

Item #30

List of relevant sugar tax publications

Draft summaries and abstracts of published sugar tax studies, prepared for internal use only, last updated 7 February 2017

## Sugar Tax Library (most recent first)

[Search underway to identify published studies between 19 September 2016 and 01 February 2017 that were not included here.]

Highlighted items being updated:

Author(s)	Type / date	Title	Link / source	Comments / summary
			<a href="http://www.cbc.ca/news/canada/north/nwt-planning-tax-on-soda-pop-for-2018-1.3966838">http://www.cbc.ca/news/canada/north/nwt-planning-tax-on-soda-pop-for-2018-1.3966838</a>	(Northwest Territories planning to implement a tax on sugary drinks)
			<a href="http://www.scoop.co.nz/stories/P01702/S00041/treasury-agrees-sugar-tax-doesnt-work.htm">http://www.scoop.co.nz/stories/P01702/S00041/treasury-agrees-sugar-tax-doesnt-work.htm</a>	(picked up on publication of Treasury working papers)
			<a href="http://www.telegraph.co.uk/news/2017/02/05/mars-bars-get-smaller-new-dairy-milk-bars-get-smaller-new-sugar-crackdown/">http://www.telegraph.co.uk/news/2017/02/05/mars-bars-get-smaller-new-dairy-milk-bars-get-smaller-new-sugar-crackdown/</a>	(heads up about public health England report on child obesity to be published in March) Choc bar sizes being reduced – voluntary industry measure UK
AHPC (Australian Health Policy Collaboration)	February 2017	Getting Australia's Health on Track – Priority policy actions for a healthier Australia	<a href="http://vuir.vu.edu.au/32486/1/Getting%20Australia's%20Health%20on%20Track%202016.pdf">http://vuir.vu.edu.au/32486/1/Getting%20Australia's%20Health%20on%20Track%202016.pdf</a>	Ten priority policy actions to prevent and reduce chronic diseases in Australia include a 20% flat tax as a health levy on sugar-sweetened beverages to reduce sugar and caloric intake. Claims this will reduce type 2 diabetes cases by 800 per year and generate \$400m annually. Outcomes evidence comes from a modelling study based on assumptions.
Creedy, J. (NZ Treasury)	Published online February 2017	Sugar Taxes and Changes in Total Calorie Consumption: A Simple Framework	<a href="http://www.treasury.govt.nz/publications/research-policy/wp/2016/16-06">http://www.treasury.govt.nz/publications/research-policy/wp/2016/16-06</a>	This paper briefly discusses the published evidence on consumer substitution to other foods in response to a tax on SSBs to other caloric items, and develops a theoretical model of consumer choice where there is a possibility of substitution. The author notes the overall poor quality of published studies and lack of evidence with respect to food and beverage substitutions that may offset any potential health benefits from reduced intake of SSBs. The theoretical model demonstrates that the success of a tax intended to reduce caloric intake is dependent on the extent to which consumers will reduce intake of SSBs as well as the extent to which they increase intake of other sources of calories. Evidence of reduced intake of SSBs alone is insufficient to be confident of a reduction in total caloric intake. The theoretical model also shows that the risk of unhealthy substitution offsetting any reduced consumption of SSBs is highest when substitutes have low prices, represent a large share of total expenditure relative to SSBs, and have high caloric content relative to SSBs. The paper concludes that the evidence gap with respect to substitutions is significant and that further research is needed.

