions in Australian sugar consumption from taxation, and

[1] Australian Medical Association, *A tax on sugar-sweetened beverages: Modelled impacts on sugar consumption and government revenue* (June 2021), (*"AMA Report"*) 5.

[2] World Health Organisation, *Global action plan for the prevention and control of noncommunicable diseases* 2013-2020 (Report, 2013) 33.

[3] Ken Henry, Jeff Harmer, John Piggott, Heather Ridout, Greg Smith, *Australia's Future Tax System, Report to the Treasurer (*Report, December 2009) (*"Henry Review"*).

- my analysis concluding that excise tax would be the preferable policy measure to influence pricing in the market for sugary products.

A sugar tax would not be a material revenue raiser in Australia, nor a strategic component of the tax framework, but it can still have an important role in achieving the health policy goal.

Sugar taxes have similarities with tobacco excise: both are aimed at reducing consumption of goods which are predominantly consumed by lower income groups, and principally pose negative health externalities to the consumer. The Australian government has effectively endorsed the tobacco excise concept through significant tax increases over the last decade.[4] This displays that excise tax can be a useful policy tool to achieve health policy aims, despite its regressivity concerns.

Sugar consumption patterns are more heterogenous and widespread across the population than tobacco, and the effectiveness and impacts of a sugar tax will depend heavily on its design.

The AMA is one of many Australian stakeholders which suggest the use of taxation to reduce sugar consumption.[5] Stakeholders proposing a sugar tax acknowledge that it will have a regressive burden on low-income consumers of taxed products.[6] Regressivity is certainly an important policy (and political) concern to be aware of. I highlight that the theoretical regressivity of any sugar tax must be viewed in the context of its place in a progressive Australian tax and transfer system.[7] As the taxed goods would make up a small portion of household spending in most cases (even at lower income levels), the progressive income tax rates should offset regressive impacts from a relatively small new excise tax. Regressive impacts are also offset by health benefits enjoyed by consumers who switch away from sugar consumption, such benefits usually having a progressive distribution. [8]

Section 2 of this paper introduces the health problem, the proposed tax solutions, and my evaluation criteria. I then provide a background in section 3 to the developing role of excise taxation and its growing use as a tool to address social policy objectives, both worldwide and within Australia's strategic tax policy framework.

In section 4, I summarise the theoretical impacts of an excise tax on sugar: discussing the likely incidence of taxation and exploring the availability and impact of substitute products for taxed goods. This section highlights findings from recent international studies that observe a significant shift from taxed goods to acceptable substitute goods and discusses possible regressivity concerns.

In section 5, I explore themes and lessons from a range of relevant comparable taxes introduced around the world in the last decade. I contrast the design and implementation differences across four case studies of successful sugar tax regimes: in the UK, Saudi Arabia, Mexico, and South Africa.

Excise taxes are only one regulatory measure available to influence consumer behaviour. In section 6 I compare excise tax with other taxation options and other pricing interventions to reduce consumption, concluding on balance that excise tax is more efficient for this market. I also explore common non-price measure, such as information campaigns, which I propose should be implemented together with tax as part of a co-ordinated approach.

This paper proposes that good design and implementation would be critical for the success of an excise tax. Section 7 explores design considerations for a sugar tax in Australia, whilst section 8 sets out practical considerations for the reform and implementation process, describing the

[4] Australian Tax Office, *Historical excise rates, 1965 through to March 2021* (Dataset, 19 August 2021).
[5] *AMA report* (n 1). Also recommended by the Senate Committee into the Obesity Epidemic in Australia (see n 19), Grattan Institute (see n 20), Obesity Policy Coalition (see n 21), and the Australian Greens (see n 156).
[6] See for example *AMA report* (n 1) 22.
[7] Miranda Stewart, André Moore, Peter Whiteford, R. Quentin Grafton, *A Stocktake of the Tax System and Directions for Reform: Five years after the Henry Review* (Tax and Transfer Policy Institute Report 1/2015, February 2015) 76.
[8] Benjamin B Lockwood, Dmitry Taubinsky, *Regressive Sin Taxes* (National Bureau of Economic Research Working Paper 23085, 2017).

current state of public, industry and political support for reform, and possible developments.

Finally, I assess both proposed sugar tax models against the defined criteria. Assuming the public health case for intervention is sufficiently compelling, I conclude that both excise tax measures would satisfy sufficient attributes within the policy review framework to be considered as appropriate tax reform measures in Australia.

However, the evaluation explains my preference for the broader-based tax option. Whilst a broad sugar tax has less global precedent than SSB taxation, and likely faces greater practical barriers to its introduction, its design attempts to apply taxation fairly across all sugar consumption in Australia, and its broader scope allows a greater chance of making a meaningful and long-lasting impact to consumer behaviour and long-term health outcomes.

2. CONTEXT FOR POSSIBLE TAX REFORM

2.1. Introducing the health problem

The world faces a growing problem from obesity. The WHO describes that "globesity" – an escalating global epidemic of overweight and obesity – is *"taking over many parts of the world"*.[9]

The Australian public increasingly consumes processed and sugar-rich foods and suffers a relatively high prevalence of obesity, particularly amongst Indigenous communities.[10] The annual healthcare costs in Australia resulting from obesity exceed $5 billion.[11]

Over-consumption of free sugars is a leading cause of obesity, tooth decay and other common public health problems. Sugary beverages and processed sugar-rich foods are a leading contributor to this over-consumption. [12]

- More than 90% of Australians exceed the WHO's conditional recommendation to limit free sugar to 5% of energy intake, with nearly half of Australians exceeding twice that recommendation.[13]
- The AMA highlights a particular risk arising from SSBs, which have high levels of free sugar, little nutritional value and a higher risk of excess consumption than sugary foods.[14] More than half the free sugars consumed in Australia are from beverages.[15]

There is a major drive by health organisations to reduce sugar consumption (at a population level) to

[9] World Health Organisation, *Controlling the Global Obesity Epidemic* (Web Page).
[10] Australia has the sixth highest proportion of overweight or obese people amongst 22 OECD countries. Current data suggest that 67 percent of adults and 25 percent of children are obese or overweight, with these percentages even higher amongst Aboriginal and Torres Strait Islander peoples. Australian Institute of Health and Welfare, *Overweight and obesity: An interactive insight* (Report no: PHE 251, 2019).
[11] Costs from obesity alone estimated to range from 5.3 to $8.6 billion. *AMA Report* (n 1) 8.
[12] Lisa Te Morenga, Simonette Mallard, Jim Mann, "Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies" (2013) *British Medical Journal* 346;e7492.
[13] Adyya Gupta, Lisa G. Smithers, Annette Braunack-Mayer, Jane Harford, "How much free sugar do Australians consume? Findings from a national survey" (2018) *Australia and New Zealand Journal of Public Health* 42(6) 533-540.
[14] *AMA report* (n 1) 5.
[15] 52% of free sugars were from SSBs in 2011/12. Australian Bureau of Statistics, *Australian Health Survey: Consumption of added sugars, 2011-12* (Catalogue No. 4364.0.55.011, 27 April 2016).

cut disease and save lives, both in Australia[16] and worldwide.[17]

To concentrate on tax policy issues, this paper henceforth assumes there is a valid public health policy aim to reduce over-consumption of sugar across the entire population.

It is broadly acknowledged that a moderate level of sugar consumption is an acceptable part of dietary intake. Whilst reducing the population's overall sugar consumption will reduce overconsumption – and allow for resulting health benefits projected by health experts, we should note there are some individuals whose sugar consumption does not require (or is not a priority for) reduction.

The author acknowledges the existence of additional public health intricacies (for example, the health merits of artificial sweeteners), but does not propose to consider these within this paper.

2.2. Introducing the proposed solution: excise tax

The context for this paper is two recent proposals for introduction of sugar taxation in Australia and the UK:

1) In June 2021, the Australian Medical Association ("AMA") called for a tax on SSBs as *"an important first step"* towards tackling obesity by reducing sugar consumption from soft drinks.[18] The proposal is for a narrow excise tax applying to a specific range of beverages as end-products (at approximately 20% of retail value). This is consistent with similar proposals in recent years, including those by the 2018 Senate Committee into the Obesity Epidemic in Australia,[19] the Grattan Institute[20], and 2020 Australian of the Year James Muecke.[21]
2) In July 2021, the UK's National Food Strategy ("UK NFS") – a government commissioned independent review of the food system – recommended replacing the UK's existing excise tax on SSBs with a "sugar and salt reformulation tax",[22] to make a more meaningful public health impact. The sugar aspect of the proposal would introduce a broader excise tax on sugar itself, when used as a constituent ingredient of any manufactured foods or beverages.

Both proposals suggest excise taxes: a one-stage consumption tax imposed on specific goods, whether imported or domestically produced. Excise would not be levied on products exported outside of Australia (this would be an important factor if broad-based taxation were applied to raw sugar).

Whilst we can observe many health bodies supporting the use of sugar taxation, and many examples of recently introduced sugar taxes worldwide, the tax policy reaction to the use of excise in this area is mixed. Some experts are critical of sugar taxation,[23] whilst many sources simply do not consider the many recent examples of sugar taxation in the last decade and its impacts (or were not published in time to).[24]

[16] See for instance *AMA Report* (n 1) 5.
[17] World Health Organisation Global Action Plan (n 2) recommends that states develop policies to *"reduce the content of free and added sugars in food and non-alcoholic beverages"*.
[18] *AMA Report* (n 1) 3.
[19] The Senate committee recommended the Australian government introduce a tax on SSBs, with the aim of reducing consumption, improving public health, and accelerating the reformulation of products:
The Senate, *Select Committee into the Obesity Epidemic in Australia*, Parliament of Australia (Final Report, December 2018) xii (Recommendation 10).
[20] Stephen Duckett and Hal Swerissen, *A sugary drinks tax – Recovering the community costs of obesity* (Grattan Institute Report No 2016-15, November 2016).
[21] James Muecke, "A sugar levy would be an investment in the health of our nation and its people, says James Muecke" *The Canberra Times* (online, 2 December 2020).
[22] *The National Food Strategy: The Plan – July 2021* (United Kingdom), Recommendation 1.
[23] See for example Boesen (2021), who opines that SSB taxation has "inherent design flaws" and "highly uncertain" effects on public health. Ulrik Boesen, "Excise Tax Application and Trends" (16 March 2021) *Tax Foundation* Fiscal Fact No. 753.
[24] See the *Henry Review* (n 3) and *Re:think* (n 47) in an Australian context, and Cnossen (2005) (n 29) and Terra (1996) (n 113) considering general excise tax design principles.

Given the fast pace of those developments, this research paper aims to present a contemporary study, which assesses the effectiveness of two models for addressing the public health policy aims in Australia:

A. a narrow excise tax focussed on SSBs; and
B. a broader excise tax applying to all sugar consumed in Australia.

2.3. Policy review criteria

The evaluation will be based on six policy review criteria. Five are the design principles articulated by the Henry Review,[25] as an established view of good tax policy in Australia. This paper interprets each of these design principles with reference to the assumed principal policy objective of changing behaviour (i.e., of consumers and producers). This interpretation may differ from how these principles are generally interpreted for taxes designed mainly to raise public revenues.

As the analysis evaluates proposed measures (rather than an existing tax), an additional sixth factor is included with to the review framework, being 'Likelihood of introduction'. The theoretical merits of any proposed tax design cannot have practical value without the tax being able to be enacted through law.

The six criteria used for assessment of the proposed sugar tax measures are therefore:

1. *Equity:* Does the measure treat similar individuals (at both consumer and producer level) in the same way (horizontal equity); and is the entire measure structured in such a way as to be progressive (vertical equity)?
2. *Efficiency:* Does the measure change behaviour *"at the least possible cost to economic efficiency"*?[26] Are the burdens of the measure appropriate given the expected health benefits?
3. *Simplicity:* Is the measure simple for those affected to understand and comply with, and is it simple for Government to administer and collect?
4. *Sustainability:* Is the measure structured with sufficient flexibility to allow it to be maintained into the future, given reasonable expectations of consumer change, technological change, and policy change?
5. *Policy consistency:* Is the measure consistent with the existing tax policy framework (with specific reference to the conditions to introduce specific taxes articulated by the Henry Review) and broader policy objectives of the Australian government?
6. *Likelihood of introduction:* Does the measure have significant political or legal barriers to prevent its future introduction?

