

ARTICLE

Sugar Rush: Worldwide Momentum Toward the Taxation of Sweet Drinks and Implications for New Zealand

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Obesity is an epidemic. A leading cause of obesity is the excessive consumption of sugar. Governments around the world are seeking hard-line solutions as they continue to struggle with the financial and social burden of obesity and the diseases it induces (diabetes, cancer, respiratory and cardiovascular diseases). Light-handed interventions such as health education programmes and incentives no longer suffice, as the rate of obesity continues to rise. A tax on sugar in sweet drinks is emerging as a favourable solution. The World Health Organisation has recently released a report urging world governments to tax sweet drinks in order to reduce consumption of beverages highly detrimental to global health. In April 2018, the United Kingdom government implemented a tax on sweet drinks. While an increasing number of countries are choosing to implement some form of sugar tax, there is still much debate about the efficacy of such a tax on improving public health and the best method for implementation. If New Zealand is to implement a sugar tax, there are important issues to be considered: what drinks should be taxed? How much tax? What type of tax? Who should be liable for paying the tax? This article draws on international research and examples to examine the New Zealand situation, particularly in light of proposals for implementation of a sugar tax here. It concludes that a specific excise tax would be the best method of achieving the objective of reducing sweet drink consumption, and proposes how such a tax could be implemented.

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I Introduction

Taxing commodities to reduce consumption is not novel. In 1776, Adam Smith wrote:¹

Sugar, rum, and tobacco are commodities which are nowhere necessities in life, which become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation.

Sugar is detrimental to people's health and is widely consumed, particularly in the form of sweet drinks. In this article, "sweet drinks" refers to beverages containing added sugar, such as fizzy drinks, flavoured milks and fruit drinks, but excluding diet drinks, pure fruit juice and pure vegetable juice.

No jurisdiction has implemented a broad-ranging sugar tax; that is, a tax that is applied to all products containing sugar. But there is a global push toward a sugar tax on sweet drinks, most of which are high in sugar and lacking in nutrition. The main culprit is fizzy drinks.²

This article aims to demonstrate, first, that New Zealand should implement a sugar tax, and secondly, how that tax should work—that is, who should pay, what exactly should be taxable and what should be the rate of tax. This article proposes a tax with the following scope. First, the tax should be imposed on manufacturers and importers. Secondly, the tax should be imposed on all sweet drinks containing more than five grams of added sugar per 100 ml of drink. Thirdly, the tax should be in the form of a specific excise tax which is levied as a set price per gram of added sugar. Finally, this price should be set with the target of a 53 per cent increase, on average, on the retail price of sweet drinks.

The article begins in Part II with a consideration of background matters, including intrinsic issues with implementing a sugar tax as well as the domestic and international context in which a sugar tax on sweet drinks would be implemented. Part III will address the application of the tax, outlining the types of drinks that should be subject to taxation and the rate of tax necessary to make it effective in reducing consumption. This is followed in Part IV by a typology of different tax mechanisms, taking into account lessons learned from global implementation and other sin taxes used in New Zealand. Finally, Part V will consider how the tax would be collected. This method of analysis is consistent with internationally recognised policy formulation in relation to beverage taxation.³

This article provides the legal branch of a multidisciplinary topic. The opinions of medical and economic professionals are also essential to address the question of whether, and how, a sugar tax should be implemented.

II Background

This section addresses a few preliminary matters, including the link between sugar and non-communicable diseases in New Zealand, the momentum that sugar taxes are gaining worldwide and where New Zealand is situated in the global debate.

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- 1 Adam Smith *An Inquiry into the Nature and Causes of the Wealth of Nations* (Bantam Books, New York, 2003) book 5, ch 3 at 1193–1194.
 - 2 Nick Triggle "Sugar tax: How will it work?" *BBC News* (online ed, London, 16 March 2016).
 - 3 Jamie F Chriqui and others "A typology of beverage taxation: Multiple approaches for obesity prevention and obesity prevention-related revenue generation" (2013) 34 *Journal of Public Health Policy* 403 at 406.

A *Non-communicable diseases in New Zealand*

Non-communicable diseases are not transferred from person to person, rather they are chronic diseases which slowly progress, usually for long durations. The four main types are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes.⁴ Non-communicable diseases are often referred to in relation to social issues because the commonality of these diseases is attributable to some kind of wide-spread social habit, such as high consumptions of sugar.

Type 2 diabetes is becoming increasingly common amongst adults and children. Over-consumption of sugar induces insulin-resistance, which essentially overloads the system and leads to a dysfunction in insulin production.⁵ This causes people to become very sick, compromising their quality of life and ultimately causing an earlier death.

Individuals are at high risk of suffering from type 2 diabetes and other non-communicable diseases when they are obese.⁶ Obesity is classified as a Body Mass Index greater than 30. It is widely acknowledged that New Zealand has a growing obesity problem, with the number of people classified as obese increasing three-fold since 1977.⁷ In 2015, 31 per cent of adults in New Zealand were obese and a further 5.3 per cent were considered morbidly obese. People of lower socio-economic status show disproportionately higher rates of obesity, and one in nine children are obese.⁸ With obesity rates rising, so too will the number of people suffering from non-communicable diseases.

The availability of calorie-dense food and beverages is one cause of the high level of obesity amongst adults and children.⁹ The prevalence of sugar-laden products in New Zealand creates an “obesogenic environment” that facilitates the consumption of unhealthy food and drinks.¹⁰ Just as the Government provides subsidies for vaccinations to prevent contagious diseases, so too should it provide measures that limit the consumption of sugar, which induces obesity. Sugar consumption can be limited by increasing prices, thereby mitigating the temptations of the obesogenic environment in which we live.

A tax is one way to increase prices and limit sugar consumption, and revenue from the tax could be used to offset the cost of obesity. The main costs are medicines and other healthcare expenses, loss of revenue from income tax due to loss of the ability to work, and decreased social productivity. The earmarking of tax revenue will be discussed in the final section of this article.

4 Temo Waqanivalu and Leo Nederveen *Fiscal Policies for Diet and Prevention of Noncommunicable Diseases: Technical Meeting Report* (World Health Organisation, May 2015) at 8.

5 “Understanding type 2 diabetes” Diabetes New Zealand <www.diabetes.org.nz>.

6 “Obesity—information for health professionals” (26 April 2017) Ministry of Health <www.health.govt.nz>.

7 New Zealand Treasury Intern Research Report “Regulatory responses to address the growing obesity problem in New Zealand” (February 2014) at 1 (Obtained under Official Information Act 1982 Request to the New Zealand Treasury).

8 Bridget Murphy and others *Annual Update of Key Results 2014/15: New Zealand Health Survey* (Ministry of Health, December 2015) at vi.

9 Treasury Intern Research Report, above n 7, at 6.

10 At 3; and Peter Gluckman “The Challenge of Policy Development in Areas of Post-Normal Science” (paper presented to SuPeru Childhood Obesity Seminar, Wellington, 18 November 2015) at 3.

Obesity, and chronic diseases generally, are an issue globally and in New Zealand. The Government has a duty to protect New Zealanders against the causes of these diseases.

B *Tobacco, rum and sugar*

Most countries have implemented a tax on tobacco and alcohol. These taxes, often referred to as sin taxes, have contributed to decreased consumption of those products. Could sugar in sweet drinks be equally suitable for taxation?

Sugar presents a different set of challenges to alcohol and tobacco. It will be more difficult to demonise the sugar and beverage industry, which was a key tactic in successfully convincing legislators to tax alcohol and tobacco, as was the social condemnation of people who drink or smoke. This is not so easily done in relation to sugar, which has been accepted as safe and perhaps necessary in small quantities.¹¹

Additionally, sugar comes in many forms such as honey, corn syrup and cane sugar. It is not a single, easily identifiable substance; there is some form of sugar in almost every item in the supermarket. This means that sugar is more difficult to classify, identify and quantify for the purposes of imposing a tax. This difficulty is mitigated, to some extent, where a tax is limited to sweet beverages only.

C *Worldwide momentum*

Sugar taxes are gaining interest amongst countries looking to fight the obesity epidemic. Most recently, the United Kingdom, Ireland, Portugal and several jurisdictions in the United States have announced or implemented a sugar tax on sweet drinks. Mexico has had a tax since 2014 and Denmark since the 1930s before it was repealed in 2014. The United Kingdom joined the growing list of countries with sugar taxes, implementing their version of a sugar tax in April 2018. The successful implementation of sugar taxes in these countries provides a wealth of information from which New Zealand can learn.

(1) Denmark

Denmark had a sugar tax for 80 years before abolishing it in 2014. The beverage industry often cites the tax as an example of sugar tax failure. But words of caution are warranted here. The tax was poorly designed and resulted in a small retail price increase of one to two per cent; this is not enough to influence consumption behaviour.¹²

The sugar tax was abolished because the Government thought it was regressive, making groceries unaffordable particularly for low-income earners. This effect was amplified by the introduction of a fat tax in 2013 which applied to all food containing saturated fat, making more groceries less affordable.¹³ Political pressure to abolish the fat tax and sugar tax led to the repeal of both taxes in 2014.

Denmark is cited by industry representatives as proof that the sugar tax does not work.¹⁴ But when one looks at the circumstances in which that tax failed—particularly poor

11 Gluckman, above n 10, at 8.

12 New Zealand Treasury Working Paper “A Conceptual Basis and Evidence Base for Health Tax” (February 2015) at 18 (Obtained under Official Information Act 1982 Request to the New Zealand Treasury).

13 Chriqui and others, above n 3, at 405.

14 “What We’re Doing About ... Sugar Tax” New Zealand Beverage Council <www.nzjba.org.nz>.

design—Denmark serves as a precautionary tale for policymakers. It is not conclusive evidence that a sugar tax is ineffective.