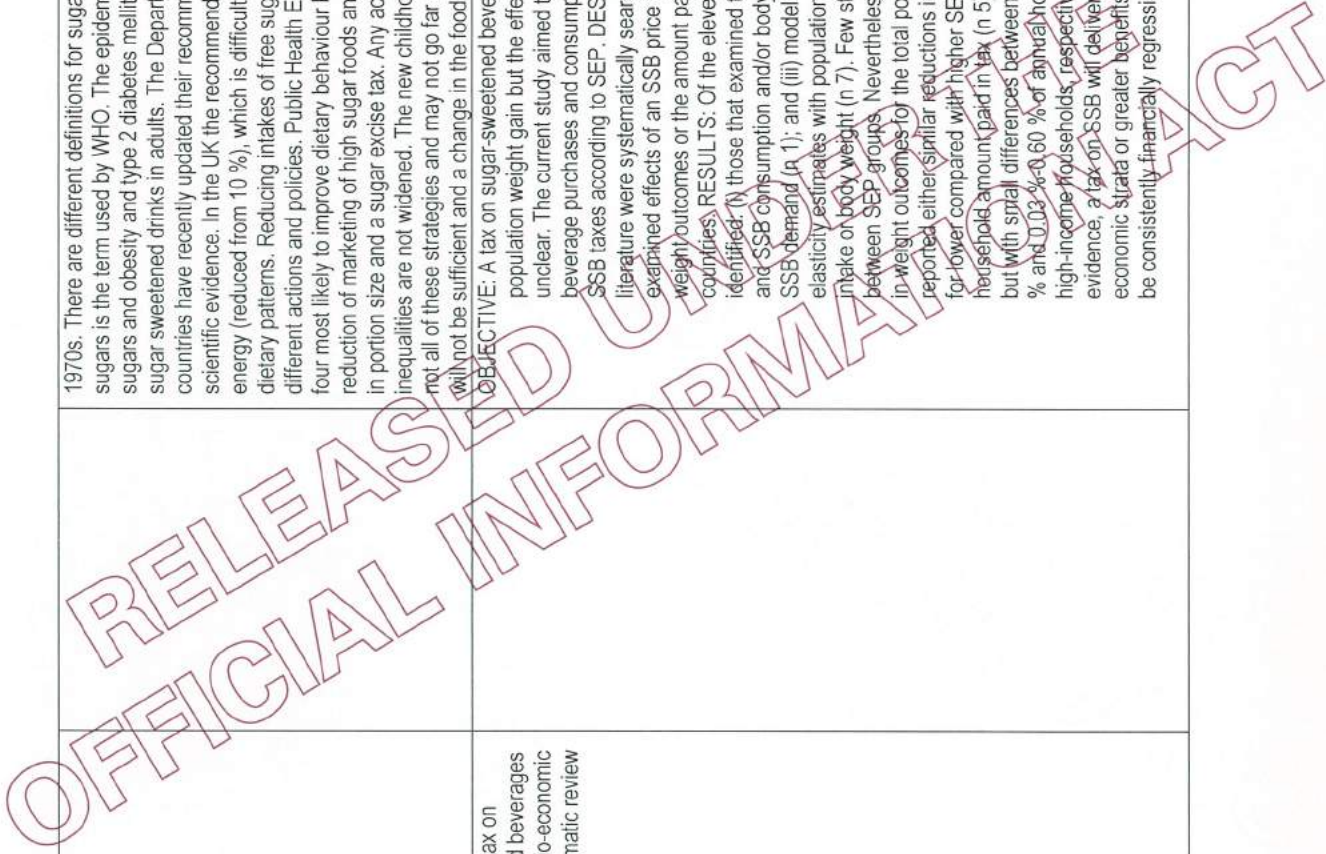
Gardiner, A. (NZ Treasury)	Published online February 2017	Implications of a Sugar Tax in New Zealand: Incidence and Effectiveness <a href="http://www.treasury.govt.nz/publications/research-policy/wp/2016/16-09">http://www.treasury.govt.nz/publications/research-policy/wp/2016/16-09</a>	<p>This working paper consists of three parts: A description of the problem motivating the sugar tax debate; a review of some of the literature on effects of sugar taxes; and, an analysis of New Zealand household survey data to determine the potential incidence of a SSB tax and a broader sugar tax on New Zealand households.</p> <p>The report highlights the weak links in the intervention logic from a tax to a price increase, to a reduction in consumption, to reduced caloric or sugar intake, to reduced risk factors, and ultimately to reduced morbidity and mortality.</p> <p>The paper notes that when the percentage of total energy intake attributable to SSBs is considered, a tax appears to be poorly targeted. It cites Ministry of Health data that suggests 5% of total energy intake is attributable to non-alcoholic beverages (some of which will not be SSBs), these being the fifth most important contributor to total energy intake. As a percentage of total sugar intake, SSBs are more important but are still only the second highest source of sugar for New Zealand adults.</p> <p>Data from the NZ Adult nutrition Survey is referred to in noting that there is a positive correlation between frequency of soft drink consumption and neighbourhood deprivation, a relationship that is also observed overseas although to varying degrees.</p> <p>The paper notes that there is wide variation in the methods used to estimate the extent to which consumers respond to price increases (elasticities). Only one study was identified that specifically estimated elasticities for the groups that would be targeted by a sugar tax (those with greatest consumption or who derive the greatest proportion of sugar or energy from SSBs). Many of the identified studies did not distinguish between sugar-sweetened and artificially sweetened products. The range of own-price elasticities (the responsiveness of demand for the targeted good to an increase in the price of the targeted good) was from -0.63 to -1.3. The only study that looked at specific groups found that Maori were less responsive to price increases than non-Maori.</p> <p>The paper also notes that cross-price elasticities (the change in demand for other, particularly untaxed substitute and complement goods, in response to a change in price of the targeted good) are essential to understanding how consumers respond and whether any health benefits might be expected from a tax. Some studies found that lower income consumers may be more price sensitive with respect to the targeted good, however those who are highly price sensitive are at higher risk of substituting to lower priced taxed items or untaxed items, many of which may be equally unhealthy.</p> <p>The literature review revealed limited data on cross-price elasticities and counter-intuitive results where results were reported. This was considered to be a major area of incomplete information. The claim that a sugar tax would have "progressive" health effects (greater health benefits for those who are poorest and least healthy) is put in doubt by the lack of evidence as to the likely substitutions that may occur.</p> <p>Overall, the paper presents a compelling case for the need for further research to inform the question of effectiveness of a sugar tax. In particular, the paper cautions that regressivity could be a concern and that there is insufficient evidence to support claims that a sugar tax could be appropriately targeted or effective at delivering health benefits.</p>
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Myers, A. Fig. D. et al.	Glob Public Health January 2017  (Published Online 28 August 2016)	Sugar and health in South Africa: Potential challenges to leveraging policy change.	<a href="https://www.ncbi.nlm.nih.gov/pubmed/26315435">https://www.ncbi.nlm.nih.gov/pubmed/26315435</a>	<p><b>Abstract</b></p> <p>A growing body of evidence indicates that excessive sugar consumption is driving epidemics of obesity and related non-communicable diseases (NCDs) around the world. South Africa (SA), a major consumer of sugar, is also the third most obese country in Africa, and 40% of all deaths in the country result from NCDs. A number of fiscal, regulatory, and legislative levers could reduce sugar consumption in SA. This paper focuses on a sugar-sweetened beverage (SSB) tax. The purpose of the paper is to highlight the challenges that government might anticipate. Policies cannot be enacted in a vacuum and discussion is focused on the industrial, economic, and societal context. The affected industry actors have been part of the SA economy for over a century and remain influential. To deflect attention, the sugar industry can be expected either to advocate for self-regulation or to promote public-private partnerships. This paper cautions against both approaches as evidence suggests that they will be ineffective in curbing the negative health impacts caused by excessive sugar consumption. In summary, policy needs to be introduced with a political strategy sensitive to the various interests at stake. In particular, the sugar industry can be expected to be resistant to the introduction of any type of tax on SSBs.</p>
Capewell, S. and Lloyd-Williams, F.	Peer-reviewed study  Published online 25 January 2017  The Lancet Public Health	Promotion of healthy food and beverage purchases: are subsidies and consumer education sufficient?	<a href="http://www.sciencedirect.com/science/article/pii/S2468266717300129">http://www.sciencedirect.com/science/article/pii/S2468266717300129</a>	<p>Not about sugar tax although sugar tax briefly mentioned.</p> <p><b>Summary</b></p> <p><b>Background</b> Evidence is mounting that price discounts can be effective in improving diet. This study examined the effectiveness of a 20% price discount on food and drink purchases with and without consumer education in remote Indigenous Australia.</p> <p><b>Methods</b> A 20% discount on fruit, vegetables, sugar, and artificially sweetened soft drinks was applied for 24 weeks in 20 communities in remote Indigenous Australia where the community store was managed by the Arnhem Land Progress Aboriginal Corporation (ALPA) or Outback Stores (OBS) in a stepped-wedge randomised trial. Communities were randomly allocated to a fixed framework of five sets of four stratified by-store association, ten stores (two in each set) were randomly assigned to receive consumer education. A store from each of the ALPA and OBS store groups (contained in separate opaque envelopes) was selected, and stores in turn continued to be consecutively allocated to the fixed store set framework, starting with the first store slot in the first store set, until all stores had been allocated. The effect of the discount on the weight of fruit and vegetables purchased (the primary endpoint) was assessed using weekly store sales data and mixed models per protocol. We did sensitivity analyses by repeating the analyses with the outliers included and repeating the analyses for the primary outcome measure removing each store one at a time. This trial was registered with Australian New Zealand Clinical Trials Registry, number ACTRN12613000694718.</p> <p><b>Findings</b> Weekly store sales data on all food and drink products sold in 20 stores were collected from July 1, 2012, to Dec 28, 2014. Price discount alone was associated with a 12.7% (95% CI 4.1–22.1) increase in purchases in grams of</p>

Schwendicke, F. and Stolpe, M.	Peer-reviewed study Published online 17 January 2017 BMC Public Health 17:88	Taxing sugar-sweetened beverages: impact on overweight and obesity in Germany.	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5240244/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5240244/</a>	fruit and vegetables combined (primary outcome), and a 19.8% (6.2–35.1) increase post discount (after vs before); an effect of 12 g and 18 g per capita per day. Sensitivity analyses did not modify the results for the primary outcome measure. <b>Interpretation</b> A 20% discount can only increase fruit and vegetable purchases to help protect against obesity and diet related disease to a certain extent. Large discounts might have a greater impact than small discounts. Creative merchandising approaches to consumer education could also be considered alongside fiscal interventions to achieve marked improvements in diet.
Berardi et al.	January, 2017 Applied Economics 48(41) 3976-3994 Peer-reviewed study	The impact of a 'soda tax' on prices: evidence from French micro data	<a href="https://hal-amu.archives-ouvertes.fr/hal-01440299/">https://hal-amu.archives-ouvertes.fr/hal-01440299/</a>	<p><b>Summary</b> Modelling study based on a 20% sales tax on SSBs in addition to the existing VAT in Germany. Elasticities used were from a previously published meta-analysis<sup>1</sup>. Own price elasticity for SSBs was -1.21 (mean across groups). Cross price elasticities for juice and milk were 0.637 and 0.150 (means).</p> <p><b>Limitations</b></p> <ul style="list-style-type: none"> <li>• Price elasticity of demand for SSBs based on (probably) overestimated previously published elasticities.</li> <li>• In the base case, elasticities were assumed not to differ by gender or age (some adjustment made for sensitivity analysis based on assumption due to lack of data on age-sex specific elasticities)</li> <li>• In the base case, the tax was assumed to be 100% passed through to consumers (80% pass-through assumed for sensitivity).</li> <li>• Substitution to juice and milk were the only substitutions considered.</li> <li>• No other changes in diet or in physical activity as a result of reduced SSB intake or as a result of weight loss was allowed for.</li> <li>• The effect of price promotions and stockpiling behaviour were ignored.</li> </ul> <p>Based on an original data set of more than 500,000 non-alcoholic beverage price records, we evaluate the impact on consumer prices of the 'soda tax', an excise on drinks with added sugar or sweetener, introduced in France in January 2012. We adopt a difference in differences approach and find that the tax was gradually passed through to the prices of the taxed beverages. After 6 months of its introduction, it was fully shifted to soda prices and almost fully shifted to the prices of fruit drinks, while the pass-through for flavoured waters was incomplete. We also find that the pass-through was heterogeneous across brands and retail groups</p>
Evans, CE.	Published online 5 December 2016	Sugars and health: a review of current evidence and future policy	<a href="https://www.ncbi.nlm.nih.gov/pubmed/27916004">https://www.ncbi.nlm.nih.gov/pubmed/27916004</a>	<p><b>Abstract</b> The automation of the process of extracting sugars in the 1900s reduced cost and increased availability of sugars leading to a dramatic rise in consumption, which reached a peak in the</p>