[25] *Henry Review* (n 3), Part One, Overview, 17.

[26] Ibid.

3. BACKGROUND TO APPLYING EXCISE TAX TO SUGAR

3.1. Developments in role of excise taxes

An excise is defined as any tax *"levied as a product specific unit tax on a predefined limited range of goods".*[27] The specificity of the tax base is the key attribute: it does not include broad-based consumption taxes.

Excise taxation dates back as far as ancient Egypt,[28] and was favoured as a revenue-raising source during the Middle Ages, due to its administrative ease and a government's ability to control supply.[29] Over time, the revenue role of excise taxes has diminished,[30] with many smaller excise taxes replaced in the twentieth century by broad-based consumption taxes.[31]

In the present day, excise tax is typically linked to goods which have negative externalities. The most common excises are imposed on highly controlled products (fuel, alcohol, and tobacco) which have relatively inelastic demand and therefore generally raise material domestic revenues.[32] However, there has been a shift towards excise taxes being more justified by social and health policy reasons. Indeed, the UN Tax Committee recently agreed to establish a subcommittee to assist in the policy development of health taxes: which are stated to be designed primarily to be *"an effective measure to reduce consumption"* of tobacco, alcohol and SSBs, with government revenue generation as a secondary motive only.[33]

As a social policy tool, excise taxes are often described as "Pigouvian" taxes: whereby consumers of products are required to effectively pay compensation for external costs of their consumption. The tax "internalises the externality" by allocating the societal costs of consumption and adding these to prices of the taxed product. [34]

Consumption of sugar mostly has detrimental effects on the consumer itself, although some public externalities exist (such pressure on the healthcare system, and increased packaging waste). It is very difficult to measure these public externalities, and to show the extent of their causation from sugar consumption. Further, revenue-raising capacity of existing sugar taxes are observed to be modest (as is also predicted in Australia),[35] and are unlikely to be sufficient to cover those externalities.

For these reasons, this paper argues that the primary function of an excise tax on SSBs in Australia would be to drive behavioural change. This would be achieved through:

- A market intervention designed to change behaviour through an increased price: both from a reduction in consumer demand, and an incentive for producers to reformulate their products to provide non-taxed alternatives.[36]
- A "signalling" effect, raising awareness about detrimental health impacts and identifying taxed products as harmful. This additional effect can have particular importance for influencing consumers who are less price sensitive (who may not

[27] OECD, *Revenue Statistics 2020*, OECD Publishing [A.5].
[28] Joshua J Mark, *"Ancient Egyptian Taxes & the Cattle Count"*, World History Encyclopedia, (Online, 7 February 2017).
[29] Sijbren Cnossen, *Theory and Practice of Excise Taxation: Smoking, Drinking, Gambling, Polluting and Driving* (Oxford Scholarship Online, October 2005) [1.1].
[30] Average excise taxation across the OECD has fallen to 7.2% of total tax revenues. OECD, *Revenue Statistics 2020* (n 27), 1. Tax Revenue Trends 1965-2019.
[31] Sijbren Cnossen, "The Role and Rationale of Excise Taxes in the ASEAN Countries" *IBFD Bulletin* (December 2005), 503.
[32] Sijbren Cnossen, *Theory and Practice of Excise Taxation: Smoking, Drinking, Gambling, Polluting and Driving* (n 29).
[33] United Nations Committee of Experts on International Cooperation in Tax Matters, *Report on the twenty-third session (virtual session, 19-28 October 2021)* (Online, 2021), E/2021/45/Add.2, 27.
[34] See for example Boesen (n 23) [Pigouvian Taxes].
[35] Parliamentary Budget Office estimates of approximately $560 million per year, following implementation. Parliamentary Budget Office, *Policy costing—during the caretaker period for the 2016 general election, GRN084: Tackling Obesity – Sugar Sweetened Beverages* (2016).
[36] World Bank, *Taxes on Sugar-Sweetened Beverages: International Evidence and Experiences* (Report, September 2020), (*"World Bank SSB Report"*) 24-30.

respond to pricing signals alone) and for influencing producers who wish to position their products as untaxed (and by analogy "healthier").[37]

The use of excise tax to deter consumption – for health impacts to the consumers themselves – has been criticised as a "paternalistic" governmental intervention which impinges on individuals' liberties and freedom to make decisions.[38] Indeed, imposing excise tax balances improvements to public health against individuals' cost burden and losses to personal freedoms. This is particularly relevant for individuals who only consume moderate amounts of sugar, and whose consumption is not required to be discouraged. For example, a high-performance athlete who needs to consume free sugars during training would suffer excise tax, despite this consumption not being an obvious health risk.

Any Government intervention in the market must be justified (for example, by the existence of a market failure). In the case of sugar consumption, a lack of adequate consumer information on future health risks from over-consumption is likely to be one such market failure relevant in Australia.[39] Government intervention should clearly increase the overall population's wellbeing (acknowledging that the effects on different individuals will vary).[40] In this case, all consumers of sugary products will suffer a tax burden for a measure targeted at cases of over-consumption. Given the finding 90% of Australians can be considered as "over-consumers"[41], the use of an excise tax on all sugar consumption appears justifiable for a population-wide health benefit.

As noted above, excise taxes on alcohol and tobacco are nearly ubiquitous worldwide.[42] Certainly, for these products, it seems widely accepted that excise taxation is an acceptable market intervention.

3.2. Excise taxes in Australia

The federal government has the exclusive statutory power to levy excise duties in Australia.[43] It imposes excise on fuel, alcohol, tobacco, and luxury cars, making up 4.3% of tax revenues,[44] all of which are available for general budgetary use.[45] Fuel excise could be said to be the most efficient of Australia's existing taxes, with a small taxpayer population and very high voluntary compliance.[46]

From a strategic direction, the Henry review recommended that Australia move away from sundry product taxation for revenue purposes. It articulated four major broad tax bases for revenue raising, and stated that other specific taxes should only be imposed if they were a better means than other policy instruments to achieve any of these policy aims:

- *"to improve market or social outcomes by addressing spill over costs and benefits;*

[37] *World Bank SSB Report* (n 36) 28.
[38] Jenesa Jeram, *The Health of the State*, The New Zealand Initiative (Report, 2016) 2.
[39] A recent ministerial forum concluded that Australian consumers are not provided with adequate labelling information to make informed dietary choices. Australia and New Zealand Ministerial Forum on Food Regulation, *Consultation Regulation Impact Statement: Labelling of sugars on packaged foods and drinks* (Consultation, 2018) 1.
[40] The Australian Treasury's framework for measuring wellbeing in policy decisions did not cover public health aspects in detail but provides useful context on the balance between different aspects of wellbeing. Australian Treasury, *Policy advice and Treasury's wellbeing framework*, Economic Roundup Winter 2004.
[41] Gupta et al (2018) (n 13)
[42] Only 6 out of 165 (3.6%) of countries supplying data did not impose excise tax on alcohol. World Health Organization, *Global Health Observatory data repository, Excise tax on alcoholic beverages by country* (Dataset, September 2018).
Only 16 out of 186 (8.6%) of countries supplying data did not impose excise tax on tobacco. World Health Organization, *"WHO Report on the Global Tobacco Epidemic: Raising taxes on tobacco"*, 2015.
[43] *Commonwealth of Australia Constitution Act* (Cth.), s. 90
[44] Australian Bureau of Statistics, *Government Finance Statistics 2019-20*, (27 April 2021). Excises do not include duties on imported goods.
[45] Fuel excise revenues were, in the past, hypothecated to road spending, but this has been long discontinued. Richard Webb, *Petrol and Diesel Excises*, (Research Paper 6 2000-01, 3 October 2000), Australian Parliamentary Library.
[46] The tax gap ranged from 0.5% - 2.0% during the period from 2015-2020: much lower than other tax types. Australian Tax Office, *Commissioner of Taxation Annual Report 2020-21*, 61.

- *to help counteract self-control problems; and*
- *to improve market efficiency through appropriate price signals".*[47]

All above policy aims could be valid actions in the context of reducing sugar consumption.

A recent Tax Institute review of the Australian tax system had a similar conclusion, that excise should only be retained where necessary to drive behavioural change.[48]

Following the Henry Review (and consistent with its recommendations), the government demonstrated its acceptance for use of excise to reduce consumption for health objectives: tobacco excise was increased by over 400% over the following decade from 2010-2019,[49] despite acknowledgement of its regressive nature.[50]

The excise taxation regime for alcohol is notable for its complexity (particularly the wine equalisation tax regime) and has been subject to calls for significant reform,[51] but some form of specific tax on alcoholic beverages seems likely to remain part of the Australian tax system.

3.3. Taxation of sugar in Australia

There is no specific taxation on sugar consumption. Within the general consumption tax base, sugar itself is not taxed (it is "GST-free"), although sweetened beverages and many sugary food products are subject to GST of 10%.[52]

The Henry Review did not mention taxation of sugar, although its publication was before other large economies commenced introducing similar taxes.[53] The subsequent *Re:think* Treasury paper acknowledged the existence of sugar taxes globally but did not comment on their possible introduction in Australia.[54]

Estimates of annual fiscal receipts from a 20% retail price tax on SSBs in Australia are in the range of $500-800 million.[5556] In real terms these are not trivial amounts, and these revenues could make a positive impact if invested for appropriately targeted public health initiatives.

Within the Australian tax system however, these revenues would be approximately 0.1-0.2% of Australia's overall tax receipts.[57] Even if a broader base and higher rate were adopted, it is unlikely that this percentage would materially exceed 1%. Sugar taxation would therefore not be a main "revenue raiser", and its effectiveness should instead be assessed for its impact on public behaviour.

4. EXPECTED IMPACTS OF SUGAR TAX

4.1. Theoretical impacts on taxed goods

The consumption of goods – such as sugar products – with harmful effects for the consumer poses challenges for the standard "more is better" assumption to consumer preferences. [58]

[47] *Henry Review* (n 3), Part One: Overview, 26 (Recommendation 1).
[48] *The Case For Change* (2021) recommended all indirect taxes be abolished unless deemed necessary to drive behavioural change – in which case they should be designed to improve consistency, reduce compliance costs, and encourage economic growth where relevant. The Tax Institute, *The Case For Change: A paper to prompt discussion for the future of Australia's tax system* (Report, July 2021) 223.
[49] Australian Tax Office, *Historical excise rates, 1965 through to March 2021* (Dataset, 19 August 2021).
[50] National Preventative Health Taskforce, *Australia: the healthiest country by 2020. National Preventative Health Strategy – the roadmap for action*, (Report, 30 June 2009) 176.
[51] *Henry Review* (n 3), Part Two, Detailed Analysis (volume 2 of 2) 438.
[52] *A New Tax System (Goods and Services Tax) Act 1999* (Cth.) s 38-3, Schedules 1 & 2.
[53] *Henry Review* (n 3).
[54] Australian Treasury, *Re:think Discussion Paper*, (2015) (*"Re:think"*) Chapter 9: Indirect Taxes, 335.
[55] Parliamentary Budget Office (2016) (n 35)
[56] Estimates in 2021 by the AMA suggested $814 million annual revenues. *AMA Report* (n 1) 4.
[57] Total tax receipts in 2019-20 were $552 billion. Australian Bureau of Statistics, *Taxation Revenue, Australia* 2019-20 (27 April 2021).
[58] Jeffrey M. Perloff, *Microeconomics* (Pearson Education, 2nd ed, 2001) 75.