(2) Mexico

Mexico's tax on soda came into effect on 1 January 2014. The New Zealand Food and Grocery Council and the New Zealand Beverage Council both cite the Mexican soda tax as a failure.¹⁵ While it initially reduced soda sales by three per cent, the following year saw a three per cent increase in sales. The net reduction of sales amounted to less than a sip per person.¹⁶ These statistics, as provided by opponents of the tax, are contrary to other studies which find a 12 per cent net drop in sales of beverages subject to the tax.¹⁷ These conflicting figures may suggest that it is simply too early to tell if the tax has been effective.

Regardless of the reliability of these statistics, there are critical design flaws with the Mexican tax, most notably the amount of tax levied, which only provides a 10 per cent increase in retail price.¹⁸ Other issues in relation to the application of the tax and the type of tax will be examined in the next section of this article. Mexico's experience is frequently cited in New Zealand Parliamentary debates on sugar tax where opinions differ as to whether it has been effective in reducing consumption of sugar.

(3) United Kingdom

In the United Kingdom's 2016 budget statement, George Osborne, then Chancellor of the Exchequer, announced the Government's intention to implement a sugar tax on sweet drinks in 2018:¹⁹

I am not prepared to look back at my time here in this Parliament, doing this job, and say to my children's generation: 'I'm sorry. We knew there was a problem with sugary drinks. We knew it caused disease. But we ducked the difficult decisions and we did nothing.'

The United Kingdom's plan is significant to New Zealand for several reasons. First, it shows that the British Government believes the tax is feasible and would be effective in reducing consumption of sweet drinks. Secondly, it was introduced by a conservative right-wing government, suggesting the tax can appeal to a political perspective traditionally against such interventionist measures. Finally, it may make the idea of a sugar tax more palatable to the New Zealand Government.²⁰ Advocates for a sugar tax, such as the New Zealand

15 New Zealand Beverage Council "NZBC Statement: Report on Mexico 'sugar tax'" (press release, 18 May 2015); and New Zealand Food and Grocery Council "Sales data shows Mexico sugar tax a failure" (press release, 17 May 2016).

16 New Zealand Food and Grocery Council, above n 15.

17 Denis Campbell, Rebecca Smithers and Sarah Butler "Sugar tax: Osborne's two-tier levy brings mixed response" *The Guardian* (online ed, London, 17 March 2016); Jennifer Falbe and others "Impact of the Berkeley Excise Tax on Sugar-Sweetened Beverage Consumption" (2016) 106 *AJPH* 1865 at 1869; and Andrea McDonald and others "Taxing sugary drinks: Empirical findings out of Mexico" (4 February 2016) University of Otago Public Health Expert <<https://blogs.otago.ac.nz>>.

18 McDonald and others, above n 17.

19 (17 March 2016) 712 NZPD 9876 as quoted by Kevin Hague.

20 Anusha Bradley "Will NZ follow UK's lead on sugar tax?" *Radio New Zealand* (online ed, 17 March 2016).

Dental Association, hope the United Kingdom's decision to introduce a tax on sweet drinks will provide momentum for the implementation of such a tax in New Zealand.²¹

(4) United States

Since the beginning of 2015, Philadelphia, Cook County, Boulder and four cities in California (Berkeley, San Francisco, Oakland and Albany) have announced or implemented a tax on sweet drinks.

The United States' experience suggests that there are an increasing number of small jurisdictions willing to take on Big Sugar (that is, the beverage industry). These taxes have been implemented in cities and counties which means that a person only has to step outside the city boundaries to buy a sweet drink tax-free. These cities and counties must consider that a tax will have tangible effects on consumer behaviour despite the ease of accessing non-taxed goods. Finally, the public support for a tax on sweet drinks has been the drive for implementing these taxes, which suggests increased public recognition of the obesity problem.

These jurisdictions vary in the rate of tax applied, the types of beverages it applies to and the mechanisms for taxation. This provides information from which New Zealand and other countries might replicate a tax on sweet drinks. This information will be incorporated throughout this article.

(5) The World Health Organisation

A tax on sweet drinks was recommended by the World Health Organisation (WHO) in its report *Fiscal Policies for Diet and Prevention of Non-Communicable Diseases*, released in October 2016.²² After this report was released, Finland, Ireland and five jurisdictions in the United States (Boulder, San Francisco, Oakland, Albany and Cook County) introduced legislation giving effect to the WHO's recommendations.

(6) Industry resistance

The WHO identifies overcoming industry resistance as a primary factor in formulating and successfully implementing taxes aimed at reducing sugar consumption.²³ One way to achieve this is through thorough research to discredit industry claims, which is what this article aims to do.

Industry resistance versus public and medical professional support has been at the heart of every debate in jurisdictions where a sugar tax has been implemented, particularly in the United States. In November 2012, the beverage industry spent USD 4.1 million to defeat a ballot for introducing a sugar tax on sweet drinks in Richmond and El Monte, California.²⁴ Beverage producers have been vocal about their opposition to a sugar tax, and proactive in their resistance.²⁵

21 Bradley, above n 20.

22 Waqanivalu and others, above n 4, at 9.

23 At 9.

24 Chriqui and others, above n 3, at 405.

25 Paul Ebeling "American Beverage Association Spending Millions Fighting 'Soda' Tax" *Living Trading News* (online ed, New York, 15 November 2016); Bruce Lee "5 More Locations Pass Soda Taxes: What's Next For Big Soda?" *Forbes* (online ed, 14 November 2016); and Greg Hinz

An increasing number of jurisdictions have succeeded in overcoming sugar tax opposition through the support of public and medical professionals who attest to the harmful effects of sweet drinks. As mentioned above, the populations of Boulder, San Francisco, Oakland, Albany and the Cook County (including Chicago) have implemented, by public vote, a tax on sweet drinks.²⁶

The arguments raised in resistance to sugar tax are not novel: the nanny state and regressive arguments raised in opposition to tobacco and alcohol taxes are now being used by the beverage industry against sugar taxes.²⁷ The nanny state argument is that people should not be told what to eat and drink, and should be able to decide for themselves what they and their children consume. But, as outlined above, the obesogenic environment—where junk food is cheap and healthy options are comparably more expensive and less readily available—gives consumers (and particularly poor consumers) little choice. A sugar tax should be seen as a means of mitigating the obesogenic environment, rather than being negatively framed as impinging on consumer choice.

Also common is the regressive argument, which contends that a sugar tax would disproportionately affect people of lower socio-economic status because a price increase will have a greater effect on their buying power. Indeed, a sugar tax *is* regressive, but so too are the rates of obesity and diabetes, which are particularly high amongst low-income earners.

The nanny state and regressive arguments have little substance in this context and governments should not be deterred by them.²⁸

D *New Zealand*

New Zealand has the third highest rate of obesity for adults in the OECD.²⁹ However, a sugar tax on sweet drinks has failed to gain substantial political momentum in New Zealand.

There is moderate public support for a sugar tax in New Zealand,³⁰ although some studies speculate it to be higher than that; up to 52 per cent of the New Zealand population are believed to support a sugar tax.³¹

There is widespread support amongst medical professionals. Advocacy groups such as Fighting Sugar in Fizzy Drinks (FIZZ) and Fighting the Obesity Epidemic (FOE) argue that a sugar tax is an important tool for reducing the prevalence of obesity and diabetes.³² The Prime Minister's Chief Science Advisor, Sir Peter Gluckman, also supports a sugar tax.³³ His report explains the multifaceted approach which must be taken in order to reduce

"Sugar warrior Michael Bloomberg pours \$1M into Cook County's anti-pop push" *Crain's Chicago Business* (online ed, Chicago, 7 November 2016).

26 Jacob Sullum "Five More U.S. Jurisdictions Imposed Soda Taxes Last Week" *Reason* (online ed, 15 November 2016) at 1.

27 Waqanivalu and others, above n 4, at 17.

28 Douglas Bettcher and others *WHO Technical Manual on Tobacco Tax Administration* (World Health Organisation, Switzerland, 2010) at 109.

29 "Obesity—information for health professionals", above n 6.

30 "Petition for a tax on sugar-sweetened beverages" Change.org <www.change.org>.

31 Gerhard Sundborn and others "New Zealand's growing thirst for a sugar-sweetened beverage tax" (2015) 128(1422) NZMJ 80 at 80.

32 Lin Mei Tan and James Xun Liu "Curbing the Consumption of Soft Drinks in New Zealand: Is Tax the Solution?" (2014) 20 NZJTL 203 at 219.

32 Gluckman, above n 10, at 8.

33 At 8.

obesity and associated diseases. Three causal domains exist: the biological, the contextual and the behavioural; a sugar tax goes to the latter two. There is no “silver bullet”, Sir Gluckman concludes, but there are important measures which must be implemented.³⁴

The Treasury has identified a tax on sweet drinks, along with front-of-pack labelling, as key measures for curbing the consumption of sweet drinks in New Zealand.³⁵ But the amount of tax, the inclusion criteria and the mechanism by which the tax would be administered must be considered further.³⁶ This article addresses those issues.