<sup>1</sup> Long MW, Gortmaker SL, Ward ZJ, Resch SC, Moodie ML, Sacks G, Swinburn BA, Carter RC, Claire Wang Y. Cost Effectiveness of a Sugar-Sweetened Beverage Excise Tax in the U.S. Am J Prev Med. 2015;49(1):112–23

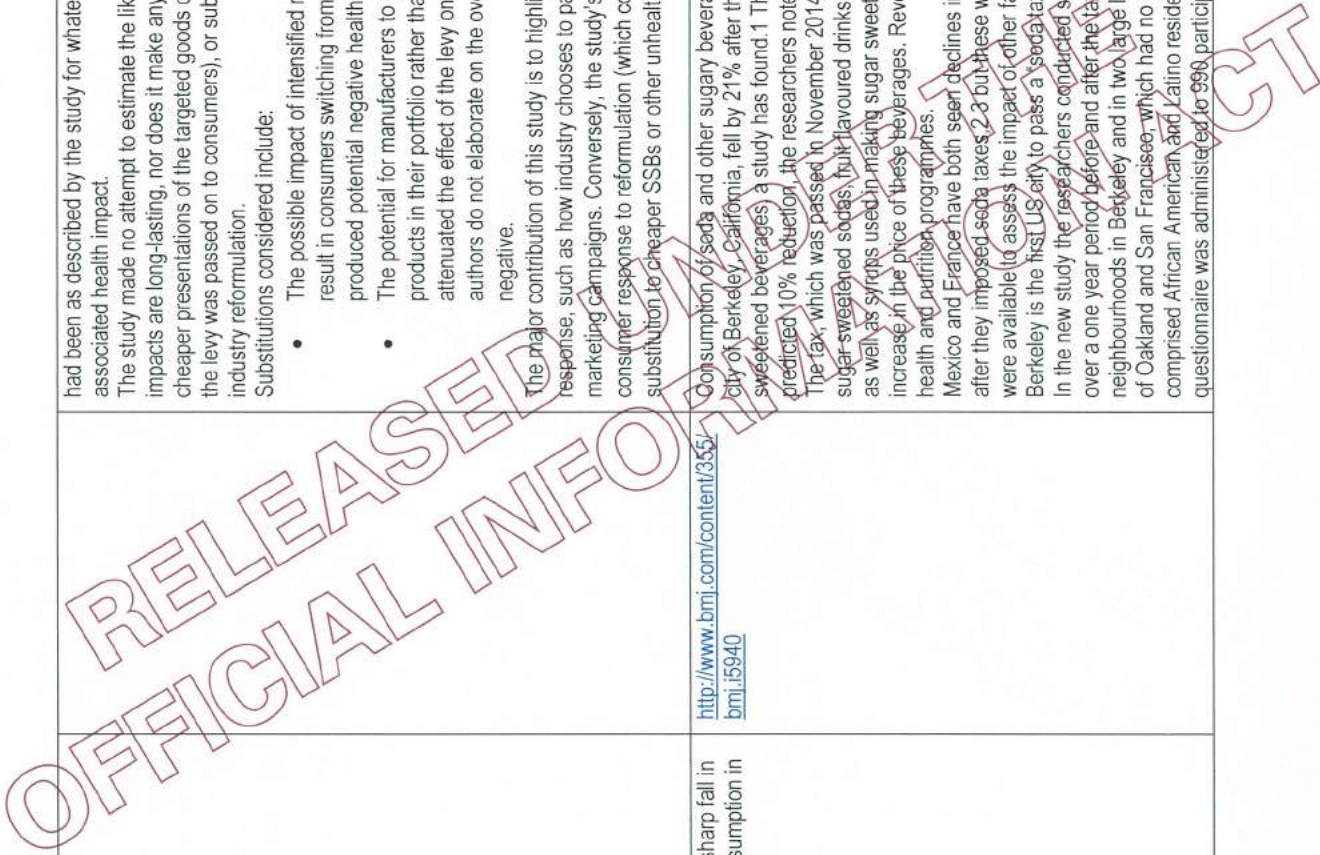
	Proc Nutr Soc		<p>1970s. There are different definitions for sugars not naturally available in foods, and free sugars is the term used by WHO. The epidemiological evidence of the associations between sugars and obesity and type 2 diabetes mellitus is fairly strong and consistent, particularly for sugar sweetened drinks in adults. The Department of Health in the UK and many other countries have recently updated their recommendations for free sugars as a result of this scientific evidence. In the UK the recommended amount of free sugars is currently 5 % of energy (reduced from 10 %), which is difficult to meet and very different from current British dietary patterns. Reducing intakes of free sugars is a challenge and will necessitate a range of different actions and policies. Public Health England has put forward eight suggestions but the four most likely to improve dietary behaviour based on available evidence are social marketing, reduction of marketing of high sugar foods and drinks to children, reformulation and reductions in portion size and a sugar excise tax. Any action taken needs to be evaluated to check inequalities are not widened. The new childhood obesity strategy has incorporated some but not all of these strategies and may not go far enough. It is likely that government policies alone will not be sufficient and a change in the food culture is necessary to see real progress.</p>
<p>Backholer K. et al.</p>	<p>December 2016 Public Health Nutrition 19(17): 3070-3084 Peer-reviewed study – systematic review</p>	<p>The impact of a tax on sugar-sweetened beverages according to socio-economic position: a systematic review of the evidence</p>	<p><b>OBJECTIVE:</b> A tax on sugar-sweetened beverages (SSB) has been proposed to address population weight gain but the effect across socio-economic position (SEP) is unclear. The current study aimed to clarify the differential impact(s) of SSB taxes on beverage purchases and consumption, weight outcomes and the amount paid in SSB taxes according to SEP. <b>DESIGN:</b> Databases (OVID and EMBASE) and grey literature were systematically searched in June 2015 to identify studies that examined effects of an SSB price increase on beverage purchases or consumption, weight/outcomes or the amount paid in tax across SEP, within high-income countries. <b>RESULTS:</b> Of the eleven included articles, three study types were identified: (i) those that examined the association between variation in SSB taxes and SSB consumption and/or body weight (n 3); (ii) price elasticity estimation of SSB demand (n 1); and (iii) modelling of hypothetical SSB taxes by combining price elasticity estimates with population SEP-specific beverage consumption, energy intake or body weight (n 7). Few studies statistically tested differences in outcomes between SEP groups. Nevertheless, of the seven studies that reported on changes in-weight outcomes for the total population following an increase in SSB price, all reported either similar reductions in weight across SEP groups or greater reductions for lower compared with higher SEP groups. All studies that examined the average household amount paid in tax (n 5) reported that an SSB tax would be regressive, but with small differences between higher- and lower-income households (0.10-1.0 % and 0.03 %-0.60 % of annual household income paid in SSB tax for low- and high-income households, respectively). <b>CONCLUSIONS:</b> Based on the available evidence, a tax on SSB will deliver similar population weight benefits across socio-economic strata or greater benefits for lower SEP groups. An SSB tax is shown to be consistently financially regressive, but to a small degree.</p>