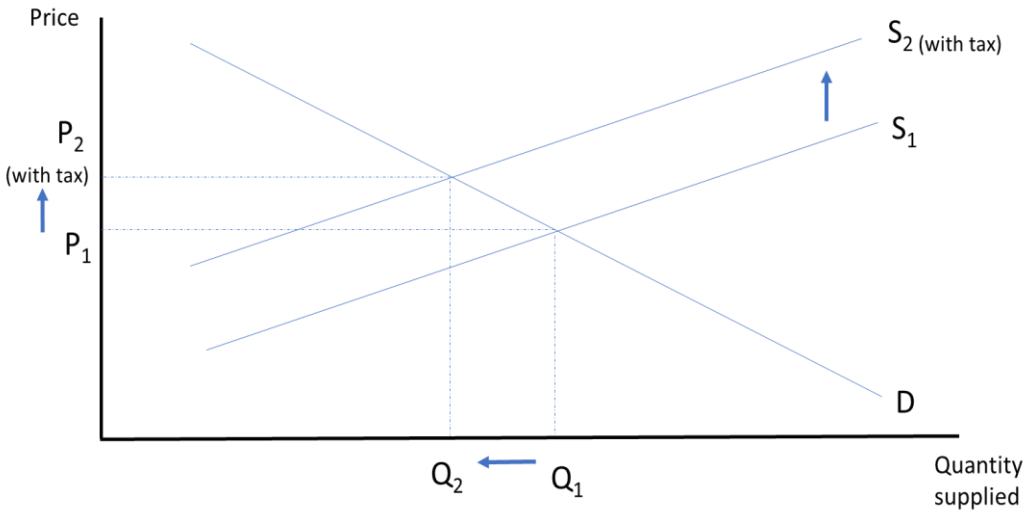
However, standard microeconomic theory is still a useful starting point to examine the likely market effects of a product tax. This dictates that imposition of a selective tax on a product would increase its price, leading to a corresponding reduction in its consumption. This impact is depicted in Figure 1.

Studies reveal that these theoretical impacts do not occur evenly when sugar taxes are imposed in practice.

Price changes vary depending on market specifics and reflecting strategic behaviours by producers and retailers. Changes in consumption also vary throughout the population – *"particularly among income levels, age groups and baseline consumption"*.[59]

In addition to the price changes themselves, the communication and signalling of the tax are an important aspect for behavioural change of consumers. In practice, consumers are more likely to reduce consumption if they are aware that a product is taxed and has a higher price (and thus designated as unhealthy).[60] Some experts have argued that this is the most valuable contribution of a tax on unhealthy products.[61]

Figure 1: Excise tax levied on producer increases price and reduces quantity supplied at equilibrium



Source: Author

[59] Barry M. Popkin, Shu Wen Ng, "Sugar-sweetened beverage taxes: Lessons to date and the future of taxation" (2021) 18(1) *PLoS Med* e1003412.

[60] Franco Sassi," Taxing Sugar" (2016) *British Medical Journal* 352: h6904.

[61] *World Bank SSB Report* (n 36) 28.

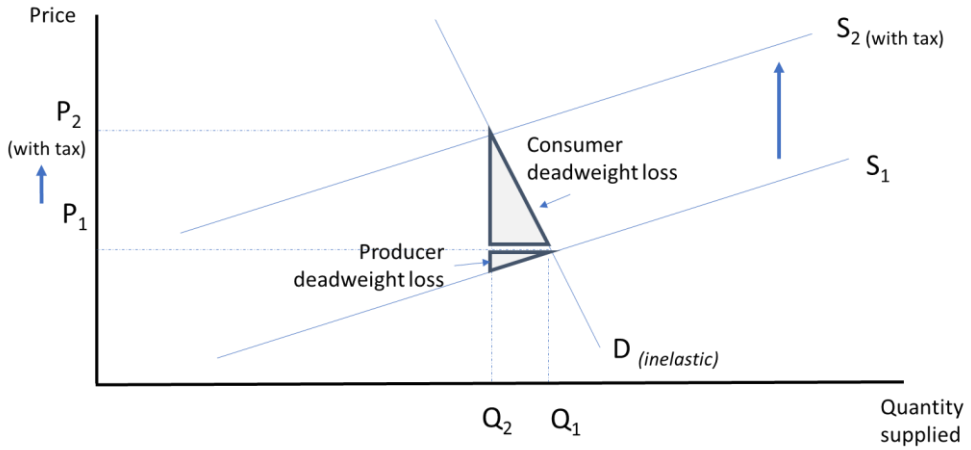
4.2. Incidence of taxation

For administrative reasons, the producer or importer of the good is typically the legal subject of excise taxation, being the person who the tax is collected from. However, this differs from economic incidence of the tax. The overall burden of excise tax is shared between the buyers and sellers of a good, depending on the relative elasticities of demand and supply.[62] Consumers with inelastic demand suffer most of the burden of an excise tax.

Meta-analyses across a range of country markets suggest that soft drinks are relatively elastic to price increase, having an approximate elasticity of -1.0 (meaning a 10% increase in price results in a 10% decrease in consumption). However, this depends heavily on characteristics of individual markets.[63]

4.3. Substitutes

An important factor in product elasticity is the availability of acceptable substitute goods. If a consumer is willing to consume an alternative product instead of the taxed good, this increases elasticity of demand. Likewise, if a producer can produce and sell an alternative non-taxed product, this increases elasticity of supply. As a policy measure, introducing tax on a product with elastic supply and demand is predicted to be highly effective at changing quantity of the good supplied, but ineffective at raising revenues (see Figure 3).



Source: Author

[62] Joshua Gans, Stephen King, Robin Stonecash, Martin Byford, Jan Libich, N. Gregory Mankiw, *Principles of Economics* (Cengage, 7th ed, 2018) 176.

[63] Andrea M. Teng, Amanda C. Jones, Anja Mizdrak, Louise Signal, Murat Genç, Nick Wilson "Impact of sugar-sweetened beverage taxes on purchases and dietary intake: Systematic review and meta-analysis" (2019) 20(9) *Obesity Reviews* 1187.

Acceptable substitute goods are those which the consumer accepts switching to and which are socially desirable (in line with the policy goals). The availability of acceptable substitute products varies across different foods and beverage types. The beverage industry has long offered bottled water and diet alternatives to carbonated SSB drinks ('diet beverages') within product ranges, and acceptance of these substitutes is often observed from SSB taxation, particularly in high-income countries.[64]

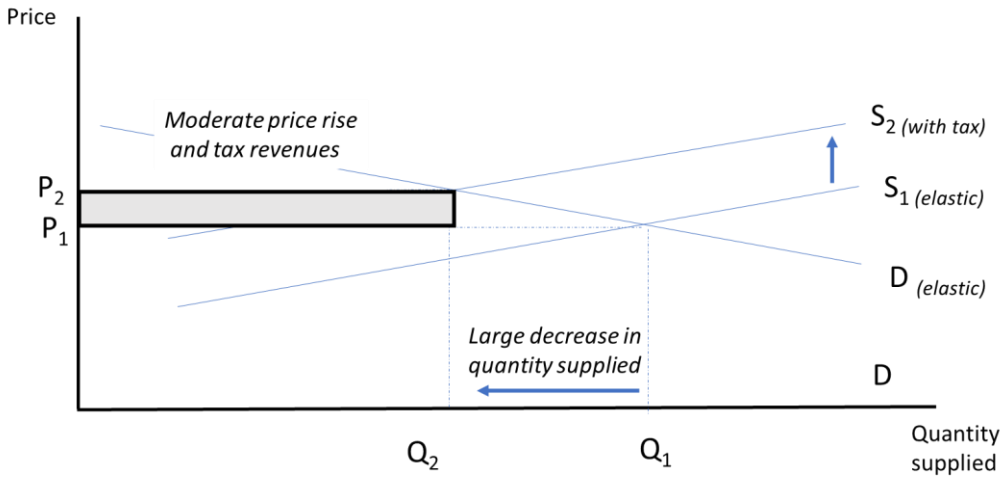
The author acknowledges there remains some debate on the health merits of diet beverages, but contends that for the purpose of the stated health goal they are effective at reducing sugar consumption.

A switch to non-desirable substitutes (products with other harmful attributes) could frustrate the purpose of the tax. For sugar taxes, non-desirable substitutes might include alcohol, non-sugary junk food, or a sugary product sold in a form which avoids tax (such as an energy drink in powdered form).

A robust tax design process should identify items which might erode the intended tax base and ensure these are captured within the scope where possible.

A concern surrounding introducing a narrow SSB tax is that consumers will simply obtain sugar from food products instead of beverages, without reducing overall sugar consumption. US studies carried out between 2011-2013 suggest switches from SSBs to alcohol and sugary foods.[65] However, more recent international studies did not observe this phenomenon; instead noting strong evidence of a switch to water and diet beverages.[66]

Figure 2: Excise tax on products with elastic supply and demand causes large change to quantity supplied



Source: Author

[64] Popkin & Ng (2021) (n 59).
[65] Studies quoted from 2011 and 2013, as referenced by Boesen (2021) (n 23).
[66] M Arantxa Colchero, Barry M Popkin, Juan A Rivera, Shu Wen Ng, *"Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study"* (2016) BMJ 2016;352:h6704.

4.4. Regressivity

A common criticism of most excise taxes is their regressive impact.

A feature of any consumption tax with a flat rate is that lower income taxpayers pay more tax than their respective ability to pay (e.g., as a portion of income). Indeed, as lower income households spend a greater portion of their income on consumption (compared to richer persons who save or invest more), they in fact suffer a greater comparative burden from taxes on consumption.

This impact is often exacerbated by the nature of the goods targeted by specific taxes (such as cigarettes, alcohol, and sugary drinks) often making up a larger part of the spending of many lower-income households. A pan-OECD study observes this regressive impact for excise taxes on alcohol and tobacco but suggests that the "addictive nature" of these products is a significant contributor to regressivity.[67] Many international studies indicate that sugary beverages and sugar-rich products are disproportionately consumed by the poor.[68] Theoretically, a regressive impact holds true for sugar taxation. However, this should be viewed in the context of three offsetting factors.

a) Sugar tax delivers progressive health benefits

Lower-income households already suffer disproportionately from the negative health problems caused by over-consumption of SSBs and sugary products, and therefore have the most to gain from a reduction in their consumption.[69] An Australian study modelled that lower income households would obtain a greater share of health gains from a 20% SSB tax, both in terms of greater life expectancy and lower out-of-pocket healthcare costs.[70] This is consistent with a hypothesis that at a population level, any regressive impact of sugar tax itself would – at least partly – be offset by the progressive nature of the health benefits

b) Regressivity is removed by behavioural change

Within the lower-income community, there would be individual winners and losers from taxation. Those consumers who switch their consumption to non-taxed products would not suffer any cost from the tax and would also derive the greatest health gains from reduced consumption of the harmful product.

International studies align with the intuitive assumption that low-income consumers have a greater market tax salience to excise taxes than higher-income consumers,[71] and are more likely to respond to taxes with consumption changes.[72] By reason, a tax which is effective at behavioural change for lower-income consumers will at least have a lower regressivity impact.