The Treasury anticipates industry resistance to a sugar tax being introduced in New Zealand.³⁷ There are two major industry players in New Zealand: Coca-Cola Amatil and Frucor Beverages Ltd.³⁸ Frucor has already begun reformulating many of their products in order to reduce sugar or to provide all natural ingredients, but they maintain their opposition to the tax.³⁹

These major manufacturers are represented by the New Zealand Beverage Council who are firmly opposed to a “revenue-gathering tax”.⁴⁰ The Council bases this objection on several grounds: that the tax would be regressive, that it would not curb consumption, and that it would be unfair to tax the beverage industry alone, rather than all manufacturers of sugar products. Further, non-communicable diseases such as obesity are complex and require a more comprehensive approach.⁴¹ As noted earlier, the regressive argument is flawed, and claims that sugar taxes have failed in other jurisdictions (such as Mexico and Denmark) are unsubstantiated. As to the complexity argument, a tax on sweet drinks has never been presented as the sole solution but as an important tool to be implemented alongside other health policies and initiatives.⁴²

The unfair application argument (that a sugar tax on sweet drinks discriminates against beverage manufacturers rather than taxing all sugar producers) is justified given the nature of sweet drinks compared to other confectionary. Sweet drinks are cheap and common, provide no nutritional benefit and contain large amounts of sugar which can be consumed very quickly. Discouraging the consumption of these products is therefore more urgent and attracts priority over other types of confectionary. They are also more readily identifiable and so do not present the same complexities (such as identification of the type of sugar, or the quantity of sugar in whole foods) as a broad-ranging sugar tax would.

The sugar tax debate is well and alive in New Zealand, but has yet to gain any real traction in Parliament.

(1) Debates in Parliament

In June 2014, the Labour Party announced their support for a broad-ranging sugar tax. In response, the Hon Tony Ryall MP (then Minister of Health) pointed to the nanny tactics of

34 At 3.

35 Isaac Davison “Treasury’s advice on soft drink tax revealed” *New Zealand Herald* (online ed, 24 November 2015) at 2.

36 Treasury Intern Research Report, above n 7, at 29.

37 At 22.

38 Tan and Liu, above n 32, at 216.

39 Jonathan Moss “Frucor: A hunger for making things better” (11 October 2016) FIZZ <www.fizz.org.nz>.

40 “What We’re Doing About ... Sugar Tax”, above n 14.

41 New Zealand Beverage Council “NZBC Statement: WHO Recommended Sugar Intake Guidelines” (press release, 4 March 2015).

42 Waqanivalu and others, above n 4, at 18.

the Labour opposition and their recklessness in applying consumption taxes against poor consumers who should be able to spend their money as they please:⁴³

The Government is opposed to a sugar tax. We do not think it will work. It is a tax that everyone will pay, even though it is designed to influence the behaviour of some, and it will be very costly, as proposed by the Opposition, because it will mean people will pay more for tomato sauce, more for honey, more for jam, and more for the cost of living, whereas on this side of the House we think we should be keeping taxes under control and providing more opportunities for families to spend their own money. We do not think the nannies opposite should get their hands on the tax levers.

More recently, on 14 October 2016, Julie Anne Genter MP of the Green Party referred the Minister of Health to the WHO report during a parliamentary session. The Minister, the Hon Dr Jonathan Coleman MP, replied that there is no proof that sugar taxes are effective and that the “jury is still out on this issue”.⁴⁴

The National Government remained stubborn in its stance against implementing a sugar tax. On 8 December 2016, Dr Coleman was again confronted with the increasing evidence of the success of a sugar tax on sweet drinks. Dr Coleman said that, while it was initially reported that there was a 12 per cent decrease in sale of soft drinks since Mexico implemented the tax in 2014, this decrease was not solely due to the sugar tax, but also as a result of other factors such as health campaigns and better access to safe drinking water.⁴⁵ The Minister believed that the evidence was non-conclusive and would make no further decision on the implementation of a sugar tax in New Zealand until a comprehensive meta-analysis of all data is completed.⁴⁶

Subsequent to this debate in Parliament, a report commissioned by the Ministry of Health and conducted by the University of Waikato and the University of North Carolina was released. The report found no conclusive evidence that a sugar tax is necessarily effective in reducing sugar intake.⁴⁷ However, the report concedes that it was too soon to assess the effects of a sugar tax, given that Mexico—the sugar tax that has been in place for the longest—only implemented that tax several years prior.⁴⁸ The report concluded by recommending that further research be done, as existing evidence merely suggests that a sugar tax, when properly implemented, *may* have tangible effects on sugar consumption habits.⁴⁹ Such research is currently being conducted at the University of Waikato, and a follow up report is expected to be released in May 2018.⁵⁰

E Summary

New Zealand is situated in a global environment which is showing greater support for a tax on sugar in sweet drinks. The application, type and rate of tax differs between jurisdictions. These will be considered throughout this article and the best mechanism will be chosen based on these international lessons and in light of the New Zealand context.

43 (19 June 2014) 699 NZPD 18724.

44 (13 October 2016) 717 NZPD 14268.

45 (8 December 2016) 719 NZPD 15722.

46 At 15722–15723.

47 Ministry of Health *Mexican Sugar Tax—Evidence of Impact* (2017) at 1.

48 At 6.

49 At 6.

50 At 6.

The New Zealand context is mixed. There is strong industry resistance, moderate public support, high medical professional support and mixed support in Parliament for a sugar tax on sweet drinks. The evidence on which these varying perspectives are based has caused confusion. The purpose of this article hereafter is to provide clarity around some of these issues and provide recommendations for New Zealand moving forward.

III Application

The purpose of this section is to define what beverages are classified as sweet drinks for the application of a sugar tax and what amount of tax would reduce the consumption of those beverages. The following needs to be established: first, what beverages a tax would apply to, and secondly, the rate of tax. The primary consideration here is whether a sugar tax should apply to artificially sweetened beverages (ASBs) and fruit drinks. This is a point of contention amongst health professionals, and this section will consider the differing perspectives.

The tax rate is also of crucial importance to the effectiveness of a sugar tax. It would depend on the economic context of each individual country.

A Beverages subject to tax

There are many beverage choices available in New Zealand. What type of beverages should be subject to a sugar tax? Identifying the tax base is important; to be effective, health-related taxes must be clear as to the nutritional criteria underpinning the policy.⁵¹ Two fundamental criteria must be set: the type of beverage to be taxed and the threshold quantity of sugar that triggers application of the tax.

(1) Type of beverage

A sugar tax will not achieve the ultimate objective of reducing obesity rates if consumers switch to non-taxed drinks that are equally detrimental to health. This is summarised in the WHO's report:⁵²

It is important to consider the tax base since the overall health effects of the tax depends on the availability of substitutes for different types of consumers. Consumers might substitute to a healthier type of product, to another type of unhealthy product, to a cheaper brand or store. Correct design of the tax and correct choice of the tax base could minimize any potential adverse unexpected health effects of food and beverage taxes.

That is, if the tax changes purchasing behaviour, will that behavioural change be a healthy change? The substitution dilemma was a concern highlighted by Dr Coleman in April 2016.⁵³

51 Waqanivalu and others, above n 4, at 22.

52 At 21.

53 "Govt will listen on sugar tax—Medical association" *Radio New Zealand* (online ed, 10 December 2016).

The New Zealand Beverage Guidance Panel (NZBGP) defines sugar-sweetened beverages (SSBs) as:⁵⁴

Any beverage that contains added caloric sweetener usually sugar. The main categories of sugary drinks include soft-drinks/fizzy-drinks, sachet mixes, fruit drinks, cordials, flavored milks, cold teas/coffees, and energy/sports drinks.

The WHO definition is similar.⁵⁵

Those who support a sugar tax all accept that fizzy drinks are proper beverages for taxation. Fizzy drinks (or soft drinks) are more technically described as aerated water containing added sugar.⁵⁶ They have no nutritional value, and are high in energy, sugar and acidity which, when consumed in high quantities, leads to weight gain and tooth decay. Fizzy drinks clearly fall within the scope of the NZBGP definition.

ASBs and pure fruit juices (with no added sugar) are not included in this definition. ASBs—often marketed as diet or sugar-free drinks—and fruit juices are likely to be the prime substitute for people wanting to limit SSB consumption but still crave a sugary drink. Are ASBs and fruit drinks healthy substitutes for drinks with added sugar? Philadelphia, Berkeley and Cook County are proposing to make ASBs subject to taxation but exclude fruit juices. Mexico and the United Kingdom exclude both ASBs and fruit juices from the scope of the sugar tax.⁵⁷

ASBs contain a sweetening agent, most commonly aspartame and stevia, which contain zero calories but all the sweetness of caloric sugar.⁵⁸ Increasing evidence shows that ASB consumption does not necessarily result in less total calorie consumption. Rather, the sweetener stimulates the appetite, particularly a craving for salty and sweet foods. This leads to greater overall calorie consumption.⁵⁹ In light of this growing body of evidence, more jurisdictions are choosing to include ASBs within the scope of a sugar tax, the most recent being Philadelphia and Cook County.

While medical evidence suggests that a New Zealand sugar tax should include ASBs, this article argues that they should be excluded from a tax for two reasons: first, the primary objective of a tax is to reduce *sugar* intake, and secondly, there are significant legal complications around applying a tax to artificial sweeteners. These issues will be discussed in subsequent paragraphs.

The NZBGP's SSB definition only includes beverages with added sugar. This means that pure fruit juices with only naturally-occurring sugars would not fall within the scope of the tax. There is mixed evidence as to whether the sugar present in fruit juices can be as harmful as sugar in SSBs.⁶⁰ Nonetheless, many medical practitioners believe that fruit juice should not be subject to a sugar tax—despite some juices containing as much sugar as a can of fizzy.⁶¹

54 *Policy Brief: Options to Reduce Sugar Sweetened Beverage (SSB) Consumption in New Zealand* (New Zealand Beverage Guidance Panel, June 2014) at 1.