Backholer K. et al.	December 2016 Editorial	Have we reached a tipping point for sugar-sweetened beverage taxes?	<a href="https://www.cambridge.org/core/journals/public-health-nutrition/article/doi/10.1017/S0954579416000037-8">https://www.cambridge.org/core/journals/public-health-nutrition/article/doi/10.1017/S0954579416000037-8</a>	
Briggs, ADM., Mylton, OT, Kehlbacher, A. et al.	Peer reviewed study Published online 15 December 2016 The Lancet	Health impact assessment of the UK soft drinks industry levy: a comparative risk assessment modelling study	<a href="http://www.thelancet.com/journal/2016/11/16/20161116-30037-8/abstract">http://www.thelancet.com/journal/2016/11/16/20161116-30037-8/abstract</a>	<p>This modelling study attempts to estimate the potential effects of the proposed<sup>2</sup> UK levy on sugar-sweetened beverages by considering three possible industry responses:</p> <ol style="list-style-type: none"> <li>1. Reformulation of SSBs to reduce sugar concentration;</li> <li>2. An increase in the price of SSBs and potentially non-sugar sweetened beverages produced by the manufacturers of SSBs; and,</li> <li>3. A change in the market share of high sugar, mid-sugar, and low-sugar SSBs.</li> </ol> <p>The motivation behind the study is to explore the possible outcomes of the levy and their potential impacts on health. The UK government has expressed a desire that the levy not be passed on to consumers through price rises, however that preference cannot be mandated and the industry's preferred response is not known.</p> <p>For each of the three possible industry responses, the authors defined a best case and worst case scenario, based on expert opinion (although it is unclear who the experts are or what their opinions were) and available evidence from previously published literature on SSB taxes. The scenarios are described as a set of assumptions.</p> <p>For each scenario, a comparative risk assessment model estimated the effect of the changes on SSB purchases and the resulting impact on dental caries, incidence of type 2 diabetes, and prevalence of obesity. This was done by way of a two-step process involving calculating the effect of SSB consumption as a risk factor for disease, and then calculating the effect on disease incidence and prevalence based on changes in the risk factor. Relationships between risk factors and diseases are assumed to be causal.</p> <p>Results were applied to the 2014 UK population and essentially describe what the incidence of dental caries and type 2 diabetes, and prevalence of obesity would be if consumption patterns</p>

<sup>2</sup> The levy was proposed in the 2016 budget, is subject to parliament passing the legislation in 2017, and is planned to come into effect in 2018.

			<p>had been as described by the study for whatever number of years is necessary to have the associated health impact.</p> <p>The study made no attempt to estimate the likely duration of impacts, implicitly assuming that impacts are long-lasting, nor does it make any attempt to identify possible substitutions to cheaper presentations of the targeted goods or to other foods and drinks (in scenarios where the levy was passed on to consumers), or substitutions to other products in response to industry reformulation.</p> <p>Substitutions considered include:</p> <ul style="list-style-type: none"> <li>• The possible impact of intensified marketing of mid-sugar varieties which could result in consumers switching from both high and low sugar varieties. This scenario produced potential negative health effects.</li> <li>• The potential for manufacturers to pass on the levy across all drinks or other products in their portfolio rather than just those targeted by the levy. This scenario attenuated the effect of the levy on reducing consumption of sugary drinks but the authors do not elaborate on the overall health effect which could potentially be negative.</li> </ul> <p>The major contribution of this study is to highlight the potential for unintended industry response, such as how industry chooses to pass on a levy and the potential effect of resulting marketing campaigns. Conversely, the study's major limitation is the lack of consideration of consumer response to reformulation (which could involve unhealthy choices) or consumer substitution to cheaper SSBs or other unhealthy items.</p>	<p>Consumption of soda and other sugary beverages in low income neighbourhoods of the US city of Berkeley, California, fell by 21% after the city imposed a "penny per ounce" tax on sugar sweetened beverages) a study has found.1 The observed decline was more than double the predicted 10% reduction, the researchers noted.</p> <p>The tax, which was passed in November 2014 and implemented in March 2015, applied to sugar sweetened sodas, fruit flavoured drinks, and sweetened water, coffee, and tea products, as well as syrups used in making sugar sweetened beverages. The tax resulted in an 8% increase in the price of these beverages. Revenues from this are used to support municipal health and nutrition programmes.</p> <p>Mexico and France have both seen declines in consumption of taxed sugar sweetened drinks after they imposed soda taxes 2.3 but these were national taxes, so no control communities were available to assess the impact of other factors that also may have affected consumption. Berkeley is the first US city to pass a "sodatax."</p> <p>In the new study the researchers conducted street surveys to compare beverage consumption over a one year period before and after the tax was imposed, in low income and minority neighbourhoods in Berkeley and in two large low income neighbourhoods in the nearby cities of Oakland and San Francisco, which had no soda taxes. Most of the neighbourhoods comprised African American and Latino residents. The study's beverage frequency questionnaire was administered to 998 participants about eight months before the vote, to</p>
<p>McCarthy, M.</p>	<p>Published online 4 November 2016</p> <p>Research News</p> <p>BMJ</p>	<p>Soda tax brings sharp fall in sugary drink consumption in Californian city</p>	<p><a href="http://www.bmj.com/content/351/bmj.i5940">http://www.bmj.com/content/351/bmj.i5940</a></p>	