Of course, consumers who keep consuming sugar will suffer the full burden of the tax. This can be a particular issue in cases of addiction, if consumers are prevented from making rational consumption decisions. However, studies do not identify clear evidence of humans having addiction to sugar, certainly not to the extent that is observed for alcohol and tobacco.[73]

c) Overall progressivity of the tax system

When viewed in the context of the entire tax and transfer system, one regressive tax can be offset by progressivity elsewhere.[74] Australia's very progressive income tax rates offsets the regressivity of consumption taxes – and a new excise tax, raising

[67] OECD/Korea Institute of Public Finance (2014), *The Distributional Effects of Consumption Taxes in OECD Countries*, OECD Tax Policy Studies, (Report No. 22) 39
[68] See for example Lockwood & Taubinsky (2017) (n 8) 1.
[69] Ibid, 2.
[70] Anita Lal, Ana Maria Mantilla-Herrera, Lennert Veerman, Kathryn Backholer, Gary Sacks, Marjory Moodie, Mohammad Siahpush, Rob Carter, Anna Peeters "Modelled health benefits of a sugar-sweetened beverage tax across different socioeconomic groups in Australia: A cost-effectiveness and equity analysis" (2017) *PLOS Medicine* 17(7): e1002326.
[71] Jacob Goldin, Tatiana Homonoff, "Smoke Gets in Your Eyes: Cigarette Tax Salience and Regressivity" (2013) *American Economic Journal: Economic Policy*, 5 (1): 302-36.
[72] Rita de la Feria, Michael Walpole, "The Impact of Public Perceptions on General Consumption Taxes" (2020) *British Tax Review* 67/5, 659.
[73] Margaret Westwater, Paul Fletcher, Hisham Ziauddeen, "Sugar addiction: the state of the science" (Nov 2016) *European Journal of Nutrition* 55 (Suppl 2) 55-69.
[74] Stewart et al (2015) (n 7) 76.

a small amount of tax on sugar, is unlikely to have a considerable impact on the system's overall progressivity.

Indeed, a sugar tax should not be a significant burden to consumers, when compared to other taxation and household expenditure. Modelling suggested that, if the full cost of a 20% SSB tax in Australia was borne by the consumer, the average cost of tax would be $30-$35 per year.[75]

This research did not model sugary food, but a study from New Zealand found that expenditure on sugary food and beverages was less than 3% of household budgets, across all income levels. [76] This suggests that even a broader sugar tax would not have a material impact for most households.

4.5. Estimated effects of sugar tax in Australian market

Empirical studies have been carried out to project the impact of SSB taxation within the Australian market. Price elasticity for non-diet soft drinks was modelled by Sharma et al (2014) to be -0.63: a material consumption reduction (although lower than global averages).[77] Subsequent studies, using different data sources, have been consistent with those results, estimating a 10%-12% reduction in consumption from a 20% ad valorem tax.[78][79] Studies also modelled a greater behavioural effect on lower income households, consistent with the theoretical assumptions above.[80]

These modelled findings include some simplified assumptions: for example, each study assumes that tax is fully passed to the consumer, instead of being absorbed by producers/retailers. The model also assumes ad valorem taxation, rather than targeted based on sugar content. Despite these cautionary notes, the studies remain useful indicators that SSB taxation would be effective in changing behaviour in Australia.

Looking more broadly at sugary foods, a separate study analysed the impact of sugar taxation on high-sugar foods in Australia.[81] This estimated a statistically significant reduction in the population's daily energy intake (3% per day), a far greater reduction than that modelled for an equivalent tax on SSBs.[82]

4.6. Impact on remote communities

An important consideration in Australia is the effect of sugar tax on remote Indigenous communities. Aboriginal and Torres Strait Islanders have higher rates of obesity than the general population,[83] and remote Indigenous communities could have greater potential health benefits to gain from switching from sugar.

However, these communities often face food insecurity – with the unavailability and unaffordability of food items resulting in greater consumption of sugary foods. Many communities also have issues in accessing safe drinking water (leading to a higher consumption of SSBs).[84] Without viable alternatives, imposition of an excise tax would be highly regressive and would add to the existing burdens faced by many remote low-income communities. These additional impacts would not be easily addressed by excise tax design, but

[75] Lal et al (2017) (n 70)
[76] Alasdair Gardiner, *Implications of a Sugar Tax in New Zealand: Incidence and Effectiveness* (New Zealand Treasury Working Paper, 3 February 2017) [4.2].
[77] Anurag Sharma, Katharina Hauck, Bruce Hollingsworth, Luigi Siciliani, "The Effects of Taxing Sugar-Sweetened Beverages Across Different Income Groups" (2014) *Health economics*. 2014;23(9):1159–84.
[78] J. Lennert Veerman, Gary Sacks, Nicole Antonopoulos, Jane Martin, "The Impact of a Tax on Sugar-Sweetened Beverages on Health and Health Care Costs: A Modelling Study". (2016) *PLoS* ONE 11(4): e0151460.
[79] Lal et al (2017) (n 70)
[80] Observed in both Lal et al (2017) (n 70) and Sharma et al (2014) (n 77).
[81] Ice cream and other foods with sugar content exceeding 10g per 100g.
[82] Linda J. Cobiac ,King Tam, Lennert Veerman, Tony Blakely, "Taxes and Subsidies for Improving Diet and Population Health in Australia: A Cost-Effectiveness Modelling Study" (2017) *PLoS Med* 14(2): e1002232.
[83] Australian Institute of Health and Welfare (2019) (n 10).
[84] Katherine A. Thurber, Johanna Long, Minette Salmon, Adolfo G. Cuevas, Raymond Lovett "Sugar-sweetened beverage consumption among Indigenous Australian children aged 0–3 years and association with sociodemographic, life circumstances and health factors" (2020) *Public Health Nutrition* 23(2), 295–308.

consideration should be given to other appropriate policy measures.

4.7. Impact on Australian producers

Sugar is an important national industry, with the industry generating over 40,000 jobs, mostly in Queensland.[85] Over 80% of raw sugar production is exported to overseas buyers.[86] An excise tax would not fall on exported sugar, and the comparative scale of the global market suggests that an excise on local consumption would not have any material effect on the global price for sugar (nor any material disadvantage for the primary industry).

Producers of sugary beverages and food products for local consumption would suffer from the imposition of tax, but this is reduced if there is an elastic supply. Producers who could develop and market lower sugar alternative products should be able to mitigate economic losses (and if successful, may be able to grow overall market share).

[85] Sugar Australia, *"Industry Information"* (Web Page).
[86] Australian Bureau of Agricultural and Resource Economics and Sciences, *Agricultural Commodity Statistics 2020 - Rural Commodities – Sugar* (Dataset, 2020).

5. OBSERVED EFFECTS FROM COMPARABLE INTERNATIONAL REFORM

Whilst some smaller economies have levied sugar taxes for decades, the major trend for countries introducing taxes on unhealthy foods commenced last decade.[87] By 2021, over 40 countries had introduced taxes on sugar, with most being targeted at SSBs.[88]

Many studies have since measured the impacts of individual countries' taxes. International experience is that almost all sugar taxes have been effective in changing consumer behaviour, although the nature and scale of these changes depends on the design of the tax. The rate is obviously important, but the unit of taxation also affects the exact market response.

A World Bank analysis of global SSB taxes found that tax pass-through rates have a high variance between jurisdictions, but all countries still experienced a reduction in consumption.[89] Some countries had notable success, with three major economies (each highlighted in case studies below) reducing sugar consumption by 25% or more. The UN Tax Committee considers that a "well designed" SSB tax, which encourages substitution, may produce *"a rare win-win-win from a tax reform"* (i.e., reduced sugar consumption, fiscal revenue generation, and economic growth from substitute products).[90]

Results in Mexico and South Africa showed that lower-income households are more likely to change consumption away from a taxed product. This suggests that these income groups will suffer a less-pronounced regressive effect from the tax and will obtain a larger share of the health benefits from dietary change.

There are fewer taxes on sugary foods in place worldwide, and a smaller body of evidence to support their effectiveness. Whilst a global study only observed "limited evidence" that taxing foods with sugar reduced their consumption,[91] the Mexico case study demonstrates that excise taxes on sugary foods can be effective measures.

Given the relatively recent timeframe of reform it is not yet possible to observe long-term health impacts of sugar taxation in these countries. However, given the reductions in sugar consumption it seems plausible that we will observe these in future.

A consistent feature observed from sugar taxes in major economies is that they are not significant revenue raisers. In most cases, revenues from sugar taxes are less than 1% of total tax revenues.[92]

Four notable case studies are outlined below, with relevant lessons for excise tax scope, design, and implementation in an Australian context.

5.1. United Kingdom: extensive reductions from industry buy-in

The United Kingdom's excise tax on SSBs was intentionally described as a "Soft Drinks Industry Levy", aimed at incentivising the industry to change its behaviour by reformulating products, reducing portion sizes, and promoting healthier alternatives.[93] The tax was designed as a tiered volumetric tax, with a higher rate applying for drinks exceeding a certain sugar content threshold. Importantly, manufacturers were given a two-year

[87] *World Bank SSB Report* (n 36) 10.
[88] Popkin & Ng (2021) (n 59).
[89] *World Bank SSB Report* (n 36) 41.
[90] United Nations Committee of Experts on International Cooperation in Tax Matters, *Possible work on health taxes* (Report, 4 October 2021) E/C.18/2021/CRP.35 4.
[91] Manuela Pfinder, Thomas L Heise, Michele Hilton Boon, Frank Pega, Candida Fenton, Ursula Griebler, Gerald Gartlehner, Isolde Sommer, Srinivasa Vittal Katikireddi, Stefan K Lhachimi, "Taxation of unprocessed sugar or sugar-added foods for reducing their consumption and preventing obesity or other adverse health outcomes" (2020) *Cochrane Database Syst Rev.* 2020(4): CD012333.
[92] An exception is Saudi Arabia, which has relatively few broad tax bases, where excise tax made up approximately 7% of Government tax revenues in 2019. Ministry of Finance (Saudi Arabia), *Budget Statement 2019*.
[93] United Kingdom Government, *Soft Drinks Industry Levy Policy Paper* (2016).

window before introduction to allow for product reformulation.[94]

Major industry players initially opposed the planned measures during the consultation period, but studies showed a shifting of this reaction towards acceptance of the levy.[95] Industry participants eventually engaged in reform measures to adapt, diversifying product lines and changing marketing strategies in a "remarkable reformulation" of the market.[96] The British Soft Drinks Association now publicly acknowledges its role in tackling obesity and highlights its reformulation of products and other actions.[97]

Studies analysing the impact of the tax have found that the average amount of sugar in soft drinks has decreased by 29%. Notably, sugar consumption has fallen despite the volume of soft drinks purchased staying the same – meaning that consumer preferences followed the product reformulation.[98]

Despite the initial successes of SSB taxation, the UK NFS concluded that excise tax would need to cover a broader range of products to make a meaningful impact on public health. [99]

This case study demonstrates that designing a tax aimed at reformulation by producers and providing sufficient implementation time to allow reformulation can result in a material reduction in sugar consumption, without a significant impact on the industry's overall sales. However, it questions whether SSB taxation alone can sufficiently reduce sugar consumption for transformative health improvements.

5.2. Saudi Arabia: ad valorem taxation at high rates

Saudi Arabia introduced an excise tax on soft drinks and energy drinks in 2017. Its design was unusual in that:

- The tax base was initially narrow: it applied to carbonated beverages only (and not to juices or other SSBs).
- It applied an ad-valorem basis to the retail sale price of the beverages (rather than volume or sugar content). This created some difficulties in applying tax given the taxpayers (producers and importers) did not set retail prices.[100]
- The rates were also notably higher than in other countries – at 50% for soft drinks and 100% for energy drinks – resulting in the "largest SSB tax worldwide" in terms of impact on price.[101]

The high rates of tax led to a clear impact on consumer and producer behaviour. Tax increases were fully passed on: studies showed a "tax pass through" rate of more than 100%[102]. Consumption of soft drinks declined by 35–40%, with energy drink consumption dropping 60%.[103]

The tax base and rates were criticised for being arbitrary and unfair,[104] and various countries

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[94] TL Penney, J Adams, M White, "Industry reactions to the UK soft drinks industry levy: unpacking the evolving discourse from announcement to implementation" (2018) *J Epidemiol Community Health* 72: A43.
[95] Ibid.
[96] Popkin & Ng (2021) (n 59).
[97] British Soft Drinks Association, *Position Statements: Soft Drinks Industry Levy* (2020).
[98] David Pell, Oliver Mytton, Tarra L Penney, Adam Briggs, Steven Cummins, Catrin Penn-Jones, Mike Rayner, Harry Rutter, Peter Scarborough, Stephen J Sharp, Richard D Smith, Martin White, Jean Adams, "Changes in soft drinks purchased by British households associated with the UK soft drinks industry levy: controlled interrupted time series analysis" (2021) *British Medical Journal*; 372.
[99] *UK National Food Strategy* (n 22) 146.
[100] Tax authorities were required to set a minimum price for taxed products. *Excise Tax Treaty for the Gulf Cooperation Council* (2015), art. 6(2).
[101] Reem Alsukait, Sara Bleich, Parke Wilde, Gitanjali Singh, Sara Folta "Sugary drink excise tax policy process and implementation: Case study from Saudi Arabia" (2019), *Food Policy* 90, January 2020, 101789.
[102] Reem Alsukait, Parke Wilde, Sara N Bleich, Gitanjali Singh, Sara C Folta, "Evaluating Saudi Arabia's 50% carbonated drink excise tax: Changes in prices and volume sale" (2020), *Economics and Human Biology*, 38
[103] Reem Alsukait, Parke Wilde, Sara Bleich, Gitanjali Singh, Sara Folta, "Impact of Saudi Arabia's Sugary Drink Tax on Prices and Purchases" (2019) *Current Developments in Nutrition*, 3(1) P10-066-19.
[104] Alsukait et al (2020) (n 102).

challenged the tax at WTO. [105] Saudi Arabia was required to formally justify its choice of rates and beverage categories, and it subsequently broadened the scope of the tax to include other non-carbonated SSBs. [106]

This case study shows that a high tax rate can have significant impacts on consumer behaviour, but also emphasises the importance of clearly articulating a rationale for the tax design based on health evidence.