55 Waqanivalu and others, above n 4, at 8.

56 Customs Tariff Act 2012 (Cook Islands), sch 1, ch 99.

57 Stephen Duckett, Hal Swerissen and Trent Wiltshire *A sugary drinks tax: Recovering the community costs of obesity* (Grattan Institute, Report No 2016-15, November 2016) at 27.

58 Damon Gameau "Sugar Substitutes—The Current Truth" (10 December 2015) That Sugar Film <<http://thatsugarfilm.com>>; and Beaglehole R "Sugar sweetened beverages, obesity, diabetes and oral health: a preventable crisis" (2014) 20(1) *Pacific Health Dialog* 39 at 40.

59 Beaglehole, above n 58, at 40–41.

60 Waqanivalu and others, above n 4, at 13.

61 Duckett, Swerissen and Wiltshire, above n 57, at 32.

The inclusion of pure fruit juices may also present administrative difficulties, particularly where the juice is produced at, for example, a juice bar. In those contexts, it may be unreasonable to expect the sugar content of these beverages to be calculated.

Furthermore, pure fruit juice is harder to manufacture and is, therefore, sold at a higher retail price. Thus, fruit juice consumption is already discouraged by its being more expensive than fizzy drinks.⁶²

On balance, fruit juices with no added sugar should be excluded. Fruit juice with no added sugar is easily identifiable, so it should be simple to determine beverages that are exempt from taxation thus maintaining the simplicity of the tax's application. Juice is a reasonable substitute that has nutritional value and is already more expensive than SSBs.

ASBs, on the other hand, are not reasonable substitutes for fizzy drinks. Increasing evidence around the detrimental effects of ASBs suggest that there are strong reasons to subject ASBs to a sugar tax. However, implementation issues point against including ASBs, at least initially. These issues are discussed below.

Alcoholic beverages containing added sugar are technically included under the NZBGP definition. However, alcoholic beverages should be exempt because they are already subject to a heavy liquor excise tax. This would be consistent with the United Kingdom's sugar tax which exempts alcoholic beverages containing at least 1.2 per cent alcohol.⁶³

(2) Threshold of sugar or sweetening agent content

ASBs contain substantially less sweetening agent than beverages containing regular sugar because artificial sweeteners are much sweeter than sugar. To introduce separate rates of tax for sugar and artificial sweeteners would greatly complicate a sugar tax on sweet drinks. As such, this article recommends excluding artificial sweeteners.

(a) Sugar

What amount of sugar should be present in a drink before it becomes classified as a sweet drink and subject to taxation? A threshold provides an incentive for manufacturers to reformulate beverages in order to avoid the sugar tax. It also relieves manufacturers from compliance with the administrative requirements of the tax for drinks with a minimal amount of sugar.

The minimum threshold for drinks subject to a tax should be determined in line with the WHO's recommended maximum daily intake of 25 g of sugar per adult (approximately 6 teaspoons).⁶⁴ The average New Zealand adult currently consume, on average, 148 g of sugar per day (37 teaspoons).⁶⁵ Parliament might also set a minimum sugar content threshold for New Zealand by reference to the WHO's regulatory code based on world beverage markets. This code is currently being developed in the Western Pacific region.⁶⁶

62 Andrea McDonald *Sugar-sweetened beverage tax in Pacific Island countries and territories: A discussion paper* (Secretariat of the Pacific Community, 2015) at 33.

63 Finance Act 2017 (UK), s 26(1)(a).

64 World Health Organisation "WHO calls on countries to reduce sugars intake among adults and children" (press release, 4 March 2015).

65 Beaglehole, above n 58, at 39.

66 Waqanivalu and others, above n 4, at 22.

As it currently stands, countries that have implemented a sugar tax tend to set the minimum threshold for sugar content at 5 g per 100 ml. In the United Kingdom, the threshold for drinks subject to tax is a concentration of 5 g per 100 ml or more.⁶⁷ In Hungary, beverages containing less than 8 g per 100 ml are not subject to the tax.⁶⁸ In Finland, the threshold is 0.5 per cent sugar.⁶⁹ These examples, as well as others from different jurisdictions that have implemented a sugar tax, suggest that the New Zealand threshold should be set at around 5 g per 100 ml. This threshold would be calculated according to the amount of added sugar, not naturally occurring sugar. So a fruit juice with 20 g of naturally occurring sugar per 100 ml and no other added sugar would not be subject to tax.

On this recommendation, any beverage with more than 5 g of added sugar per 100 ml would be subject to a tax.

(b) Artificial sweeteners

Artificial sweeteners are far sweeter than caloric sugar, meaning that less of it needs to be added to a beverage to achieve the desired sweetness.⁷⁰ For example a 355 ml can of Diet Coke contains only 125 mg (0.125 g) of aspartame sweetener.⁷¹ This can be contrasted with a 355 ml can of regular Coke, which contains 38 g of sugar.

Some jurisdictions in the United States have applied a sugar tax to artificially sweetened drinks, but the tax is levied based on the volume of liquid and does not require a weight calculation of the sugar or sweetener. The only jurisdiction to have based the tax on the weight of artificial sweetener (as proposed in this article) is the Cook Islands.⁷² However, no commentary exists around how this has played out in practice.

Medical evidence and international trends suggest that ASBs should be included in a sugar tax. However, this does not make legal sense. If a separate threshold was set for ASBs, complications could arise around what cumulative amount of sweetening agent and sugar constitutes a sweet drink. There are further complications in measuring the weight of sweetener to levy the tax according to the mechanism proposed in this article. This will be explained in Part IV.

It makes sense to exclude artificial sweeteners, at least on the initial implementation of a sugar tax. The tax's primary target is sugar. Artificial sweeteners may adversely affect people's health, but they are not the primary concern.

(3) Summary

If implemented in New Zealand, a sugar tax should apply to any beverage that is a sweet drink (drinks containing added sugar) and meets the minimum threshold of 5 g of sugar per 100 ml of liquid.

67 Campbell, Smithers and Butler, above n 17.

68 Duckett, Swerissen and Wiltshire, above n 57, at 27.

69 At 27.

70 Gameau, above n 58.

71 Mary Franz "Diet Soft Drinks" (May 10 2010) Diabetes Self-Management <www.diabetesselfmanagement.com>.

72 Customs Tariff Act (Cook Islands), sch 1, ch 99.

B *Rate of taxation*

The NZBGP and the Treasury recommend a price increase of 20 per cent.⁷³ The WHO recommends this as the minimum increase amount.⁷⁴ Dr McDonald for the Secretariat of the Pacific Community argues that the desirable amount is a rate providing a 30 per cent increase in price.⁷⁵ This article will recommend a rate of tax which produces a 53 per cent price increase.

Mexico levies the excise tax at MXN 1 per litre, producing an average price increase of 10 per cent.⁷⁶ Philadelphia applies a tax of USD 0.015 per liquid ounce,⁷⁷ while Albany, Oakland, San Francisco and Cook County intend to implement a USD 0.01 per liquid ounce tax.⁷⁸ The municipality of Boulder in Colorado applies a USD 0.02 per ounce tax to SSBs and ASBs.⁷⁹ American Samoa, the Northern Mariana Islands, French Polynesia, Samoa and Tonga apply the tax at a rate of NZD 1 per litre.

In order to determine the appropriate rate of tax for New Zealand, this article will consider price elasticities for sweet drinks in New Zealand and the gross national income.

(1) Price elasticities

Price elasticities is a term used by economists to describe a number which reflects the demand for a product. This number is used to predict the expected decline in purchase of that product when the price increases by a certain amount.⁸⁰

The Treasury predicts a 20 per cent drop in sales if a 16 per cent price increase was applied to SSBs based on a price elasticity between 0.92 and -0.81.⁸¹ Among consumers of lower socio-economic status, the predicted elasticity is -1.03, suggesting a drop in consumption proportionate to the increase in price.⁸²

Price elasticities for sweet drinks have been studied in various countries and by various economists within New Zealand. While each study provides slightly different results, there is a general consensus that SSBs are relatively elastic and that SSB price increases will have a greater impact on low socio-economic buying behaviour.⁸³

Price elasticities that reflect New Zealand sweet drink consumption, should be used to set the rate of tax at a level which will decrease sales of sweet drinks.

Price elasticity (that is, demand) is not the only determinant of consumption. The most effective implementation mechanism will incentivise manufacturers to provide healthier alternatives and to reformulate beverage recipes to reduce the quantity of sugar in the beverage. This factor, which falls outside the scope of consumer choice, will have a real influence on total sugar consumption.

73 Sundborn and others, above n 31, at 80–81; and New Zealand Treasury Working Paper, above n 12, at 19.

74 Waqanivalu and others, above n 4, at 24.

75 McDonald, above n 62, at 34.

76 McDonald and others, above n 17.

77 Philadelphia Code §19.4103(2).

78 Lee, above n 25, at 2.

79 At 2.

80 Treasury Intern Research Report, above n 7, at 19.

81 At 21.

82 At 21.

83 See McDonald, above n 62, at 2, 34 and 36; and New Zealand Treasury Working Paper, above n 12, at 18.

(2) New Zealand income

The World Bank classifies New Zealand as a high-income country.⁸⁴ This means that New Zealand has a high gross national income (GNI), so citizens (that is, purchasers of sweet drinks) have greater buying power on average. The average consumer within a high-income country will not be discouraged from purchasing a product if the price increase is relatively insignificant.⁸⁵

The WHO recommends a price increase on sweet drinks of at least 20 per cent.⁸⁶ This price increase is too low in the New Zealand context, given the country's high GNI ranking. The WHO considered purchasing power in relation to tobacco, when it gave no recommended tax rate for *universal* application. Instead, the price increase should be proportional to the country's income. For example, the recommended tax rate for high-income countries for tobacco is 53 per cent.⁸⁷ New Zealand has met this recommended rate in relation to tobacco.⁸⁸ While his 53 per cent increase in price for high-income countries provides an approximate price increase which could be applied in the case of sweet drink taxation.