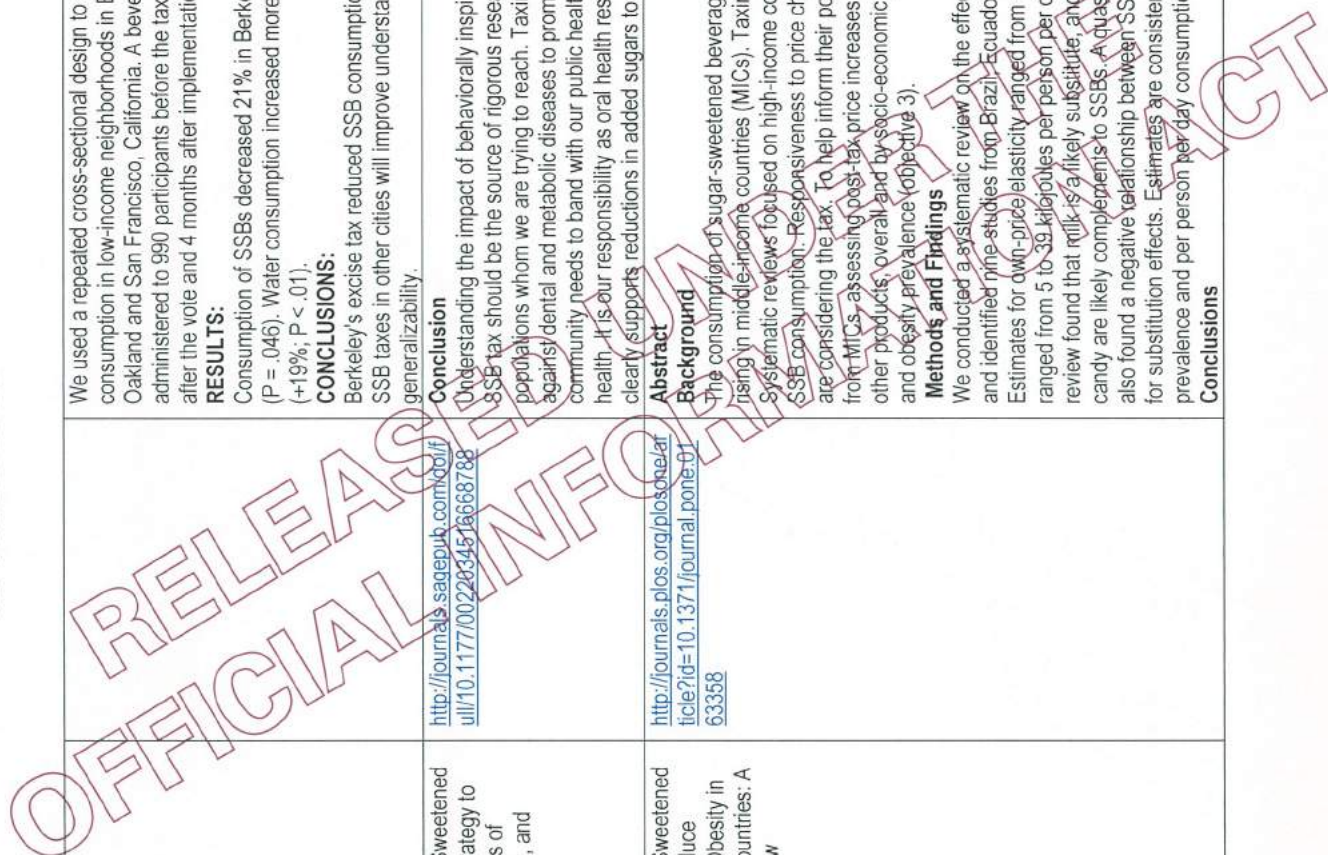




<p>lessen the effect of news coverage during the campaign, and to 1689 participants four months after the law's implementation.</p> <p>The researchers found that consumption of sugar-sweetened beverages in the Berkeley neighbourhoods fell by 21% after the soda tax was imposed, while consumption in the comparison communities rose by 4% (P=0.046). Over the same period water consumption rose in Berkeley by 63%, compared with an increase of only 19% in the other cities (P&lt;0.01). The 21% decline in soda consumption was in line with a 17% decline seen in low-income communities in Mexico after it imposed a one peso per litre (€0.04; US\$0.05) soda tax in 2013, the researchers wrote.</p> <p>They concluded, "If impacts in Berkeley persist, and evidence from other cities passing SSB [sugar-sweetened beverage] taxes corroborate our findings, widespread adoption of SSB excise taxes could have considerable fiscal and public health benefits."</p>		<p>lessen the effect of news coverage during the campaign, and to 1689 participants four months after the law's implementation.</p> <p>The researchers found that consumption of sugar-sweetened beverages in the Berkeley neighbourhoods fell by 21% after the soda tax was imposed, while consumption in the comparison communities rose by 4% (P=0.046). Over the same period water consumption rose in Berkeley by 63%, compared with an increase of only 19% in the other cities (P&lt;0.01). The 21% decline in soda consumption was in line with a 17% decline seen in low-income communities in Mexico after it imposed a one peso per litre (€0.04; US\$0.05) soda tax in 2013, the researchers wrote.</p> <p>They concluded, "If impacts in Berkeley persist, and evidence from other cities passing SSB [sugar-sweetened beverage] taxes corroborate our findings, widespread adoption of SSB excise taxes could have considerable fiscal and public health benefits."</p>	<p>Impact of a levy on sales of sugar-sweetened beverages within a national chain of restaurants: interrupted time-series analysis</p>	<p>http://www.thelancet.com/journal/2016/11/03/S0140-6736(16)32251-6.pdf</p>
<p><b>Abstract</b></p> <p><b>Background</b></p> <p>Consumption of sugar-sweetened beverages (SSBs) is associated with type 2 diabetes, weight gain, and dental caries. Taxes and levies on these beverages have been proposed as a way to reduce their consumption. However, only limited evidence exists for the effectiveness of taxes and levies where implemented. We aimed to assess the impact of a levy of £0.10 per drink on sales of SSBs delivered nationally in the UK within a restaurant setting using electronic point of sale data.</p> <p><b>Methods</b></p> <p>Point of sale data for non-alcoholic drinks were obtained from all eligible restaurants (n=37) in one restaurant chain between June 23, 2014, and Feb 28, 2016. We conducted an interrupted time-series analysis using linear mixed-models with restaurant as a random effect to assess whether there was a step-change in sales per customer of levy-eligible SSBs at 12 weeks and 6 months after implementation. We assessed effects on non-levied drinks (other soft drinks, juices, bottled waters, and diet cola) to explore substitution effects. Analyses also adjusted for seasonality and clustering. We stratified analyses by sales area (London, the North of the UK, the South of the UK) to assess regional effects.</p> <p><b>Findings</b></p> <p>Overall, compared with the preintervention period, sales per customer of levy-eligible SSBs declined by 11.7% (p=0.002) at 12 weeks and 9.8% (p=0.004) at 6 months. For non-levy drinks, sales per customer of fruit juice (main menu) increased at 12 weeks (+3.3%, p=0.051) and 6 months (+19.7%, p&lt;0.0001). At 6 months, there was a decrease in sales per customer of diet cola (-7.6%, p=0.002) and bottled waters (-6.7%, p=0.009), whereas sales of other non-levied soft drinks increased (+14.6%, p&lt;0.001). We found marked regional variations, with declines in sales of levy-eligible SSBs in London (-14.2%, p&lt;0.001) and the South (-13.8%, p&lt;0.001), but no change in the North.</p> <p><b>Interpretation</b></p> <p>To our knowledge, this is the first study to assess the impact on sales of a levy on SSBs delivered at scale in a national chain of restaurants. We found evidence of substantial declines in sales of levy-eligible SSBs, with the greatest effects seen in London and the South. A levy</p>	<p><b>Abstract</b></p> <p><b>Background</b></p> <p>Consumption of sugar-sweetened beverages (SSBs) is associated with type 2 diabetes, weight gain, and dental caries. Taxes and levies on these beverages have been proposed as a way to reduce their consumption. However, only limited evidence exists for the effectiveness of taxes and levies where implemented. 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We found marked regional variations, with declines in sales of levy-eligible SSBs in London (-14.2%, p&lt;0.001) and the South (-13.8%, p&lt;0.001), but no change in the North.</p> <p><b>Interpretation</b></p> <p>To our knowledge, this is the first study to assess the impact on sales of a levy on SSBs delivered at scale in a national chain of restaurants. We found evidence of substantial declines in sales of levy-eligible SSBs, with the greatest effects seen in London and the South. A levy</p>	<p><b>Abstract</b></p> <p><b>Background</b></p> <p>Consumption of sugar-sweetened beverages (SSBs) is associated with type 2 diabetes, weight gain, and dental caries. Taxes and levies on these beverages have been proposed as a way to reduce their consumption. However, only limited evidence exists for the effectiveness of taxes and levies where implemented. We aimed to assess the impact of a levy of £0.10 per drink on sales of SSBs delivered nationally in the UK within a restaurant setting using electronic point of sale data.</p> <p><b>Methods</b></p> <p>Point of sale data for non-alcoholic drinks were obtained from all eligible restaurants (n=37) in one restaurant chain between June 23, 2014, and Feb 28, 2016. We conducted an interrupted time-series analysis using linear mixed-models with restaurant as a random effect to assess whether there was a step-change in sales per customer of levy-eligible SSBs at 12 weeks and 6 months after implementation. We assessed effects on non-levied drinks (other soft drinks, juices, bottled waters, and diet cola) to explore substitution effects. Analyses also adjusted for seasonality and clustering. We stratified analyses by sales area (London, the North of the UK, the South of the UK) to assess regional effects.</p> <p><b>Findings</b></p> <p>Overall, compared with the preintervention period, sales per customer of levy-eligible SSBs declined by 11.7% (p=0.002) at 12 weeks and 9.8% (p=0.004) at 6 months. For non-levy drinks, sales per customer of fruit juice (main menu) increased at 12 weeks (+3.3%, p=0.051) and 6 months (+19.7%, p&lt;0.0001). At 6 months, there was a decrease in sales per customer of diet cola (-7.6%, p=0.002) and bottled waters (-6.7%, p=0.009), whereas sales of other non-levied soft drinks increased (+14.6%, p&lt;0.001). We found marked regional variations, with declines in sales of levy-eligible SSBs in London (-14.2%, p&lt;0.001) and the South (-13.8%, p&lt;0.001), but no change in the North.</p> <p><b>Interpretation</b></p> <p>To our knowledge, this is the first study to assess the impact on sales of a levy on SSBs delivered at scale in a national chain of restaurants. We found evidence of substantial declines in sales of levy-eligible SSBs, with the greatest effects seen in London and the South. A levy</p>	<p>Impact of a levy on sales of sugar-sweetened beverages within a national chain of restaurants: interrupted time-series analysis</p>	<p>http://www.thelancet.com/journal/2016/11/03/S0140-6736(16)32251-6.pdf</p>
<p>Cornelsen, L., Adams, J., Gasparini, A. et al.</p>	<p>Published November 2016</p> <p>The Lancet Volume 388, S15</p>	<p>Impact of a levy on sales of sugar-sweetened beverages within a national chain of restaurants: interrupted time-series analysis</p>	<p>http://www.thelancet.com/journal/2016/11/03/S0140-6736(16)32251-6.pdf</p>	<p>http://www.thelancet.com/journal/2016/11/03/S0140-6736(16)32251-6.pdf</p>