5.3. South Africa – tax design results in notable sugar reduction

South Africa announced a proposed SSB tax in 2016, with an approximate tax burden of 20%. Following opposition from the sugar industry and beverage producers, introduction of the tax was delayed until 2018, with a reduced tax burden of 10-12%.[107] The design of the tax is based on sugar content, with tax charged on each gram per 100 mL (above an exempt threshold for the first 4 g/100 mL).

Studies showed that only half of the tax burden was passed to consumers (through 6% price rises). [108] However, the volume of taxed beverages decreased by 15%, with an even greater reduction of 35% in the population's daily sugar consumed from taxed beverages.[109]

Notably, lower income households showed a fourfold greater consumption reduction following introduction of the tax.[110]

This case study suggests that even a moderate tax rate can have a significant effect on consumption; and that the desired behavioural changes take place more within lower income communities. Further, an excise tax designed to apply tax based on sugar content has a notable and targeted effect on reducing consumption of the added sugar itself.

5.4. Mexico – taxes on foods and beverages particularly successful in low-income households

In 2014 Mexico introduced taxes on SSBs and a range of defined "non-essential" foods. The tax on SSBs was volumetric (at approximately 10%), whilst the food tax applied at 8% to a broad range of finished "junk food" products – such as chips, sweets, chocolate, and ice cream.[111]

The SSB tax resulted in a decline of 6-8% in consumption of taxed beverages, with the greatest reductions in consumption observed in high-purchasing households, particularly lower-income

[105] World Trade Organisation, *Replies by the Kingdom of Saudi Arabia to the Questions posed by Switzerland regarding the 2017 legislation on Excise Tax*, 24 April 2018.
[106] Amendment to Excise Tax Implementing Regulations (Saudi Arabia), issued by Decision of the Board of Directors No 2-3-2019.
[107] *World Bank SSB Report* (n 36) 20.
[108] Nicholas Stacey, Ijeoma Edoka, Karen Hofman, Elizabeth C. Swart, Barry Poplin, Shu Wen Ng "Changes in beverage purchases following the announcement and implementation of South Africa's Health Promotion Levy: an observational study" (2021) *The Lancet*, 5(4) E200-E208.
[109] Ibid.
[110] Ibid. Households with lower Living Standards Measures purchased 8.2 grams less of sugar per capita, compared to a reduction of only 2.1 grams for the higher-income households.
[111] Carolina Batis, Juan A. Rivera, Barry M. Popkin, Lindsey Smith Taillie, "First-Year Evaluation of Mexico's Tax on Nonessential Energy-Dense Foods: An Observational Study" (2016) *PLos Med* 13(7): e1002057.

households. Studies also showed a significant switch to consumption of bottled water.[112]

The food tax was also found to be effective. Studies showed that the consumption of non-essential foods declined after introduction of the tax. These declines were only statistically significant in low and medium socioeconomic households (5-10%), with consumption relatively unchanged for the high-income group.[113]

A particularly interesting observation from a separate study was that a consumer's awareness of the tax was directly proportional to their decrease in consumption.[114]

The Mexican experience reinforces the South African finding that the greatest consumption changes come from lower income households and extends this finding's application to food consumption. It also highlights the importance of the public awareness of a tax on its effectiveness.

6. OTHER POSSIBLE MEASURES TO EFFECT BEHAVIOURAL CHANGE

This section compares excise tax with other market interventions, and argues it has a role as one part of a package of policy instruments.

6.1. Other sugar tax options

Instead of excise tax, Australia could amend its multi-stage consumption tax (GST) so that a higher rate applies to SSBs and sugary foods (both are currently subject to the standard rate of 10%).[115] This should have an equivalent effect to an ad-valorem excise tax on the final sales price (noting that sales through the chain would be subject to GST the higher rate, but this would be fully creditable except at the final consumption stage).

Higher VAT rates are relatively uncommon globally: good practice tends towards a "broad base / low rate" approach, with limited exemptions.[116] However, there are some precedents of higher rates for sugar: a higher GST rate (of effectively 40%) has been applied to SSBs in India since its major GST reform in 2017. Interestingly, a subsequent study did not observe any evidence of decreased consumption resulting from this higher rate.[117]

Australia's GST system already has complexity from its "GST free" treatment of certain foods – which *"significantly increase the complexity of the GST and introduce distortions"*.[118] Introducing a new, higher rate would add further complexity. Indeed, international VAT policy literature suggests that the few goods justifying a higher rate *"are probably best dealt with by special excise taxes"*.[119]

A higher GST rate would also have less flexibility to be designed to tax the sugar content: meaning cheaper products would have a lower taxation burden. A higher GST rate is therefore not considered preferable to excise tax in this case.

[112] Shu Wen Ng, Juan A Rivera, Barry M Popkin, M Arantxa Colchero, "Did high sugar-sweetened beverage purchasers respond differently to the excise tax on sugar-sweetened beverages in Mexico?" (2019) *Public Health Nutrition* 22: 750–7.
[113] Batis et al (2016) (n 111).
[114] Aurelio Miracolo, Marisa Sophiea, Mackenzie Mills, Panos Kanavos, "Sin taxes and their effect on consumption, revenue generation and health improvement: a systematic literature review in Latin America" (2021) *Health Policy and Planning* 36(5), 790–810.
[115] *A New Tax System (Goods and Services Tax) Act (Cth.) 1999*, Schedules 1 & 2.
[116] OECD, *Choosing a Broad Base - Low Rate Approach to Taxation*, (OECD Tax Policy Studies Report No. 19, 28 October 2010) 15-19.
[117] The study hypothesises the lack of an observable effect was due to low benchmark consumption rates, and that this could be specific to the Indian market. Cherry Law, Kerry Ann Brown, Rosemary Green, Nikhil Srinivasapura Venkateshmurthy, Sailesh Mohane, Pauline FD Scheelbeek, Bhavani Shankar, Alan D Dangour, Laura Cornelsen, "Changes in take-home aerated soft drink purchases in urban India after the implementation of Goods and Services Tax (GST): An interrupted time series analysis" (2021) *SSM – Population Health* 14.
[118] *Re:think* (n 54) 134.
[119] Åsa Johansson, Christopher Heady, Jens Arnold, Bert Brys and Laura Vartia *Tax and Economic Growth* (OECD Economics Department Working Paper No.620, 11 July 2008) 19.

A few smaller island nations apply higher import duties to sugars or SSBs.[120] This would not be an appropriate tax measure in the Australian market, as there is a large volume of locally produced foods and SSBs in the market which would not be caught by taxes at importation (and would therefore be untaxed).

6.2. Alternative market interventions

An alternative to product-level taxation (which applies tax bluntly to all consumption, whether problematic or not), is to apply a financial incentive to healthy behaviour (such as a discount on personal Medicare levy for individuals who exhibited healthy behaviours, analogous to similar incentives offered with private insurance). Theoretically, this allows the intervention to be focussed on individual consumption patterns. However, design and measurement of these incentives appears difficult for sugar consumption. One meta-study also observes mixed effectiveness, and highlight possible ethical issues, from using such incentives.[121]

An alternative to taxation for adjusting market prices is the setting of a price floor, which accords to the socially desired level of consumption. There is some evidence of price floors successfully targeting low-price alcoholic drinks in Australia.[122] Theoretically, a price floor might give more certainty than a tax on price control: as producers and retailers might not choose to pass through a tax in full.

However, price floors are inefficient tools as they do not allow the market to set the price – a regulatory body is required to monitor the market and set an appropriate minimum price which accords to the quantity demanded. This would be very difficult in practice for one homogenous commodity, and even more so for a range of sugary products. Tax is preferable as it allows the market to set an increased (tax inclusive) price, and also generates some fiscal revenues.

As well as price controls, interventions that directly control the quantity supplied (such as setting production limits) are theoretically possible, but are not observed – and appear practically difficult to apply – in markets for sugar products. Regulation does however seek to influence quantity supplied in this market – and common regulatory measures (such as product labelling) are discussed at 6.3 below.

Assuming the tax is designed to ensure appropriate pass-through to consumer prices, excise tax can be seen as an appropriate policy tool for increasing consumer prices in taxed goods (in line with the principles for indirect taxation prescribed by the *Henry Review)*.[123]

6.3. Non-market policy measures

Over-consumption of sugar occurs due to a range of factors. In addition to the availability and relative affordability of high sugar products, literature suggests the consumers' knowledge gap (affected by advertising and other factors) is a main contributor.[124]

Examples of common regulatory methods suggested to reduce sugar consumption might include:

a. communication campaigns to improve nutrition literacy around sugar, including media advertising, school campaigns and mandatory nutritional labelling (this would target the information gap by giving consumers more information);

[120] Examples are the Bahamas, Fiji, Nauru, Seychelles. John Cawley, Anne Marie Thow, Katherine Wen, David Frisvold, "The Economics of Taxes on Sugar-Sweetened Beverages: A Review of the Effects on Prices, Sales, Cross-Border Shopping, and Consumption" (21 August 2019) *Annual Review of Nutrition* 39:317-338 [Table 1]

[121] Marzena Tambor, Milena Pavlova, Stanisława Golinowska, Jelena Arsenijevic, Wim Groot, "Financial incentives for a healthy life style and disease prevention among older people: a systematic literature review" (2016) *BMC Health Serv Res*; 16(Suppl 5): 426.

[122] Nicholas Taylor, Peter Miller, Kerri Coomber, Michael Livingston, Debbie Scott, Penny Buykx, Tanya Chikritzhs, "The impact of a minimum unit price on wholesale alcohol supply trends in the Northern Territory, Australia" (2021), *Public Health* 45(1)

[123] *Henry Review* (n 3)*,* Part One: Overview, 26 (Recommendation 1).

[124] *AMA Report* (n 1) 9.

b. regulation of product advertising (this would target an imbalance in the information gap caused by advertising); and
c. regulatory bans on the sale of the highest-sugar SSBs (a severe restriction which would target the availability of the highest sugar products, if necessary from a health perspective).

The author views that an effective change to consumer and producer behaviour will not arise from any one policy measure alone. Some consumers will be more affected by a price signal, whilst some will take more from advertising or information campaigns.

Groups supporting an Australian sugar tax have acknowledged that sugar tax itself is not a "silver bullet" solution to counter obesity.[125] To effectively change behaviours, tax should be introduced together with complementary non-price interventions. A well-designed tax regime and a strong public communication campaign are likely to be complementary measures: the communication increases awareness (and thus effectiveness) of the tax, whilst a tax regime raises awareness of the negative health impact of the taxed products, adding "gravitas" to nutritional labels.