Mexico may be an example of an insufficient price increase. Mexico's sugar tax is disproportionate to the country's moderate income levels. The tax only increased the retail price of sweet drinks by approximately 10 per cent.⁸⁹ In the context of tobacco, the average taxation rate for upper middle income economies, such as Mexico, is around 41 per cent.⁹⁰ This indicates that Mexico's sugar tax should be levied with the effect of at least a 41 per cent increase in retail price.

In practice, the price increase produced by a sugar tax may be difficult to predict because a tax would be applied at the manufacturer and importer level, not the retail level. This means that the value of the tax might not be passed on to consumers. Moreover, if the mechanism for taxation is a specific excise tax on the particular sugar content of a drink, then not all drinks will attract a level of tax equivalent to a 53 per cent price increase.

For example, if a \$1 can of fizzy drink contains 40 g of sugar and the tax is levied at \$10 per kilogram of sugar, then the tax will be \$0.40. Presuming the amount of tax is passed through, the can of fizzy drink now costs \$1.40 at retail. That is a 40 per cent price increase. However, if a \$1 can of fizzy drink contains 20 g of sugar and the tax is levied at \$10 per kg of sugar, then the price increases by \$0.20. Presuming the amount of tax is passed through, the can of fizzy now costs \$1.20 retail. That is a 20 per cent price increase—far less than 53 per cent that the tax was intended to effect.

These two issues—passing through of tax and allowing for different concentrations of sugar—can be dealt with upon implementation of the sugar tax. Economists can calculate the tax rate required to achieve a 53 per cent increase in price on average. By monitoring a tax within the first few years of its implementation, Parliament can then make adjustments in order to reach the 53 per cent average threshold.

84 "World Bank Country and Lending Groups" The World Bank <<http://datahelpdesk.worldbank.org>>.

85 Bettcher and others, above n 28, at 88 and 107.

86 Waqanivalu and others, above n 4, at 9.

87 At 53.

88 Des O'Dea and others *The Report on Tobacco Taxation in New Zealand* (The Smoke Free Coalition and ASH New Zealand, November 2007).

89 McDonald and others, above n 17.

90 Bettcher and others, above n 28, at 53; and "World Bank Country and Lending Groups", above n 84.

A 53 per cent increase in retail price need not be immediate on implementation. In the case of tobacco, projections are made as to the targeted price rise. Current policy is strategized to increase the price of tobacco by 10 per cent each year until 2020.⁹¹ The same could be done in relation to a tax on sweet drinks.

(3) Summary

This article recommends a tax rate equivalent to an average retail price increase of approximately 53 per cent.

C Conclusion

Any proposed sugar tax should be applied to a broad range of beverages which contain more than, for example, 5 g of sugar per 100 ml of liquid. Parliament should adopt the NZBGP's definition of SSBs because it excludes ASBs and pure fruit and vegetable juice, the implementation of which would introduce additional complexity to the sugar tax and implementation difficulty.

The amount of tax should effect a retail price increase of 53 per cent for high-income economies such as New Zealand.

IV Implementation

The WHO argues that “there is reasonable and increasing evidence that appropriately designed taxes on sugar sweetened-beverages would result in proportional reductions in consumption”.⁹² Thus, the mechanism by which a tax is applied is of crucial importance to its effectiveness in influencing consumer behaviour. This section aims to provide an objective analysis of the best tax mechanism by which a sugar tax on sweet drinks could be implemented. This discussion will be pre-emptive, as the New Zealand legislature has not yet proposed a tax on sweet drinks, let alone considered implementation of such a tax. However, such a consideration is valuable in providing a broader appreciation of whether or not a tax on sugar in sweet drinks could be effective.

There are many mechanisms that can be used to increase the price of sweet drinks. This section considers four main options: excise taxes, value added taxes (VAT), import taxes and minimum pricing.

A Excise tax

An excise tax is an indirect tax applied in addition to the base price of the good or service. While the tax is usually applied at the producer or retailer level, the intention is that the cost of the tax will be passed through, resulting in an increased purchase price paid by the consumer for the good or service. Excise taxes are relatively easy to administer.⁹³

The original intention of excise taxes was to generate revenue on frequently purchased goods. However, it became evident that excise taxes affected purchaser behaviour as

91 Ministry of Health “Improving the health of New Zealanders” (14 December 2017) <www.health.govt.nz>.

92 Waqanivalu and others, above n 4, at 9.

93 Chriqui and others, above n 3, at 406.

consumers were unwilling or unable to pay the increased price for the product.⁹⁴ Excise taxes are now frequently applied as a “sin tax”: special taxes applied to specific products identified as hazardous in nature.⁹⁵ Excise taxes are the most common form of sin tax, with 90 per cent of countries (163 out of 182) choosing to use some form of excise tax to regulate tobacco sales.⁹⁶

Excise taxes can be split into two types: *ad valorem* excise tax and specific excise tax.

(1) *Ad valorem*

An *ad valorem* tax is a tax on value. It is calculated as a percentage of the price of the product.⁹⁷ For example, a can of fizzy that retails at \$1, if subjected to a 20 per cent *ad valorem* tax, would cost \$1.20. Sixty out of 182 countries have chosen to use *ad valorem* taxes in regulating tobacco.⁹⁸ It is more popular in low-income countries, utilised by 28 out of 40 low-income countries. In contrast, only 2 out of 38 high-income countries use *ad valorem* excise taxes.⁹⁹ In the context of sweet drinks, *ad valorem* taxes have been applied in Barbados, Chile, Dominica and Nauru.¹⁰⁰

An *ad valorem* tax is attractive for its ease of implementation because it is easy to determine the amount of tax for a product and it adjusts automatically with inflation.¹⁰¹ It would also better accommodate a sugar tax that captures artificially sweetened beverages, as it requires no weight calculation.

Interestingly, no jurisdiction proposing to implement a sweet drink tax is intending to apply an *ad valorem* system, suggesting that this tax mechanism is being increasingly recognised for its deficiencies. There are two main disadvantages: manufacturer under-shifting and consumer switch-down. Each will be defined and examined in turn.

Manufacturer under-shifting occurs when the manufacturer undervalues a product to mitigate their tax liability. Tax under-shifting has occurred in Pacific Island countries and territories where an *ad valorem* tax on sweet drinks has been implemented.¹⁰²

An *ad valorem* tax can be applied at any point in production. Legislators must determine where in the production chain the product should be assessed for value to levy a tax. If an *ad valorem* tax is applied at an early stage of the production chain, manufacturers may adjust stages of production so that the price of the product rises later in the distribution chain.¹⁰³ This diminishes the effectiveness of the tax. This tactic can be checked through other price controls, such as minimum pricing and independent valuation, but these are costly, administratively burdensome and require greater technical capacity.¹⁰⁴

How can manufacturers adjust the value of the product in order to reduce their tax liability? They do so in two ways: by reducing the costs of production or by importing low value goods.

94 Patricia Meng San leong “Curbing Harms through Price Control: Alcohol Excises versus Minimum Prices” (2012) 18 NZJTL 303 at 304.

95 At 305.

96 Bettcher and others, above n 28, at 28.

97 Waqanivalu and others, above n 4, at 8.

98 Bettcher and others, above n 28, at 35.

99 At 35–36.

100 Duckett, Swerissen and Wiltshire, above n 57, at 27.

101 Bettcher and others, above n 28, at 40.

102 McDonald, above n 62, at 44.

103 Chriqui and others, above n 3, at 409.

104 Bettcher and others, above n 28, at 40.

Manufacturers may choose to import low-value goods to increase their competitiveness in the market and to mitigate their tax liability, as occurred in Nauru.¹⁰⁵ This can result in poor quality goods which are of equal or higher sugar content, thus providing counter-productive results in the battle against SBs.

While decreasing the value of products may affect manufacturer and importers' profits, the net result is a lower amount of tax to be paid and the ability to absorb that tax given reduced production costs. If this occurs, there may be no change in the retail price of sweet drinks. Consequently, the tax would be completely ineffective in reducing sales and consumption of sweet drinks.¹⁰⁶

A second potential consequence of an *ad valorem* tax on sweet drinks is consumer switch-down. A tax on value means that lower-priced brand beverages would be taxed less than higher-priced brand beverages. Consumers are not incentivised to reduce consumption of SSBs, but rather, they are driven to "switch down" to lower-branded beverages, as occurs in the context of tobacco.¹⁰⁷ This undermines the intended health benefits of the tax as consumers may not in reality reduce consumption of sugar.

As well as incentivising consumers to "switch down", an *ad valorem* tax discourages consumers from "switching up" to alternatives, such as fruit juices, which have more nutritional value but a higher retail price due to greater manufacturing costs.¹⁰⁸ Proportionally, healthier alternatives will become more expensive than non-nutritional beverages. Healthy alternatives are important in making the sugar tax effective.¹⁰⁹ Where healthy alternatives are not available or less attractive as a purchase option for consumers, then a change in consumer behaviour is unlikely to occur.

A recent study conducted at the University of Auckland found that a 20 per cent increase in the price of sweet drinks had little effect on consumers' purchasing behaviour.¹¹⁰ However, that finding should not be taken as evidence that a sugar tax will be ineffective because the study only applied an *ad valorem* tax at a low rate. Rather, the study demonstrates that an *ad valorem* tax is unlikely to be effective in discouraging consumers from purchasing sweet drinks. More broadly, it demonstrates that poor tax planning will produce poor results.