Briggs, A., Mytton, O.T., Elhoussein, A., Scarborough, P.	Published November 2016	Econometric and comparative risk assessment scenario modelling of the proposed UK sugary drink tax on health	<a href="http://www.thelancet.com/pdfs/journals/lancet/article/PIIS0140-6736(16)32245-2.pdf">http://www.thelancet.com/pdfs/journals/lancet/article/PIIS0140-6736(16)32245-2.pdf</a>	<p>on SSBs within restaurant settings has the potential to reduce sales and therefore consumption of these beverages.</p> <p><b>Abstract</b></p> <p><b>Background</b></p> <p>In March, 2016, the UK Chancellor of the Exchequer announced a two-tier industry levy on sugar-sweetened beverages (SSBs). Both the response from soft drink companies and the details of the legislation are uncertain. For example, companies might react by reformulating products, passing on the price change to consumers, or introducing new products and changing marketing strategy. We aimed to estimate the effect of possible industry responses on incidence of diabetes, obesity, and dental caries to inform design and implementation of the legislation.</p> <p><b>Methods</b></p> <p>We modelled the effects of an SSB price change, product reformulation, and a change in market share between high-sugar, mid-sugar, and low-sugar drinks. Routine data were identified on SSB consumption, expenditure, and waste, population height and weight, diabetes incidence, and dental caries. UK-specific own and cross-price elasticity data were estimated to model the effect of the tax on SSB purchases. A comparative risk assessment model was developed using published estimates of the association between SSB consumption and disease in adults and children.</p> <p><b>Findings</b></p> <p>An SSB price change resulting from the tax could result in 82 000 (95% CI 4000 to 183 000) fewer obese adults and children, 11 000 (4000 to 19 000) fewer cases of diabetes per year, and 149 000 (45 000 to 262 000) fewer decayed, missing, or filled teeth annually. Reformulation could result in 144 000 (5 000 to 307 000) fewer obese individuals, a fall in 19 000 (7 000 to 33 000) cases of diabetes, and 269 000 (82 000 to 471 000) fewer decayed, missing, or filled teeth. Change in market share between SSBs and diet soft drinks could lead to a 122 000 (5000 to 276 000) fall in the obese population, 16 000 (6000 to 29 000) fewer cases of diabetes, and 224 000 (65 000 to 412 000) fewer decayed, missing, or filled teeth. The greatest benefit for obesity and oral health would be among individuals under 18 years old, with people over 65 years old experiencing the largest decreases in incidence of diabetes.</p> <p><b>Interpretation</b></p> <p>How the soft drink industry implements the SSB levy could have substantial impacts on the health benefits of the policy. These data could be used to help inform the Government's consultation and maximise health impact.</p>
Falbe, J., et al.	October 2016	Impact of the Berkeley Excise Tax on Sugar- Sweetened Beverage Consumption	<a href="https://www.ncbi.nlm.nih.gov/pubmed/27552267">https://www.ncbi.nlm.nih.gov/pubmed/27552267</a>	<p><b>Abstract</b></p> <p><b>OBJECTIVES:</b></p> <p>To evaluate the impact of the excise tax on sugar-sweetened beverage (SSB) consumption in Berkeley, California, which became the first US jurisdiction to implement such a tax (\$0.07/oz) in March 2015.</p> <p><b>METHODS:</b></p>

<p>Lee, JY and Giannobile, WV</p>	<p>Published online 26 September 2016 Journal of Dental Research</p>	<p>Taxes on Sugar-Sweetened Beverages - A Strategy to Reduce Epidemics of Diabetes, Obesity, and Dental Caries?</p>	<p><a href="http://journals.sagepub.com/doi/full/10.1177/0022034516668788">http://journals.sagepub.com/doi/full/10.1177/0022034516668788</a></p>	<p>We used a repeated cross-sectional design to examine changes in pre- to posttax beverage consumption in low-income neighborhoods in Berkeley versus in the comparison cities of Oakland and San Francisco, California. A beverage frequency questionnaire was interviewer administered to 990 participants before the tax and 1689 after the tax (approximately 8 months after the vote and 4 months after implementation) to examine relative changes in consumption.</p> <p><b>RESULTS:</b> Consumption of SSBs decreased 21% in Berkeley and increased 4% in comparison cities (P = .046). Water consumption increased more in Berkeley (+63%) than in comparison cities (+19%; P &lt; .01).</p> <p><b>CONCLUSIONS:</b> Berkeley's excise tax reduced SSB consumption in low-income neighborhoods. Evaluating SSB taxes in other cities will improve understanding of their public health benefit and their generalizability.</p>
<p>Nakhimovsky, S., Feigl, A., Avila, C. et al.</p>	<p>Published online 26 September 2016 PLOS One</p>	<p>Taxes on Sugar-Sweetened Beverages to Reduce Overweight and Obesity in Middle-Income Countries: A Systematic Review</p>	<p><a href="http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0163358">http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0163358</a></p>	<p><b>Conclusion</b> Understanding the impact of behaviorally inspired policy, such as the implementation of the SSB tax should be the source of rigorous research to fully understand the implications to the populations whom we are trying to reach. Taxing SSBs can be an important weapon in our war against dental and metabolic diseases to promote oral and systemic well-being. The oral health community needs to band with our public health colleagues to support SSB taxation to improve health. It is our responsibility as oral health researchers to translate the mounting evidence that clearly supports reductions in added sugars to promote oral health for the benefit of the public.</p> <p><b>Abstract</b> <b>Background</b> The consumption of sugar-sweetened beverages (SSBs), which can lead to weight gain, is rising in middle-income countries (MICs). Taxing SSBs may help address this challenge. Systematic reviews focused on high-income countries indicate that taxing SSBs may reduce SSB consumption. Responsiveness to price changes may differ in MICs, where governments are considering the tax. To help inform their policy decisions, this review compiles evidence from MICs, assessing post-tax price increases (objective 1), changes in demand for SSBs and other products, overall and by socio-economic groups (objective 2), and effects on overweight and obesity prevalence (objective 3).</p> <p><b>Methods and Findings</b> We conducted a systematic review on the effectiveness of SSB taxation in MICs (1990–2016) and identified nine studies from Brazil, Ecuador, India, Mexico, Peru, and South Africa. Estimates for own-price elasticity ranged from -0.6 to -1.2, and decreases in SSB consumption ranged from 5 to 39 kilograms per person per day given a 10% increase in SSB prices. The review found that milk is a likely substitute, and foods prepared away from home, snacks, and candy are likely complements to SSBs. A quasi-experimental study and two modeling studies also found a negative relationship between SSB prices and obesity outcomes after accounting for substitution effects. Estimates are consistent despite variation in baseline obesity prevalence and per person per day consumption of SSBs across countries studied.</p> <p><b>Conclusions</b></p>



Colchero, M.A., Guerrero-Lopez, C.M., Molina, M., Rivera, J.A.	Published 26 September 2016 PLOS One	Beverages Sales in Mexico before and after Implementation of a Sugar Sweetened Beverage Tax	<a href="http://journals.plos.org/plosone/article/related?id=10.1371/journal.pone.0163463">http://journals.plos.org/plosone/article/related?id=10.1371/journal.pone.0163463</a>	<p>The review indicates that taxing SSBs will increase the prices of SSBs, especially sugary soda, in markets with few producers. Taxing SSBs will also reduce net energy intake by enough to prevent further growth in obesity prevalence, but not to reduce population weight permanently. Additional research using better survey data and stronger study designs is needed to ascertain the long-term effectiveness of an SSB tax on obesity prevalence in MICs.</p> <p><b>Abstract Objective</b> To estimate changes in sales of sugar sweetened beverages (SSB) and plain water after a 1 peso per liter excise SSB tax was implemented in Mexico in January 2014.</p> <p><b>Material and Methods</b> We used sales data from the Monthly Surveys of the Manufacturing Industry from January 2007 to December 2015. We estimated Ordinary Least Squares models to assess changes in per capita sales of SSB and plain water adjusting for seasonality and the global indicator of economic activity.</p> <p><b>Results</b> We found a decrease of 7.3% in per capita sales of SSB and an increase of 5.2% of per capita sales of plain water in 2014–2015 compared to the pre-tax period (2007–2013).</p> <p><b>Conclusions</b> Adjusting for variables that change over time and that are associated with the demand for SSB, we found the tax was associated with a reduction in per capita sales of SSB. The effectiveness of the tax should be evaluated in the medium and long term.</p>
Bollard T, Maubach N, Walker N and Ni Mhurchu C.	Published online 1 September 2016 International Journal of Behavioural Nutrition and Physical Activity 13:95 Peer-reviewed study	Effects of plain packaging, warning labels, and taxes on young people's predicted sugar-sweetened beverage preferences: an experimental study	<a href="https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-016-0421-7">https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-016-0421-7</a>	<p><b>Abstract</b> Consumption of sugar-sweetened beverages (SSBs) is associated with increased risk of obesity, diabetes, heart disease and dental caries. Our aim was to assess the effects of plain packaging, warning labels, and a 20 % tax on predicted SSB preferences, beliefs and purchase probabilities amongst young people.</p> <p><b>Methods</b> A 2x3 x 2 between-group experimental study was conducted over a one-week period in August 2014. Intervention scenarios were delivered, and outcome data collected, via an anonymous online survey. Participants were 604 New Zealand young people aged 13–24 years who consumed soft drinks regularly. Participants were randomly allocated using a computer-generated algorithm to view one of 12 experimental conditions, specifically images of branded versus plain packaged SSBs, with either no warning, a text warning, or a graphic warning, and with or without a 20 % tax. Participant perceptions of the allocated SSB product and of those who might consume the product were measured using seven-point Likert scales. Purchase probabilities were measured using 11-point Juster scales.</p> <p><b>Results</b> Six hundred and four young people completed the survey (51 % female, mean age 18 (SD 3.4) years). All three intervention scenarios had a significant negative effect on preferences for SSBs (plain packaging: <math>F(6, 587) = 54.4, p &lt; 0.001</math>; warning label: <math>F(6, 588) = 19.8, p &lt; 0.001</math>; 20 % tax: <math>F(6, 587) = 11.3, p &lt; 0.001</math>). Plain packaging and warning labels also had a significant negative impact on reported likelihood of purchasing SSBs (<math>p = &lt; 0.001</math>). A 20 % tax</p>