[125] Grattan Institute, *Submission to the Select Committee into the Obesity Epidemic in Australia*, as referenced in Select Committee's Final Report (n 19).

7. DESIGN CONSIDERATIONS FOR AN EFFECTIVE EXCISE TAX

7.1. A consistent federal tax

Any excise tax imposed in Australia must be a federal tax, rather than being applied at state or municipal level.[126] A consistent federal excise tax is in any case conceptually preferable to sugar taxation at the state or local level. Under a state-wide system, differences in rates (e.g., due to competition between states) would greatly distort the market – as observed from the US's patchwork of municipal "soda taxes".[127] Australia's geographical position means a federal tax would not suffer the tax base losses from "cross-border shopping" observed in the US and some European countries.[128]

A federal excise tax would need to be administered by the Australian Tax Office and Australian Border Force, even if it is primarily a health policy measure. This requires the tax structure and law to be robustly designed, so that the right health goals are achieved when implemented by these federal agencies.

7.2. Legal constraints on policy design

The federal government generally has broad discretion to apply excise tax under international law: taxes on consumption are not included within bilateral tax treaties.[129]

However, Australia must have regard to its obligations under the General Agreement on Tariffs and Trade – and it must not introduce protectionist or discriminatory domestic tax measures.[130] As an example, a WTO dispute settlement ruled an earlier Mexican sugar tax on high-fructose corn syrup from the USA breached these obligations.[131] Provided that sugar taxes are relatively broad and apply equally to local production, these risks should be able to be managed.

The government should also be aware of obligations under bilateral investment treaties. Literature suggests that SSB taxes could be viewed as "indirect expropriation" by a national government, thus meaning that treaty undertakings could restrict Australia's rights to impose a domestic sugar tax.[132] This risk is not simply theoretical: Australia has recently faced challenge under its investment treaties when introducing another public health policy (the plain packaging restrictions on cigarettes).[133]

7.3. Scope of taxed products

Whilst excise taxes are intentionally selective, good practice would dictate that tax should be applied across the entirety of a well-defined product group, with no or limited exemptions (only where necessary for policy reasons).[134] For administrative purposes, the product group would ideally be well-controlled by a relatively small population of reliable taxpayers.

In the case of SSB taxation, a clearly defined population of taxed drinks has been established from international practice to include all non-alcoholic drinks with added sugar (including soft

[126] *Commonwealth of Australia Constitution Act* (Cth.), s. 90

[127] *World Bank SSB Report* (n 36) 26.

[128] Denmark's fat tax was reported to have led to a "surge" in consumers shopping overseas to avoid the tax, given the relative ease of travel to neighbouring Sweden or Germany. Henriette Jacobsen, "Denmark scraps its infamous fat tax after only one year", *Euractiv* (online, 14 November 2012).

[129] *OECD Model Convention with respect to Taxes on Income and on Capital*, 2017, art. 2 and *United Nations Model Double Taxation Convention Between Developed and Developing Countries*, 2017, art. 2.

[130] *The General Agreement on Tariffs and Trade (1947)*, World Trade Organization. Art. 3 provides restrictions on national tax measures.

[131] *Mexico - Tax Measures on Soft Drinks and Other Beverages (United States v Mexico)*, World Trade Organization Dispute Settlement DS 308.

[132] See for example Bergoña Perez-Bernabeu *Chapter 5: Sugar Sweetened Beverage Taxation as a Means to Achieve the SDGs: An Assessment from an International Law Perspective in Tax Sustainability in an EU and International Copyright Context* (C Brokelind & S Thiels eds, IBFD 2020).

[133] *Philip Morris Asia Limited (Hong Kong) v. The Commonwealth of Australia* Permanent Court of Arbitration (PCA), 22 June 2011, Case No. 2012-12.

[134] Ben Terra, "Chapter 8: Excises" in *Tax Law Design and Drafting*, (International Monetary Fund, 1996).

drinks, cordials, energy drinks, sports drinks, and flavoured waters). Some variation arises around exemptions for milk-based products and fresh juices, both of which are excluded from the Australian Bureau of Statistics' definition of "sweetened beverages",[135] and the AMA's proposed tax scope.[136] Commentators suggest that these beverages have more nutritional value than a soft drink[137] – whilst acknowledging this, the author maintains it would be preferable to remove such exemptions. This would reduce complexity and risk of arbitrary distinctions in defining the tax base, prevent a shift to these exempt sugary drinks, and maximise the sugar reduction from the tax.

A broader tax regime on sugary food brings added complexity in defining the taxed products, and determining the point of excise collection. Defining an appropriate group of taxable products is particularly difficult in the case of foods. A narrow selection increases the risk of consumers switching to undesirable untaxed substitutes. A broader selection increases regressivity concerns.[138]

Mexico approached this issue by defining individual categories of finished products which were subject to its food tax: this could be described as a tax on prescribed 'junk foods'. This approach requires regular review and update to capture the current market of unhealthy foods and is susceptible to producers deliberately manufacturing unhealthy substitute goods which avoid those definitions.

By contrast, the UK NFS proposes a tax on sugar itself as an input to the manufacturing process. There are many conceptual advantages to this approach. Taxing sugar would embed a taxation cost (and a price increase) to all sugar products, without need for detailed classification of taxed products. Sugar is also a relatively homogenous commodity with a small number of large producers.[139] However, there are practical issues on taxing sugar itself:

a) Applying tax to a raw ingredient might result in more variation in how much of the tax is passed on (relative to the completed product's final wholesale or retail price). The tax rate would therefore need to be carefully set to result in meaningful consumption changes across the product range, without producing unfair tax burdens on certain finished products.
b) Taxation of sugar alternatives (natural sweeteners and artificial sweeteners) would also need careful consideration to prevent unwanted erosion of the tax base to non-acceptable substitutes (i.e., sweeteners which are not preferable to raw sugar from a public health perspective).
c) The tax system would need to apply a comparable level of taxation to imported sugary products as imposed on domestic production, otherwise these imported products would escape the embedded tax burden of sugar at the input stage and gain an advantage over locally produced goods. Competition from imported sugary products is already an observed phenomenon: Australia is described as a *"significant net importer"* of confectionery, cordials and syrups.[140] The tax imposed on imported goods must be carefully designed: without under-taxing imports (thus creating a trade disadvantage for Australian production), and without over-taxing imports (and

[135] Australian Bureau of Statistics, *Australian Health Survey: Nutrition First Results - Food and Nutrients, 2011-12* (Web Page, 2014).
[136] *AMA Report* (n 1) 2.
[137] Emma Sainsbury, Roger Magnusson, Anne-Marie Thow, Stephen Colagiuri, "Explaining resistance to regulatory interventions to prevent obesity and improve nutrition: A case-study of a sugar-sweetened beverages tax in Australia" (2020) *Food Policy* Volume 93, May 2020, 101904
[138] S Cash, RD Lacanilao "Taxing food to improve health: economic evidence and arguments" (2007) *Agricultural and Resource Economics Review*, 36(2), 174 – 182.
[139] All of Australia's raw sugar production takes place through 9 companies at 24 sugar mills. Australian Sugar Milling Council "Sugar Manufacturing in Australia" (Factsheet, 2018).
[140] Australian Bureau of Agricultural and Resource Economics and Sciences, *Food demand in Australia: trends and food security issues 2017* (Research Report 18.10, August 2018).

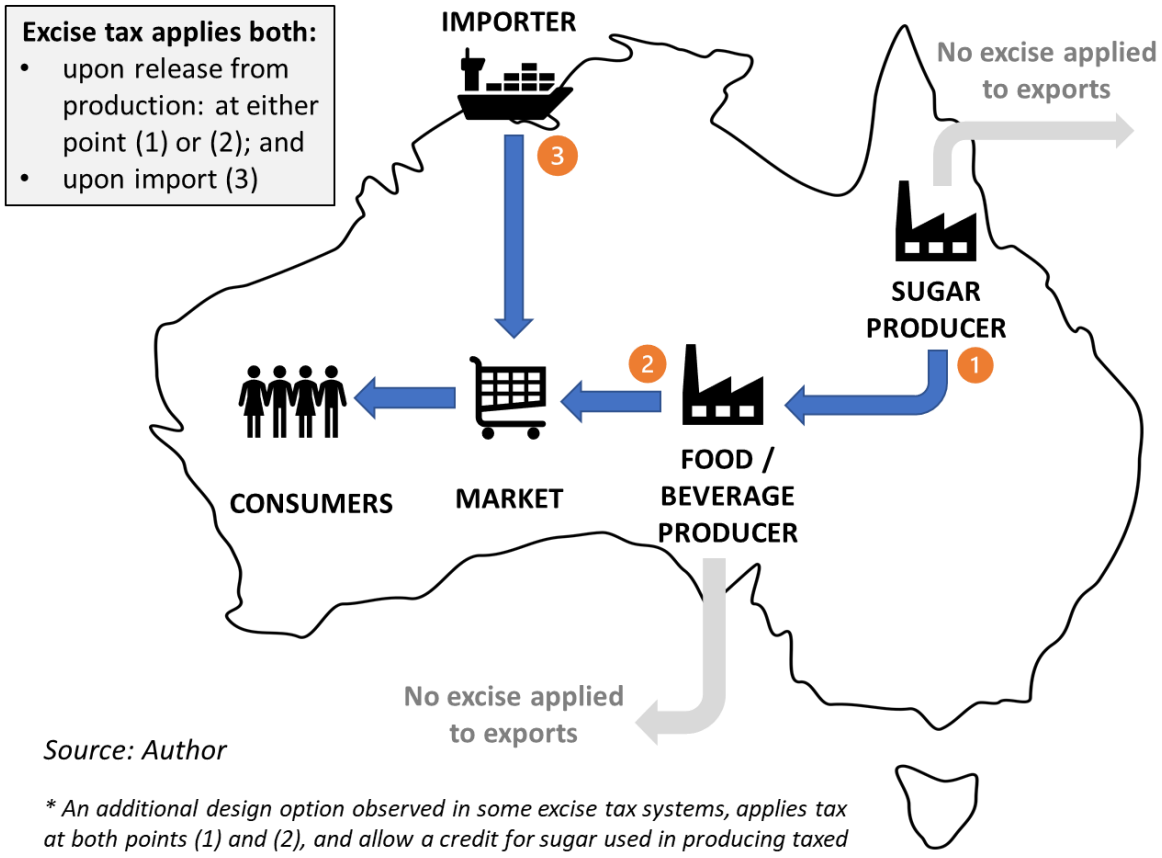
risking breaches of Australia's WTO obligations).[141] Departmental administration would also be required to validate stated sugar levels on taxable products at the time of import.

d) Difference in public / political narrative between a tax on "sugar" – often viewed as a basic household pantry item – and a tax on discretionary purchases of "junk food".

Figure 4 shows possible taxing points for a broad-based sugar tax, throughout a simplified supply chain. The most important design aims should be to apply consistent taxation to comparable sugar consumption, and to remove possibilities for non-taxation or double taxation throughout the supply chain.

The added complexities around designing an appropriate tax framework for sugared foods might be one reason why most countries to date have only applied tax to SSBs. The AMA's proposal describes SSBs as *"a practical target for a tax, as they are a discreet category that is easily identifiable"*, and *"more easily implemented than a wider ranging intervention"*.[142] However, this approach limits the possible health gains of sugar taxation to only reduce the sugar consumed from SSBs. One paper suggests that limiting sugar tax to SSBs is *"like taxing only beer, and not liquors and wine"*[143]. It would also be discriminatory to the beverage industry (compared to sugared food producers), to limit taxation to only sugar consumed from beverages.

Figure 3: Simplified application of excise tax in the supply chain for sugary products



Source: Author

** An additional design option observed in some excise tax systems, applies tax at both points (1) and (2), and allow a credit for sugar used in producing taxed or exported products*

[141] *The General Agreement on Tariffs and Trade (1947)* (n 130).
[142] *AMA Report* (n 1) 7.
[143] Peter Lloyd, Donald MacLaren, "Should We Tax Sugar and If So How?" (2018) *Australian Economic Review* 52(1), March 2019, 19-40.