Ad valorem tax has some benefits, but these are likely to be outweighed by its negative implications.

(2) Specific

A specific tax is a tax which is "[a] set amount of tax charged on a given amount of product."¹¹¹ In the case of sweet drinks, this is a tax charged on the volume of liquid or the weight of sugar.

105 McDonald, above n 62, at 44.

106 Christopher Snowdon *Sugar taxes: A Briefing* (Institute of Economic Affairs, January 2016) at 2.

107 Bettcher and others, above n 28, at 45.

108 McDonald, above n 62, at 3.

109 At 3.

110 See Tessa Bollard and others "Effects of plain packaging, warning labels, and taxes on young people's predicted sugar-sweetened beverage preferences: an experimental study" (2016) 13 *International Journal of Behavioral Nutrition and Physical Activity* 95.

111 Waqanivalu and others, above n 4, at 8.

Specific excise taxes apply to tobacco in 55 of 182 countries.¹¹² Countries have generally applied a tax on quantity (for example, per 20 cigarettes or 1,000 cigarettes).¹¹³ New Zealand uses a specific tax on tobacco, basing the amount of tax on the weight of tobacco contained in the product.¹¹⁴

Unlike *ad valorem* taxes, specific taxes are not susceptible to undervaluation and will discourage consumption irrespective of the brand.¹¹⁵ This reduces the chances of switching down to cheaper sweet drinks.

Specific taxes, in contrast to *ad valorem* taxes, generally increase retail prices more, which ultimately leads to lower consumption.¹¹⁶ Evidence based on Australian modelling indicates a 50 per cent greater impact on consumption when a moderate rate of specific tax based on volume is applied, as opposed to a tax based on the price of the beverage. Similar results have been seen in the context of tobacco.¹¹⁷

Specific taxation does not penalise the manufacturer for increasing the value of its product.¹¹⁸ Under specific taxation, any increase in price results in profit for the manufacturer, rather than a greater tax liability. This is beneficial for two reasons: manufacturers can increase the price of the product in order to mitigate the tax burden and increase profits in the face of decreased sales, and they can also make quality improvements without being subjected to a greater amount of tax.

The first benefit identified is referred to as tax “over-shifting” and has occurred in relation to tobacco.¹¹⁹ Sometimes excise taxes imposed on manufacturers and importers result in an increased retail price as manufacturers and importers try to increase their profits in order to mitigate the effects of decreased sales.¹²⁰ In relation to sweet drinks, experiences in Denmark, Finland and Mexico have shown that, in many cases, the full tax has exceeded the expected retail price increases.¹²¹ This is less likely to occur with an *ad valorem* excise tax because if manufacturers and importers increase the value of the beverage they will have to pay a greater amount of tax for that change in value.

The second benefit is that specific taxes do not limit commercial freedom to diversify and innovate. *Ad valorem* taxes discourage product innovation that increases the price of a product, as this will incur a greater amount of tax. Specific excise taxes allow manufacturers to make quality improvements, potentially resulting in a greater range of healthier beverages. For this reason, manufacturers generally favour a specific tax.¹²² This is crucial from a policy perspective, as it suggests that manufacturers will show less resistance to a specific tax.

Specific excise tax does not adjust with inflation, so policymakers would need to create a mechanism to maintain the relative purchase price to ensure that the tax remains effective.¹²³ This mechanism may be modelled on the current formulation used to adjust sin taxes on tobacco in New Zealand and Australia.¹²⁴

112 Bettcher and others, above n 28, at 35.

113 At 34.

114 At 34.

115 At 40.

116 At 40.

117 McDonald, above n 62, at 30.

118 Bettcher and others, above n 28, at 42.

119 At 44.

120 At 46.

121 Snowdon, above n 106, at 2.

122 Bettcher and others, above n 28, at 46.

123 At 40 and 107.

124 At 107.

There is a general consensus amongst professionals that a sugar tax on sweet drinks should be applied as a specific excise tax. However, opinions differ as to whether this should be levied at volume or weight of sugar.

(a) Volumetric

The effectiveness of a volume-based excise tax must be assessed in the context of each country, with particular consideration of that locale's consumption volumes of sweet drinks and obesity rates.¹²⁵

Specific volumetric excise tax on sweet drinks has been implemented in the majority of Pacific Island countries and territories, including American Samoa, French Polynesia, Samoa and Tonga.¹²⁶ It has generally been applied at a rate of NZD 1 per litre of liquid. Mexico, thought to be the world leader in the adoption of a sugar tax, applies a volumetric excise tax of MXN 1 per litre (equivalent to a 10 per cent increase in retail price).¹²⁷

In Mexico, the tax is collected from the manufacturer, and studies suggest that this cost is passed on to the consumer.¹²⁸ The WHO recommends collection at the point of production or importation.¹²⁹

Various scholars argue that a specific volumetric excise tax is the best form of taxation on sweet drinks.¹³⁰ A tax on volume strongly discourages excessive consumption of sweet drinks and would prevent marketing strategies such as bottomless cups and up-sizing.¹³¹ It would incentivise manufacturers to sell fizzy drinks in smaller serving sizes. Therefore, volumetric taxation is appropriate for the New Zealand context because it discourages excessive consumption by reducing serving sizes, and the tax revenue would likely be large.

Volumetric taxation would also be relatively easy to implement because volume is readily ascertainable.¹³² Where the beverage comes in a concentrated form (syrups, sachets or cordials) the tax would be calculated based on the "ready to drink" volume. The WHO recommends a specific tax based on volume in a country where the tax administration is not strong.¹³³

While volumetric taxation is attractive in many ways, there is a major deficiency in how it accounts for drinks of high sugar concentration. A specific tax on volume would only apply to beverages containing more than 5 g per 100 ml (as discussed in Part IV of this article). This provides an incentive for manufacturers to reduce the amount of sugar in beverages to below 5 g per 100 ml so as to escape tax liability. But a volumetric tax provides no further incentive for manufacturers to reformulate high sugar beverages to reduce the concentration of sugar.

125 Judy Jou and Win Techakehakij "International application of sugar-sweetened beverage (SSB) taxation in obesity reduction: Factors that may influence policy effectiveness in country-specific contexts" (2012) 107 *Health Policy* 83 at 83.

126 McDonald, above n 62, at 25.

127 M Arantxa Colchero and others "Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study" (2016) 352 *BMJ* 1 at 1–2.

128 At 2.

129 Bettcher and others, above n 28, at 40.

130 See, for example, McDonald, above n 62, at 30; Geoff Simmons "To tax or not to tax?" (11 October 2016) *FIZZ* <www.fizz.org.nz>; and Michael Littlewood "Taxing sugary drinks" (2016) 11 *NZLJ* 422 at 422.

131 Tan and Liu, above n 32, at 205.

132 Chriqui and others, above n 3, at 407.

133 Waqanivalu and others, above n 4, at 19 and 24.

Sugar content varies greatly between beverages and a volumetric tax ignores these vast discrepancies.¹³⁴ For example, some drinks contain 30 g of sugar or more per eight ounce serving, whilst other drinks may have between 10 to 50 g of sugar per eight ounce serving.¹³⁵ The absence of a mechanism which recognises moderate versus high sugar content drinks is a major drawback of a specific excise tax based on volume of liquid.

(b) Weight

This form of specific excise taxation focuses on the nutritional value of the drink by measuring the quantity of sugar in the beverage. Such a tax has been implemented in the Cook Islands, at a rate of NZD 9.37 per g of sugar.¹³⁶

Most notably, a tax based on the quantity of sugar provides an incentive for manufacturers to reduce the amount of sugar in beverages to as little as possible.¹³⁷ Reducing the sugar content by as little as 1 g could save manufacturers thousands of dollars in tax per year. Public health modelling studies have shown that policies that encourage reformulation are the most effective in reducing sugar consumption.¹³⁸ A specific tax based on the weight of the sugar has the prime objective of encouraging reformulation in order to mitigate the amount of tax the beverage will incur.

A specific excise tax based on weight of sugar accounts for every gram of sugar over and including the 5 g per 100 ml threshold. For example, a 100 ml drink that contains 5 g of added sugar will meet the threshold. If, in addition to this 5 g, there is another 20 g of added sugar and 10 g of naturally occurring sugar, the total amount of sugar would be 25 g, and the tax would be levied against that 25 g.

Tax on the amount of sugar in a beverage will have similar benefits to tax on the volume of the beverage, in increasing the tax burden. For example, if the tax is levied at \$0.01 per gram of sugar (\$10 per kilogram), a can of drink containing 40 g of sugar will have a tax burden of \$0.40. In comparison, a large bottle of the same drink may contain 80 g of sugar, resulting in a tax burden of \$0.80. This simple example demonstrates that consumers will be just as discouraged to up-size as they would if a tax based on volume were applied.

New Zealand currently implements a specific tax which measures the amount of tax based on a component of the product in relation to alcohol.¹³⁹ Beer containing 2.5 per cent alcohol or more is taxed at a rate of \$27.21 per litre of pure alcohol, while spirits are subject to a rate of \$49.55 per litre of pure alcohol, because the manufacturing costs for spirits is less and therefore requires a greater level of tax in order to make the shelf price relative to other alcoholic beverages.¹⁴⁰ There may be similar manufacturing discrepancies in relation to sweet drinks which should be accounted for as they arise.

This tax is far from straightforward in its implementation. This is due to the complexities of sugar; it is a substance which comes in many different forms, all of which

134 Norton Francis, Donald Marron and Kim Rueben *The Pros and Cons of Taxing Sweetened Beverages Based on Sugar Content* (Urban Institute, December 2016) at 3.