				reduced participants' purchase probability but the difference was not statistically significant ( $p = 0.2$ ). <b>Conclusions</b> Plain packaging and warning labels significantly reduce young people's predicted preferences for, and reported probability of purchasing, SSBs. News/opinion
Carolyn Heneghan	News article opinion piece September 19, 2016  September 12, 2016  News article Food DIVE	A sugar tax: insanity is catching  Something teens actually pay attention to: Sugar warning labels on drinks	<a href="http://spectator.com.au/2016/09/a-sugar-tax-insanity-is-catching/">http://spectator.com.au/2016/09/a-sugar-tax-insanity-is-catching/</a>  <a href="http://www.fooddive.com/news/something-teens-actually-pay-attention-to-sugar-warning-labels-on-drinks/426093/">http://www.fooddive.com/news/something-teens-actually-pay-attention-to-sugar-warning-labels-on-drinks/426093/</a>	Article based on published study of responsiveness to labelling. No actual sugar tax in study.
Myers, A. Fig. D. et al.	Published Online 28 August 2016  Glob Public Health January 2017	Sugar and health in South Africa: Potential challenges to leveraging policy change	<a href="https://www.ncbi.nlm.nih.gov/pubmed/26315455">https://www.ncbi.nlm.nih.gov/pubmed/26315455</a>	<b>Abstract</b> A growing body of evidence indicates that excessive sugar consumption is driving epidemics of obesity and related non-communicable diseases (NCDs) around the world. South Africa (SA), a major consumer of sugar, is also the third most obese country in Africa, and 40% of all deaths in the country result from NCDs. A number of fiscal, regulatory, and legislative levers could reduce-sugar consumption in SA. This paper focuses on a sugar-sweetened beverage (SSB) tax. The purpose of the paper is to highlight the challenges that government might anticipate. Policies cannot be enacted in a vacuum and discussion is focused on the industrial, economic, and societal context. The affected industry actors have been part of the SA economy for over a century and remain influential. To deflect attention, the sugar industry can be expected either to advocate for self-regulation or to promote public-private partnerships. This paper cautions against both approaches as evidence suggests that they will be ineffective in curbing the negative health impacts caused by excessive sugar consumption. In summary, policy needs to be introduced with a political strategy sensitive to the various interests at stake. In particular, the sugar industry can be expected to be resistant to the introduction of any type of tax on SSBs.
Gollust, S., Tang, X., White, J.M., French, S.A.	Published online July 2016  Public Health Nutrition  Vol 20, Issue 1 January 2017	Young adults' responses to alternative messages describing a sugar-sweetened beverage price increase	<a href="https://www.cambridge.org/core/journals/public-health-nutrition/article/young-adults-responses-to-alternative-messages-describing-a-sugar-sweetened-beverage-price-increase/CBC1BA42B7D37725DB2F524D83FBEE6E">https://www.cambridge.org/core/journals/public-health-nutrition/article/young-adults-responses-to-alternative-messages-describing-a-sugar-sweetened-beverage-price-increase/CBC1BA42B7D37725DB2F524D83FBEE6E</a>	<b>Abstract</b> Many jurisdictions in the USA and globally are considering raising the prices of sugar-sweetened beverages (SSB) through taxes as a strategy to reduce their consumption. The objective of the present study was to identify whether the rationale provided for an SSB price increase affects young adults' behavioural intentions and attitudes towards SSB. Participants were randomly assigned to receive one of eight SSB price increase rationales. Intentions to purchase SSB and attitudes about the product and policy were measured. A forty-six-item cross-sectional internet survey. Undergraduate students (n 494) at a large US Midwestern university. Rationale type was significantly associated with differences in participants' purchasing intentions for the full sample ( $F(7, 485) = 2.53$ , $P = 0.014$ ). Presenting the rationale for an SSB price increase as a user fee, an effort to reduce obesity, a strategy to offset health-care costs or to protect children led to lower SSB purchasing intentions compared with a message with no

Eric M. VanEpps, PhD, 1,2 Christina A. Roberto, PhD2	July? 2016  Published study  American Journal of Preventive Medicine Am J Prev Med 2016	The influence of Sugar- Sweetened Beverage Warnings A Randomized Trial of Adolescents' Choices and Beliefs	<a href="http://www.aprmonline.org/article/S0749-3747(16)30258-8/pdf">http://www.aprmonline.org/article/S0749-3747(16)30258-8/pdf</a>	rationale. Rationale type was also significantly associated with differences in perceptions of soda companies (F7,485=2.10, P=0.043); among low consumers of SSB, messages describing the price increase as a user fee or tax led to more negative perceptions of soda companies.  The rationale attached to an SSB price increase could influence consumers. However, these message effects may depend on individuals' level of SSB consumption.  Computer-based experiment – hypothetical choices. Controlling for frequency of beverage purchases, significantly fewer adolescents chose a sugar-sweetened beverage in three of the four warning label conditions (65%, 63%, and 61% than in the no label (77%) condition. Adolescents in the four warning label conditions chose fewer sugarsweetened beverage coupons and believed that sugar-sweetened beverages were less likely to help them lead a healthy life and had more added sugar compared with the no label condition. Conclusions: Health-related warning labels on sugar-sweetened beverages improved adolescents' recognition of the sugar content of such beverages and reduced hypothetical choices to buy sugarsweetened beverages.
Fifi Peters	August 17, 2016  News article	Sugar tax could cost 70,000 jobs says study	<a href="http://www.bdlive.co.za/business/2016/08/17/sugar-tax-could-cost-70000-jobs-says-study">http://www.bdlive.co.za/business/2016/08/17/sugar-tax-could-cost-70000-jobs-says-study</a>	Study by Oxford Economics and commissioned by beverage industry says South African sugar tax could result in 60,000 to 70,000 jobs lost.
Martin, Ben	August 16, 2016  News article	Job fears mount as businesses unite to fight UK sugar tax	<a href="http://www.telegraph.co.uk/business/2016/08/15/job-fears-mount-as-businesses-unite-to-fight-uk-sugar-tax/">http://www.telegraph.co.uk/business/2016/08/15/job-fears-mount-as-businesses-unite-to-fight-uk-sugar-tax/</a>	Study by Oxford Economics and commissioned by beverage industry says UK sugar tax could result in 4000 jobs lost.
Blatchford, Andy	August 8, 2016	Federal government investigated soda tax on sugary drinks	<a href="http://www.cbc.ca/news/politics/soda-tax-canada-1.3712411">http://www.cbc.ca/news/politics/soda-tax-canada-1.3712411</a>	The Canadian federal government investigated sugar tax as an option before Budget 16 but decided against it due to the lack of consistent evidence and it being too early to determine whether it's been successful in Mexico.
Pekic, Vladimir	June 28, 2016	Portugal plans to tax sugar-sweetened drinks	<a href="https://www.agra-net.com/agra/foodnews/beverage/soft-drinks/portugal-plans-to-tax-sugar-sweetened-drinks-519335.htm">https://www.agra-net.com/agra/foodnews/beverage/soft-drinks/portugal-plans-to-tax-sugar-sweetened-drinks-519335.htm</a>	Very limited information. Just breaking news that Portugal has announced plans to implement a tax on sugar-sweetened beverages. Question around motive – see Boyle article below.
Aguilar, Gutierrez, Seira	June 9, 2016	Taxing to Reduce Obesity	<a href="http://www.enriqueseira.com/uploaads/3/1/5/9/31599787/obesidad_02_junio.pdf">http://www.enriqueseira.com/uploaads/3/1/5/9/31599787/obesidad_02_junio.pdf</a>	Abstract We measure the effects of two federal taxes in Mexico aimed at reducing obesity by taxing sugary drinks (SDs) and high-caloric density foods (HCFs). We use a weekly scanner panel dataset with more than 58,721 product barcodes and found more than full price pass-through for SDs and 66 percent pass-through for HCFs, which translated to 6 percent lower SD consumption but no decrease in HCFs. We found substantial substitution towards non-taxed goods and to smaller product presentations. Overall, sugar consumption decreased, fat increased, while calories and BMI remained unchanged. We estimate a demand model and simulate better revenue-equivalent taxes.
Boyle, Joseph	June 1, 2016  News article Euobserver	Warning over Europe's sugar-guzzling habits	<a href="https://euobserver.com/social/133636">https://euobserver.com/social/133636</a>	Article about research on SSB consumption in Europe. Contains interesting facts, such as Portugal reducing SSB consumption by 19% between 2010 and 2015. Weird, considering Portugal has now decided to implement a tax on SSBs.