7.4. Tax rates

For a public health measure, the rate of tax must be sufficient to have a meaningful effect on behaviour. The World Health Organisation recommends tax rates which raise retail prices by a minimum of 20%.[144]

A higher tax rate not only corresponds to a greater impact on public behaviour, but to a greater percentage of pass through by manufacturers (demonstrated in practice by the full pass-through of the 50% tax in the Saudi Arabia case study). [145]

However, a higher rate places a higher burden on those consuming the taxed goods. Setting an appropriate rate involves a trade-off between the public health benefits and its economic impacts – particularly the regressive impact on consumers. An "optimal" excise tax rate must therefore balance the corrective benefits against the regressivity costs. [146]

Excise tax rates can be applied to different units. The following are typical measures which sugar taxation could follow:

- A volumetric rate, based on the mass or volume of taxed good. This could be applied to SSBs (as in Mexico) but would be difficult to apply for foods. A key criticism is that volumetric rates do not differentiate products with higher sugar content.
- A tiered volumetric rate – with higher banded rates for high sugar products (as in the UK and the AMA proposal). Again, this would be difficult to apply to foods.
- A tax based on sugar content, as in South Africa. This has been shown to be effective at targeted reductions at the sugar in taxed goods, but requires accurate reporting of sugar content. It would be the most appropriate unit if applied to sugar as an input to the food process (as per the UK NFS proposal).
- An "ad valorem" tax applied to the wholesale or retail price (as in Saudi Arabia). This partly addresses regressivity concerns (by applying higher tax to higher-priced products) but may not be effective in reducing consumption of low-priced sugary goods.

All approaches to designing a tax rate structure have strengths and weaknesses – and design requires careful consideration based on the scope of taxed goods. On balance, the author considers a tax rate structure which differentiates for sugar content would be most appropriate in targeting the health aim of reduced sugar consumption.

7.5 Preferred design

The focus of this paper is the broad policy objectives of sugar taxation, and it would be preferable for detailed design to be formulated in conjunction with the industry and other stakeholders. However, the author expresses some design preferences as a starting point.

a) Design of an SSB tax

A narrow SSB tax should apply based on the beverage's sugar content at a sufficiently high level to affect behaviour (equivalent to 20-30% of retail price for most full-sugar beverages, but which may be higher for low-cost SSBs). In other respects, system design can follow established norms from comparable jurisdictions such as the UK.

b) Design of a broader sugar tax

In order to tax all sugar consumption equally, , a broader sugar tax should conceptually apply to all refined sugar when exiting production premises – whether destined for production of SSBs, foods, or for other domestic use. This would avoid the requirement for policymakers to designate a list of specified completed products as being subject to tax.

Imports of food and beverages containing sugar would need to accurately specify sugar content and have a comparable level of excise tax applied

[144] World Health Organization *Fiscal policies for diet and prevention of noncommunicable diseases*. (Technical Meeting Report, May 2015) 9, 24.

[145] World Bank SSB Report (n 36) 24-28.

[146] Lockwood & Taubinsky (2017) (n 8) 2.

by Border Force, along with customs duty and import GST.

A comprehensive sugar tax may require some limited exceptions for policy reasons. For example, the author envisages that excluding sugar sold for use in households from the tax scope may be necessary to maintain public support. Whilst an exemption could theoretically erode the tax base and distort consumption towards home-made food and beverages, the UK NFS considered these effects would be negligible in practice.[147]

8. POLITICAL ECONOMY AND STAKEHOLDER REACTION

Political scientist Robert Bates wrote that *"taxation inherently implies politics"*.[148] This is particularly true when considering sugar tax in an Australian context. Taxes on food products have higher public awareness and greater political sensitivity – and have seen Governments facing humiliating backdowns,[149] or even violent protests.[150] The concept of sugar tax has majority public support in Australia,[151] but introduction of a tax requires this to be converted to political support, in the face of likely industry opposition.

8.1. Public support

As of 2019, public support for an SSB tax remained strong, and this support increased further if revenues were hypothecated to obesity prevention.[152] However, favourable public opinion on a hypothetical tax can easily shift with developing political and media narratives, particularly once the detailed parameters and likely impacts become public.

External factors, such as growing inflationary pressures on consumers, may soften public support. It is expected that industry opposition would target the additional consumer burdens and regressive nature of taxation.

Public support for a broader sugar tax in Australia is not known, but the author expects this will not be as strong as for SSB taxation (for one reason, spending on SSBs is smaller and likely more discretionary in nature than for all sugar consumption).

[147] *The National Food Strategy: The Plan – July 2021* (n 22) 193

[148] Robert H. Bates, "A Political Scientist Looks at Tax Reform" (1989) in *Tax Reform in Developing Countries*, ed. Malcolm Gillis, 473–91. Durham, N.C: Duke University Press 479

[149] For example, a sensible UK reform to remove an anomalous historical zero-rate for sales of hot Cornish pasties sparked public outrage after a campaign successfully branded the reform a "pasty tax". "Government does U-turn over 'Cornish pasty tax'", *BBC News* (online, 28 May 2012)

[150] Violent protests were sparked by a tax reform bill which included VAT increases on food. "Protesters March In Colombia Against Plan To Raise Taxes In Pandemic-Wracked Economy" *NPR* (online, 30 April 2021)

[151] Studies reported across date range from 2012 – 2019. AMA Report (n 1) 9.

[152] Support increases from 60% to 77% when hypothecation is specified. AMA Report (n 1) 9.

8.2. Industry opposition to sugar tax reform

Globally, many proposed sugar taxes have faced strong and co-ordinated industry opposition which have successfully blocked, delayed or weakened reform.[153] In Australia, sugar and beverage industry bodies in the have worked in conjunction with farming groups to oppose SSB taxation,[154] and this opposition is likely to increase once proposed reform is tabled. The beverage industry has itself reported devoting significant resources to *"keeping a tax off the policy table"*.[155] In 2018, it announced a voluntary undertaking to reduce the sugar content in drinks by 20% by 2025. [156] Critics consider such voluntary initiatives as strategies designed to avoid future sugar tax reform.[157]

The Australian Beverage Council responded to the AMA's recent SSB tax proposal by labelling it a *"last century solution"*, arguing a lack of evidence of SSB taxation impacting obesity or diabetes rates in other countries, and highlighting the results of its voluntary initiatives in reducing sugar consumption.[158] Whilst many of these industry claims can be refuted, it is undisputable that a narrow SSB tax is unfair on the beverages industry and leaves other unhealthy sugared foods disproportionately untaxed in comparison.

The domestic sugar producing industry could be expected to strongly oppose a broader tax to sugared foods, particularly concentrating on negative economic consequences. Even though 80% of its production is exported, and would not be subject to tax, the application of a selective tax to a key primary industry would rightly be viewed as discriminatory (compared to other unhealthy food inputs) – and would need to be very carefully justified against the health benefits.

8.3. Political economy

Despite its popular support, sugar taxation does not enjoy mainstream political support in Australia. Whilst the concept has been actively supported as a policy measure by the Greens,[159] a progressive party with the third-largest vote share, and has been recommended by Senate Committee report, neither of Australia's main parties currently support sugar taxation.[160]

The reasons for this are varied. Recent Government messaging has focussed on the regressive cost of sugar taxation in rejecting tax proposals:[161] as discussed above, this regressivity is likely to be greatly offset by corresponding health benefits.

From a conceptual level, "health taxes" also raise questions on to what extent the State should take in influencing consumption, (as opposed to leaving consumers to take individual responsibility for their own consumption preferences and health outcomes). In recent years, Government ministers have criticised sugar taxation as being a paternalistic or "nanny state" intervention,[162] and highlighted consumers' needs to take personal responsibility for their diets.[163] However, this objection is difficult to reconcile with the Government's willingness to significantly increase tobacco excise for health reasons in recent years.

The economic burden of a tax on primary industry is less often cited, but is likely to be particularly important. The political considerations are

[153] World Bank SSB Report (n 36), 20.
[154] Sainsbury et al (2020) (n 137)
[155] "Sugar tax and the power of big business: How influence trumps evidence in politics" *ABC News* (online, 24 January 2018).
[156] Michael Koziol and Patrick Hatch, "Australian soft drink industry vows to slash use of sugar by 20 per cent", *Sydney Morning Herald* (online, 25 June 2018).
[157] Jennifer Lacy-Nichols, Gyorgy Scrinis, Rachel Carey, "The evolution of Coca-Cola Australia's soft drink reformulation strategy 2003–2017: A thematic analysis of corporate documents" (2020) *Food Policy* Volume 90, January 2020, 101793.
[158] Nicholas Rider, "Drinks Industry Responds to Proposed Sugar Tax", *Retail World* (online, 9 June 2021).
[159] A 20% SSB tax was taken as a policy measure to the 2016 election. The Australian Greens, "Taxing Sugary Drinks: Fighting Childhood Obesity: Healthy choices for a long and healthy life" (Report, 2016)
[160] Koziol & Hatch (2018) (n 156).
[161] Health Minister Greg Hunt, quoted in "Health Minister rebuffs Australian of the Year's sugar tax push" *ABC News* (Radio Interview, broadcast 27 January 2020)
[162] Assistant Health Minister David Gillespie, quoted in Tom McIlroy and Neelima Choahan, "Sugar tax proposals divide experts and federal government" *Sydney Morning Herald* (online, 17 February 2017)
[163] Agriculture Minister David Littleproud, quoted in "Sugar tax not on says Littleproud" *Queensland Country Life* (online, 8 January 2018)

increased given the current federal electoral significance of Queensland, the main sugar producing state. The sugar industry actively engages in policy advocacy, focussed on communities in the electorates where manufacturing takes place.[164] However, the predominant export-based market for Australian sugar reduces the overall impacts of domestic taxation on the industry.

All three are plausible reasons for politicians to cite to avoid or defer reform, but each barrier is not insurmountable, and could be rebutted as part of a robust public case supporting reform.

The nature of the cited political objections above might suggest that a sugar tax reform is less likely under a centre-right administration (such as the current Coalition government). Interestingly, global studies do not observe an ideological lean in governments implementing SSBs, but instead have a common finding that sugar taxes are typically implemented within a *"window of opportunity"* with conditions favourable to a new tax being accepted – such as one measure in a broader tax reform or as a response to budget shortfalls.[165]

As well as a favourable reform "window", successful tax reform also requires strong advocates within Government. One paper proposes the idea of a *"policy entrepreneur"* as a key driver of successful reform.[166] Any Australian sugar tax would presumably need to be supported by senior government ministers (particularly the health minister, treasurer, and prime minister) with a strong drive to push the reform. Given the strength of sector lobbying and political sensitivity, each of these ministers would risk some political capital from supporting a new tax.

An additional hurdle is the bicameral Australia parliament, requiring legislation to pass through both the House and Senate. In recent decades, the government has not typically had control over the Senate,[167] and negotiation with crossbench senators to pass legislation has diluted the scope of proposed tax reforms (demonstrated in the 1990s when base-narrowing concessions were made to crossbench senators as a condition of passing new GST legislation).[168]

8.4. Public case for reform

Global experience shows that strong communication and a coherent case for reform from government, linking tax to the public health benefits, is important for the public acceptance of a tax. A cautionary lesson can be found from Denmark: a country with a long-established sugar tax,[169] which subsequently introduced the world's first "fat tax" on saturated fats in 2011. [170]

In the face of fierce challenge from farmers and the food industry - citing regressivity and negative economic impact concerns to the public, the government made minimal positive contribution to the public debate supporting the health benefits of the tax. Falling public support forced the government to repeal the fat tax in 2012, and to subsequently repeal the long-standing sugar tax in 2014.[171] Belatedly, studies showed that the fat tax had in fact been effective at reducing saturated fat consumption.[172]

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[164] See for example Australian Sugar Milling Council, *Profiles on Sugar Manufacturing's Economic Contribution by Federal Electorate* (Web Page).