135 At 3.

136 Customs Tariff Act (Cook Islands), sch 1, ch 99.

137 Tan and Liu, above n 32, at 210.

138 Adam DM Briggs and others "Health impact assessment of the UK soft drinks industry levy: a comparative risk assessment modelling study" (2016) 2 *Lancet Public Health* 15 at 15.

139 Jeong, above n 94, at 316.

140 At 316.

vary in weight and level of harm. It may therefore be challenging for administrators to quantify the amount of sugar in a beverage.

In order to enforce this tax, the quantity of added sugar must be measured. As established earlier, the definition of sweet drinks only includes beverages with added sugar, and the tax would be levied at the quantity of *added* sugar rather than the *total* amount of sugar. Currently, New Zealand beverage product labels list the *total* amount of sugar and do not indicate the amount of *added* sugar. If Parliament chooses to implement a tax on added sugar only (as proposed in this article) then it should also introduce regulations to bring product labelling more in line with the sugar tax's measurement of sugar.

In the United States, where an increasing number of jurisdictions are introducing a tax on sweet drinks, governments are also introducing new requirements for product labelling. Currently, beverages list the total quantity of sugar in the beverage. However, by 2018 and 2019, large and small manufacturers respectively will be required to list the added sugar content separately.¹⁴¹ This will enable policymakers to more easily apply a tax to added sugar only.

The WHO recommends a tax based on the weight of sugar in soft drinks if the tax administration is strong and can deal with the greater administrative burden of this more complicated system.¹⁴² The Grattan Institute, an independent think tank in Australia, endorses this method of taxation.¹⁴³

A tax based on the weight of added sugar is the most effective type of tax on sweet drinks. Its implementation in New Zealand will depend on further investigation into the differences in weight between various forms of sugar and the technical capacity of the New Zealand tax administration.

(c) Combination

An emerging global trend is the use of both nutritional and volumetric measures to determine the tax incurred, whereby the rate of tax is set by the concentration of sugar, but is levied at the volume of liquid. This is referred to as a tiered volumetric system. This system has been adopted in Portugal¹⁴⁴ and the United Kingdom,¹⁴⁵ and it has been proposed for implementation in Ireland.¹⁴⁶

Measuring both concentration and volume addresses the issue identified under a volumetric tax—that it does not incentivise the reduction of sugar in sweet drinks. The two-tiered system works by applying a high rate of tax to drinks with high sugar concentration, and a lower rate of tax to drinks with a low concentration of sugar.

For example, the United Kingdom taxes drinks with a total sugar content above 5 g per 100 ml at £0.18 per litre, and drinks with a total sugar content above 8 g per 100 ml at

141 Francis, Marron and Rueben, above n 134, at 4.

142 Waqanivalu and others, above n 4, at 19 and 24.

143 Duckett, Swerissen and Wiltshire, above n 57, at 4.

144 See “Soft Drink Sales In Portugal Down 25% Following Sugar Tax” (26 September 2017) European Supermarket Magazine <www.esmmagazine.com>.

145 See Kate Smith “Will paying more for alcohol and sugary drinks make us healthier?” (1 May 2018) BBC News <www.bbc.co.uk>.

146 See Rachel Arthur “Ireland’s sugar tax pushed back to May” (3 April 2018) Beverage Daily <www.beveragedaily.com>.

£0.24 per litre.¹⁴⁷ The Government expects this to result in a 20 per cent increase in retail price and a corresponding 1.3 per cent decrease in obesity rates.¹⁴⁸ This incentivises manufacturers to create products which will be subject to a lower rate of taxation.

This is an attractive proposition for implementation in New Zealand but would require further medical and public health research in order to determine the sugar concentrations at which the tiers should be set to disincentivise SSB purchases and reduce sugar consumption. A tiered volumetric system is a good second choice to a tax levied on the quantity of sugar.

(d) Weight of sweeteners

Sweeteners should be excluded from a sugar tax because the quantity of artificial sweetener in diet drinks is extremely low. The legislature would have to determine a different rate of tax for sweeteners. It is not as simple as levying the tax at, say, \$0.01 per 1 mg. At this rate, a standard can of diet drink containing 125 mg of sweetener would be subject to a \$1.25 tax. Diet drinks would suffer from very high taxes in contrast to non-diet drinks. This does not reflect the relative harm of diet drinks as compared to regular drinks. Thus, applying a tax to ASBs is impractical. It would require a separate rate of tax to be calculated.

A specific excise tax based on weight of sugar is the most favourable system to implement in New Zealand. Artificial sweeteners cannot be easily incorporated into this system. As such, ASBs should be excluded.

B *Value added tax*

VAT is a tax on the added value of a product at each stage of production.¹⁴⁹ The main advantage of VAT is its familiarity. However, in the New Zealand context, VAT on sweet drinks is an unattractive proposition. The New Zealand GST system prides itself on its simplicity and its use of only two GST rates: 15 per cent and 0 per cent. Introducing a high GST on sweet drinks could upset the streamlined consumption tax.

Similar disadvantages to those identified under an *ad valorem* system may also arise here: a VAT system would encourage import of low value goods, is susceptible to undervaluation, incentivises trading down and demands more efficient production. In addition, the broad-based nature of VAT systems would require a complex tax structure to administer a special tax against sweet drinks. Complex tax structures involve high administrative costs and are therefore far less efficient and effective than alternative pricing mechanisms.¹⁵⁰ It is for these primary reasons that the WHO recommends the use of excise taxes over VAT or sales taxes on the implementation of tax on sweet drinks.¹⁵¹

Given these disadvantages of a VAT system, it is perhaps unsurprising that such a system has not been applied as the primary system for sweet drinks taxation anywhere in the world.

147 Campbell, Smithers and Butler, above n 17.

148 Treasury Intern Research Report, above n 7, at 1–2.

149 Waqanivalu and others, above n 4, at 8; and Chriqui and others, above n 3, at 407.

150 McDonald, above n 62, at 29.

151 World Health Organisation “WHO urges global action to curtail consumption and health impacts of sugary drinks” (press release, 11 October 2016).

C Import tax

An import tax, also known as customs duty, is a tax on goods which are imported into New Zealand, as distinct from an excise tax applied to importers. This section will discuss applying a separate regime to importers, as opposed to applying a single tax system for sweet drinks to both domestic manufacturers and importers.

Import taxes are usually collected from the importer at the point of entry.¹⁵² They have been implemented on imported sweet drinks in four Pacific Island countries and territories: the Republic of the Marshall Islands, Nauru, Palau and Vanuatu. Tokelau has a complete import ban on soft drinks.¹⁵³ Almost every country that regulates tobacco has implemented import taxes on cigarettes.¹⁵⁴

Would an import tax be an appropriate mechanism for taxing sweet drinks in New Zealand? There are two factors to consider: domestic production versus importation of sweet drinks in New Zealand, and the efficacy of import taxes as compared to other forms of taxation.

An import tax will be effective if it captures a broad range of the market. In the case of sweet drinks, it will be effective if the market relies heavily on imported sweet drinks rather than domestic manufacturing.¹⁵⁵ In a country less reliant on sweet drink imports, an import tax should be implemented alongside an excise tax. Given the high level of domestic production, a tax on sweet drinks in New Zealand should not be solely implemented as an import tax. It should only be considered alongside a domestic tax mechanism, such as a specific excise tax as proposed in this article.

Implementing two forms of tax to regulate a single product can result in double taxation. To avoid being unduly harsh on importers, importers could be exempt from the domestic excise regime. However, this results in two separate systems: one for importers and one for domestic manufacturers. This complexity is unnecessary given that there are good alternatives for implementation of a sugar tax, and undesirable given the additional costs that will be incurred as a result of administering a more complex tax structure.

An excise tax can be applied to manufacturers and importers. The United Kingdom proposal for sweet drink taxation applies the same excise tax to manufacturers and importers.¹⁵⁶ French Polynesia applies an excise tax to both sweet drinks from importers and manufacturers, but applies a higher rate of taxation to importers in order to give domestic manufacturers a competitive edge.¹⁵⁷ So there is capacity to provide for differences within the same system.¹⁵⁸ New Zealand should follow the direction of the United Kingdom and implement a singular excise tax for all sweet drinks, whether imported or domestically manufactured for simplicity.

Efficiency issues aside, import taxes are also less effective in curbing consumption of sweet drinks. This is because import taxes are less likely to be passed on to consumers, because importers can mitigate the effects of taxation by sourcing cheaper imports. This was seen in Nauru where a 30 per cent import tax resulted in only a 20 per cent increase on the product, due to importers sourcing cheaper alternatives from nearby Asia.¹⁵⁹

152 Bettcher and others, above n 28, at 29.

153 McDonald, above n 62, at 2.

154 Bettcher and others, above n 28, at 28.

155 McDonald, above n 62, at 29.

156 Campbell, Smiths and Butler, above n 17.

157 McDonald, above n 62, at 24.

158 Bettcher and others, above n 28, at 49.

159 McDonald, above n 62, at 44.

There are extensive reasons why an import tax should not be implemented on sweet drinks in New Zealand. New Zealand does not rely entirely on imported sweet drinks and thus the tax would not capture a broad enough range of the market. Further, it may disrupt existing trade agreements. Lastly, it is unnecessary in a system proven to be more receptive to an excise tax system. As such, an import tax is not appropriate for sweet drinks in New Zealand.

D *Minimum pricing*

Minimum pricing requires a retailer to sell a product at a price not less than a specified price per unit. This price is set by policymakers. In the context of sweet drinks, the unit amount may be measured by the volume of liquid or the quantity of sugar.

Minimum pricing is not a tax, but a useful way to regulate price. Minimum pricing has been considered in New Zealand for regulating alcohol, following implementation of minimum pricing schemes in England, Wales and Scotland.¹⁶⁰ Currently, no country has used a minimum pricing scheme in relation to sweet drinks.

This pricing mechanism primarily affects retailers and consumers. Retailers tend to resist minimum pricing and prefer retail excise taxes. Retailers cannot off-set the price increase against other products under minimum pricing, whereas they can minimise the effect of excise taxes through bulk purchase deals or by spreading the tax burden across a range of products.¹⁶¹

Minimum pricing gives direct control to regulators. Specific excise tax based on quantity of sugar, as this article proposed, is imposed on the manufacturer and importer. There is no guarantee that this tax liability will be passed on to the consumers.¹⁶² In contrast, minimum pricing sets the minimum retail price of the product, thus providing no discretion for the manufacturer or importer to absorb or minimise the cost.¹⁶³

The primary appeal of minimum pricing over excise taxes, VAT and import duties is direct control of shelf price. However, studies indicate that the true value of an excise tax is passed on to consumers.¹⁶⁴ Minimum pricing on sweet drinks is an attractive proposal, but provides no additional benefits to those achievable under an excise tax regime.

E *Conclusion*

Excise taxation is the most appropriate and widely used type of tax in relation to tobacco, alcohol and sugar. A specific excise tax on sweet drinks would be most appropriate in New Zealand as it incentivises manufacturers to decrease the sugar content of sweet drinks and it will be relatively easy to implement and administer. A specific excise tax should be levied on the weight of sugar, at a rate which will result in a 53 per cent average increase in retail price.

Some pricing mechanisms have not been considered, such as a retailers' occupation tax, a licence, a privilege or a system whereby healthy beverages are subsidised.¹⁶⁵ These options could be the topic of further academic commentary.

160 Leong, above n 94, at 319.

161 At 320.

162 At 320.

163 At 320.

164 See Duckett, Swerissen and Wiltshire, above n 57, at 33.

165 See Tan and Liu, above n 32, at 212.

V Administration

This section considers aspects of administration and, in particular, the collection and earmarking of revenue. The Customs and Excises Act 1996 regulates and confers the power to administer excise taxes on liquor and tobacco. Accordingly, it would be a suitable Act to administer a tax on sweet drinks.

A Collection

A tax on sweet drinks, as proposed, should be collected at the point of production or importation; that is, the liability of a tax should rest with the manufacturer or importer.¹⁶⁶

Collection from manufacturers and importers (as opposed to distributors or retailers) has two benefits. First, it is easier to collect from these parties because there are fewer manufacturers than there are retailers (for example, dairies, supermarkets and vending machine suppliers). This makes collection administratively easy and less susceptible to evasion. The second is that the compliance cost should be relatively low for manufacturers, given that these are typically large companies with well-established account-keeping.

If a tax requires the quantity of sugar to be declared, as proposed in this article, then the liability should rest on the manufacturer or importer to declare this, with audits regularly carried out and strict penalties for non-compliance.

The legislation should define a manufacturer, with a *de minimis* threshold to exempt minor producers of sweet drinks from liability for the sugar tax. This threshold could be modelled on other thresholds in tax legislation. For example, the Goods and Services Tax Act 1985 requires registration of traders who make supplies worth more than \$60,000 per year as part of their taxable activity.¹⁶⁷

In the United Kingdom, under the Finance Act 2017 (UK), s 42, manufacturers must be registered if they exceed the “small producer threshold”. The small producer threshold is defined as a producer who produces more than 1 million litres of chargeable drink (that is, drink subject to the tax) within 12 months.¹⁶⁸

A *de minimis* threshold for sweet drink manufacturers would exempt some drinks from the tax altogether, regardless of whether it contains more than 5 g of sugar. The threshold at which a producer of sweet drinks should be classified as a manufacturer for the purposes of the tax should therefore be low in order to avoid evasion. The New Zealand threshold should be set at a similar level to the United Kingdom, pending further research into the average production of manufacturers in New Zealand.

Collecting an excise tax from manufacturers and importers is the most efficient choice. But it does not guarantee an increase in retail price, as that depends on the manufacturer or importer passing on the tax burden to the consumer. Instead, the manufacturer or importer could spread the tax burden across a range of products, including those not classified as a sweet drink. For example, Frucor Beverages Ltd may spread the cost of the tax incurred from the production of V energy drink across its Simply Squeezed and NZ Natural Water range, which contains no added sugar. If this occurs, the effect of the tax in limiting sweet drinks consumption will be minimal.¹⁶⁹

166 Currently, the liability for paying the tax rests on the distributor. Philadelphia Code §19.4105.

167 Goods and Services Tax Act 1985, s 51(1)(a).

168 Finance Act (UK), ss 38(2)(b) and 38(7).

169 Tan and Liu, above n 32, at 212–213.

A recent study from Cornell University into the Berkeley sugar tax found that less than half of the value of the tax was actually passed on to consumers.¹⁷⁰ In Nauru, only 30 per cent of the value of the tax was actually passed on to consumers due to cheap imports from nearby Asia and the pressures of a competitive market forcing manufacturers to absorb some of the tax.¹⁷¹

New Zealand can be distinguished from Berkeley and Nauru in two ways. First, New Zealand's beverage industry is a duopoly, meaning that there are only two main beverage producers; Coca-Cola Amatil and Frucor Beverages Ltd. This makes the New Zealand market somewhat less competitive than the beverage market in Berkeley and Nauru which means that manufacturers in New Zealand are less likely to absorb the cost of the tax in order to gain a competitive advantage. Secondly, New Zealand is geographically remote so there would be greater costs in importing cheap sweet drinks from neighbouring countries.

These initial observations require further research in two areas to establish whether imposing the tax on manufacturers and importers would undermine the effectiveness of the tax in raising the retail price of sweet drinks: first, the competitiveness of New Zealand's beverage market; and secondly, the ability of manufacturers and importers to distribute the burden of a tax across other products. The success of excise taxes imposed on manufacturers and importers but passed on to consumers has been seen in relation to tobacco and alcohol, both of which passed through the full tax burden, as well as some over-shifting.¹⁷²

Manufacturers and importers are the most appropriate parties to collect an excise tax from. The risk that the tax would not be reflected in the retail price of sweet drinks is small and provides further justification for a high tax rate to be imposed.

B *Earmarking revenue*

Earmarking refers to the ring-fencing of tax revenues from sweet drinks for the purpose of attributing that revenue to health promotion and covering third party costs.¹⁷³ The New Zealand Medical Association recommends earmarking any revenue collected from an excise tax on sweet drinks in New Zealand to be used for health programmes and further research into ways to reduce obesity.¹⁷⁴

Philadelphia intends to direct its sugar tax revenue toward a children's health education programme and the development of public parks and reserves. In Mexico, some of the revenue has been used to install drinking fountains in low decile schools.¹⁷⁵

Governments that outline the intended use of the sugar tax revenue are likely to garner greater public support for implementing such a tax.¹⁷⁶ It helps governments justify the tax as a means of recouping third party costs.¹⁷⁷

170 Finance Act, s 38. See also John Cawley and David E Frisvold "The Pass-Through of Taxes on Sugar-Sweetened Beverages to Retail Prices: The Case of Berkeley, California" (2017) 36 *Journal of Policy Analysis and Management* 303 at 303.

171 McDonald, above n 62, at 3.

172 At 44.

173 Waqanivalu others, above n 4, at 23.

174 New Zealand Medical Association "NZMA calls for tax on sugary drinks" (press release, 9 December 2016).

175 Duckett, Swerissen and Wiltshire, above n 57, at 45.

176 Waqanivalu and others, above n 4, at 24.

177 Duckett, Swerissen and Wiltshire, above n 57, at 44.

The cost of obesity in New Zealand (for 2006) was \$623.9 million a year in healthcare, and between 98 and 225 million in lost productivity.¹⁷⁸ The economic implications are significant and there is substantial strain on New Zealand's healthcare system. Earmarking tax revenue from sweet drinks could be used to recover some of this expense.

Identifying what the tax revenue could be used for should be a key—of any implementation strategy in New Zealand.

VI Conclusion

There is no refuting that sugar causes obesity. Sweet drinks contain alarming amounts of sugar and can be consumed quickly. Debates arise around whether a sugar tax is the proper means of reducing sugar consumption. A sugar tax on sweet drinks is not the singular solution to obesity. But, as this article has demonstrated, a properly designed sugar tax would reduce sales of sweet drinks and encourage consumers to substitute for healthier alternatives. Encouraging this behavioural change is an imperative part of the long-term goal to reduce the prevalence of obesity amongst adults and children.

The sugar tax debate is complex. As Sir Gluckman so eloquently stated: “the science is complex, the facts uncertain, the issue is urgent and of high public interest, there is a high values component and those values are in dispute”.¹⁷⁹

The sugar tax debate links into the wider issue of whether the Government should use fiscal policies to govern its citizens' behaviours.¹⁸⁰ This concern must be balanced, however, against the social costs of non-communicable diseases and the moral duty of the Government to protect its citizens against harmful externalities. One such externality is the commonality of cheap and readily available sugar products.

The New Zealand Government has a moral responsibility to the citizens of New Zealand to duly consider any proposal to reduce the issue of obesity and type 2 diabetes, particularly because these issues disproportionately affect children and people of low socio-economic status. A sugar tax on sweet drinks is a feasible and effective measure by which the country can hold Big Sugar accountable.

178 Peter Clough and Killian Destremau *The wider economic and social costs of obesity: A discussion of the non-health impacts of obesity in New Zealand* (New Zealand Institute of Economic Research, January 2015) at 25.

179 Gluckman, above n 10, at 3.

180 At 1.