[165] Phillip Baker, Alexandra Jones, Anne Marie Thow, "Accelerating the Worldwide Adoption of Sugar-Sweetened Beverage Taxes: Strengthening Commitment and Capacity" (2017) *International Journal Health Policy Management* 2018, 7(5), 474–478

[166] Lucas Rutherford, "The political economy of taxation", *Tax and Transfer Policy Institute* Working Paper 11/2021 (June 2021).

[167] In the forty years since 1981, the governing party has only controlled the senate for two years. George Williams, Sean Brennan, Andrew Lynch, *Blackshield and Williams Australian constitutional law and theory: commentary and materials* (Federation Press, 6th ed, 2014) 415.

[168] *Re:think* (n 59) 303.

[169] A sugar tax had been in place since the 1930s. *World Bank SSB Report* (n 36) 10.

[170] Vallgårda, S, Holm, L & Jensen, J "The Danish tax on saturated fat: why it did not survive" (2015) *European Journal Clinical Nutrition* 69, 223–226.

[171] Ibid.

[172] Jørgen Dejgård Jensen, Sinne Smed, "The Danish tax on saturated fat—short run effects on consumption, substitution patterns and consumer prices of fat" (2013) *Food Policy* 2013; 42: 18–31.

In Australia, one study concludes that advocacy from sugar tax proponents is fragmented and not strong enough to convert the existing majority public support for SSB tax into a political imperative for its introduction.[173] It views that a broad-based coalition of supporting groups would be required to counter the co-ordinated resistance from industry and build a popular narrative supporting reform.

Hypothecation of tax revenues to public health measures could help to build the narrative of a sugar tax's supporting case put forward to the public. Indeed, the AMA's proposal suggests linking sugar tax revenues to funding safe water supply in remote communities.[174]

Whilst a useful public narrative, the hypothecation of public revenues for such a minor excise tax should not be a motivating policy factor for introduction. After all, the main purpose of the tax is to decrease consumption and thus – if successful – it will derive less fiscal revenue in future. It would be much more efficient (and likely less regressive) to raise funds for health initiatives through Australia's existing broad tax bases.

9. EVALUATION

The two sugar tax models (the narrow excise tax on beverages and the broader excise tax on sugar) are assessed below on their merit as tax reforms designed to impact public health, by applying the six specified criteria.

a) Equity

In considering horizontal equity, a narrow tax focussed on SSBs is unfair on beverage producers, as it would not seek to evenly apply tax to all sugar consumption. A broader sugar tax would apply an even playing field to all producers, within the ambit of the stated health aim (although it would put sugar food producers at a disadvantage compared with non-sugar snacks).

Excise tax is horizontally equal amongst identical consumers, but the proportional tax burden of sugar taxation would fall mostly on lower income groups – and therefore it can be said to be theoretically regressive and offend vertical equity. However, studies infer the financial impact of this regression could be relatively minor and would also be offset by the progressivity of the Australian tax system. Also, assuming international findings that lower-income groups change behaviour more are equally applicable to the Australian context, any regressivity will be partly offset against progressive health benefits.

SSBs are known to comprise a lower share of household incomes at present. Given the discretionary consumption nature of SSBs, these are likely easier to remove from (or substitute out of) dietary intakes than sugar contained in foods. Therefore, SSB taxation is likely to be less regressive.

Conclusion: No clear preference. Each model results in some (distinct) inequity.

b) Efficiency

Excise taxes are designed to reduce consumption and thus impact the economy. However, if either model of sugar tax is designed so that producers can switch their product ranges to lower-sugar offerings, the UK experience suggests that reduced

[173] Emma Sainsbury et al (2020) (n 137) 7.

[174] *AMA Report* (n 1) 24.

sugar consumption can be achieved without material impact on economic prosperity.

It is too early for the resulting long-term health benefits in the UK to be observed but based on the growing body of evidence on consumption patterns the author opines that a well-designed excise tax, with rates sufficient to affect behaviour, would be a proportionate response to the existing health problem in Australia.

From an administrative point of view, a narrow SSB tax or a broad tax on sugar itself - imposed at importation or release from approved producer premises - is a simpler process which collects tax from a few large producers. A tax on a broader range of specified sugary foods would require greater administration to design and collect the tax.

Conclusion: No clear preference. Both models are viewed to be efficient.

c) Simplicity

An excise tax imposed at the producer/importer level should be relatively simple to apply and administer provided that the selection of taxed items is clear and logical, without arbitrary exemptions. SSB taxation can follow procedures for existing excise taxes on alcoholic beverages and experiences in sugar tax from similar economies.[175]

Conceptually, a broad sugar tax could also be relatively simple if collected directly from a few large producers (depending on its design), but administrative complexities are expected (such as validating multiple imported products). Greater work in design and implementation is likely given the relatively limited overseas precedent.

Conclusion: Preference for narrow SSB tax.

d) Sustainability

As consumers' diets are expected to change with time, an effective sugar tax will need to cover most of the products from which the population's sugar consumption is comprised.

An SSB tax could conceptually reach half of the free sugar consumption from current Australian diets, but even now its scope is limited as it could never reach further to tax sugary foods. In future, if production and consumption trends moved towards low-sugar beverage alternatives, the SSB tax would capture even less of the country's overall sugar consumption.

A broader tax on sugar would be more flexible at targeting sugar consumption – regardless of dietary change over time.

Conclusion: Preference for broad sugar tax (if designed to apply to all sugar consumption).

e) Policy consistency

Introduction of a new tax is not aligned with the strategic desire to rationalise the suite of smaller indirect taxes. However, a sugar tax can align with the policy framework if it is a better means of achieving a policy aim than other instruments.

Research suggests that both forms of sugar tax can achieve reduced consumption, provided there is sufficient pass-through to consumers. Sugar tax can be justified as a new indirect tax (within the test set by the Henry Review), given its effectiveness as a market intervention compared to other regulatory options.

SSB taxation targets products which are associated with "empty calories", and could be said to be more clearly connected to cases of over-consumption. However, if government health policy desires a reduction in <u>all</u> sugar consumption, a broader sugar tax is more consistent with that objective than a narrow SSB tax.

Conclusion: Preference for broad sugar tax.

f) Likelihood of introduction

Sugar tax does not currently have political support. Whilst the political appetite for reform might develop in future, any sugar tax measures are still anticipated to face vigorous opposition backed by industry lobbyists.

[175] Annual departmental expenditure to administer an SSB tax in Australia was estimated as a moderate $7million. Parliamentary Budget Office (2016) (n 35)

A clear trend of new SSB taxes being introduced overseas in the last decade suggests that public support (and political support) can be achieved for SSB taxation, even when facing industry opposition. This indicates that SSBs might be more acceptable as appropriate targets for tax (e.g., as unhealthy, discretionary items), which is consistent with the public support for SSB tax observed in Australia. Many Australian bodies have proposed an SSB tax with a consistent tax base and design features.

Conversely, there is little serious discussion of applying tax to sugary food in Australia. This proposal would therefore require more work to build public awareness and a case for reform. Given that sugary foods make up a higher percentage of household consumption (and some moderate amount of sugar consumption is broadly considered to be acceptable), the author expects greater initial public resistance to a broader sugar tax. However, either sugar tax model is likely to face significant challenges in Australia throughout the consultation and implementation process.

The AMA describes SSB taxation to be an *"important first step"*,[176] suggesting that subsequent steps should be taken in future to achieve further sugar reductions. However, it is likely that a staged tax reform process would face strong opposition and political hurdles at each stage: if an SSB tax were implemented, reform could thus get stalled at this first step, and not progress to the conceptually preferred tax base.

Conclusion: Short-term preference for narrow SSB tax, but no clear long-term preference.

g) Evaluation summary

Overall, both sugar tax models satisfy sufficient attributes within the policy review framework to be considered sound tax reform.

We can observe comparative advantages and disadvantages between the two models. With its narrowly defined scope, the SSB tax is likely to be simpler and impose less of a regressive burden on consumers. Its scope is comparable with similar taxes in many countries, and therefore appears a "safer" reform option.

However, the broad-based tax is a fairer approach which is more consistent with the health aim of reducing sugar consumption. It is also a sustainable design, more flexible to address changing trends over time and is – on balance – a preferable reform option. The aim of the tax is to reduce sugar consumption: and therefore, the theoretical starting tax base should be all sugar consumed. There may be sound policy or administrative reasons to consider some exemptions for certain products or sugar uses within the tax design – but there is not a good rationale to exclude all sugary foods from the tax base, simply because these are not as easy to tax as SSBs.

SSBs have been suggested to pose even greater health risks than sugary foods.[177] The author considers this could justify special design in the excise tax system to ensure SSBs are adequately taxed, but it is not a sufficient reason to limit the scope of sugar taxation to beverages only. A sugar tax which was limited in scope to half of sugar consumption, could only ever attempt to tackle half of the health policy aim.

The experience observed with hindsight in the UK is telling. The UK NFS report viewed that the successful SSB tax, efficient at changing consumption from beverages, was insufficient to create meaningful public health results – and calls for its replacement by a broader tax on all sugar products[178]. The author would prefer Australia to be a policy leader for the world by introducing a broad and comprehensive sugar tax.

[176] *AMA Report* (n 1) 3.
[177] *AMA Report* (n 1) 5.
[178] *The National Food Strategy* (n 22) Recommendation 1.

10. CONCLUSIONS

A sugar tax would not form a material part of Australia's overall tax structure. However, the tax needs to be judged on its ability to affect public health policy, noting any negative economic, social, or administrative effects.

Overseas experience shows that sugar taxes can have a significant effect in reducing sugar consumption, particularly where these taxes are designed well. We should have confidence that a well-designed sugar tax would have a strong impact on consumption patterns in Australia.

This paper concludes that excise tax is a preferable policy lever to other taxes, financial incentives or market interventions which could be employed to encourage reduced consumption. It should be together with a package of appropriate and complementary non-price measures, such as awareness campaigns.

A change to the taxation mix affects the fundamental social contract, and the Government must be able to justify extensions of its taxation powers: in this case, with compelling long-term health outcomes (driven by reductions in sugar consumption). Excise tax can be viewed as a blunt instrument as it applies to all consumption of a product. Its introduction would result in some cases where "acceptable" consumption of moderate amounts of sugar by healthy individuals will attract a tax burden. However, these burdens would be justified by the reductions in over-consumption by at-risk groups and across society (noting that most Australians already consume above WHO recommended sugar intakes).

The evaluation of the SSB tax and broader sugar tax design models concludes that both would broadly meet the criteria specified and would be an effective policy measure to reduce sugar consumption. The main concern is regressivity: and whilst the author acknowledges theoretical regressivity of sugar taxation, studies suggest that the absolute monetary impact on individual households should not be large. Further, evidence suggests that lower income groups will change behaviours more and will have an offsetting progressive health benefit from sugar taxation.

Applying tax to a narrower range of SSBs (Model A) could be seen as a lower risk reform option, seeking to tax the "low-hanging fruit": a simple group of products associated with some of the worst excess sugar consumption. However, solely targeting beverages would leave many unhealthy food products untaxed – and could only ever be a partial solution to reduce sugar consumption.

The broad sugar tax (Model B) would be a more ambitious policy move. It is likely to be more difficult to design and implement than a narrow SSB tax, but overseas evidence shows broader sugar taxes can be effective in practice. Given the ultimate health policy goal is to reduce consumption of all sugar, then the author prefers a bolder reform across a broader tax base of all sugary products.

Tax reform is a difficult process, and successful reform is often highly dependent on political and other external factors. International experience tells us that well-designed excise taxes can make a real impact on sugar consumption, which is one of the developing health problems of our time. If policymakers have a window to introduce excise tax to achieve a health policy goal, the author would favour this opportunity to be used for a more transformative reform which creates a strong legacy for the wellbeing of Australians.

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