Rich, Katherine	April/May 2016 Issue of Food New Zealand News article	Did the Mexican sugar tax really reduce sales?	Food New Zealand	Based on supermarket scan data (approx. 65% of sales in Mexico) and two whole years of data (2014 and 2015), shows that sales have recovered to pre-tax levels. The drop in sales in 2014 which formed the basis of several academic publications was temporary and also very small – 0.5% of pre-tax sales. In contrast, also based on Nielsen data (carbonated drinks as a category), NZ sales dropped 5% over the previous 12 months – Nielsen collects this routinely and publishes a rolling average change in sales for subscribers.
Aguilar, Gutierrez, Seira	To be published 2016	Taxing Calories in Mexico (Preliminary and incomplete Draft)	Available online	<b>Abstract:</b> We exploit a unique panel dataset of about 8000 households, including detailed information of their purchases of products at the barcode level to estimate the impact of the introduction of a series of taxes on sugary drinks and other products with high caloric density in Mexico using an "event-study" type methodology. We find almost full pass-through of the taxes to prices. We estimate a price-elasticity for the demand of sugary drinks close to -0.5, and for total calories consumed of -0.3, albeit not statistically significant (all these results are preliminary, estimated with 10% of the sample and the caloric content of 72 percent of food purchases). <b>Conclusion:</b> Obesity and its cost are high and rising and we know little about the effectiveness of different policy tools. We measure the short term impact of one such tool: taxing high caloric density foods. The results are still preliminary, but the evidence shows that the effects of the Mexican taxes on calories consumed in-home are very small. Results also show that lower SES may pay a higher percentage of their income from these taxes.
Cameron Slater	Blog post April 27, 2016	The lunacy of an effective Sugar Tax that would mean wine is cheaper than Coke	<a href="http://www.whaleoil.co.nz/2016/04/the-lunacy-of-an-effective-sugar-tax-that-would-mean-wine-is-cheaper-than-coke/">http://www.whaleoil.co.nz/2016/04/the-lunacy-of-an-effective-sugar-tax-that-would-mean-wine-is-cheaper-than-coke/</a>	Just because consumption reduces it does not mean obesity reduces. Most people drink fizzy without getting fat or losing their teeth. All a reduction in total consumption could mean is that the already responsible people are drinking less. The rest just carry on. Whether a tax will even change the price of sugary drinks and what effect it will have on sugar consumption is not known. It is too simplistic to say that a tax is a good idea because it will raise the price and that in turn will reduce consumption and obesity. It is also too simplistic to ignore the possibility that it could do more harm than good and increase consumption.
Eric Crampton	Opinion April 26, 2016	Sugar taxes and their ilk would break NZ's elegant tax system	<a href="http://www.stuff.co.nz/national/health/79280577/sugar-taxes-and-their-ilk-would-break-nzs-elegant-tax-system">http://www.stuff.co.nz/national/health/79280577/sugar-taxes-and-their-ilk-would-break-nzs-elegant-tax-system</a>	If a soda tax makes sense, then it makes sense regardless of whether the public health campaigns are the best use of funds. And if the public health campaigns are that valuable, why is the government not already cutting other less beneficial programmes to fund them? The answer of course is that public health campaigns worth running are already largely being tried, and that a soda tax makes little economic sense.
Karen Brown, Health Correspondent	News article April 21, 2016	Little evidence sugar tax works, think tank says	<a href="http://www.radionz.co.nz/news/national/301989/think-tank-sour-on-sugar-tax-idea">http://www.radionz.co.nz/news/national/301989/think-tank-sour-on-sugar-tax-idea</a>	New Zealand should avoid a sugar tax as there is little robust evidence it reduces obesity, a public policy think tank says. The New Zealand Initiative released its 67 page report, <i>The Health of the State</i> , last night, looking at regulation, and specifically food and obesity, smoking and alcohol. In a chapter on food taxes it acknowledged obesity was a major problem in New Zealand, but said a food tax would not necessarily help.
Veerman J, Sacks G, Antonopoulos N, Martin J.	Peer-reviewed study PLOS One	The Impact of a Tax on Sugar-Sweetened Beverages on Health	<a href="http://www.opc.org.au/latest/news/mediareleases/pages/sugary-drinks-tax-could-save-">http://www.opc.org.au/latest/news/mediareleases/pages/sugary-drinks-tax-could-save-</a>	

Lucy Cormack	April 13, 2016 News article	and Health Care Costs: A Modelling Study Sugar tax could save 1600 lives, raise \$400 million, Australian research shows	<a href="http://www.sprn.com.au/business/consumer-affairs/sugar-tax-could-save-1600-lives-raise-400-million-australian-research-shows-20160413-go5fnhgb.html">1600-lives-study.aspx#v79_emN3L8</a> <a href="http://www.sprn.com.au/business/consumer-affairs/sugar-tax-could-save-1600-lives-raise-400-million-australian-research-shows-20160413-go5fnhgb.html">http://www.sprn.com.au/business/consumer-affairs/sugar-tax-could-save-1600-lives-raise-400-million-australian-research-shows-20160413-go5fnhgb.html</a>	A 20 per cent tax on sugar-sweetened beverages could save more than 1600 lives and raise at least \$400 million a year for health initiatives, new Australian research shows. The study, co-written by the Obesity Policy Coalition and the University of Queensland's School of Public Health, is the first of its kind to model Australian population data to assess the impact of a sugary drinks tax. In the first 25 years of a sugary drinks tax there could be 16,000 fewer cases of type 2 diabetes, 4400 fewer cases of heart disease and more than 1000 fewer cases of stroke, according to the study.
Rich Pedroncelli	News article April 12, 2016	California soda tax bill pulled without a vote	<a href="http://www.sacbee.com/news/politics-government/capitol-alert/article7436032.html">http://www.sacbee.com/news/politics-government/capitol-alert/article7436032.html</a>	Elections come and go, legislative leaders rise and fall, but one constant remains in Sacramento: Soda taxes can't get traction. A bill to impose a two-cents-per-ounce tax on sugary beverages was pulled by its author ahead of its scheduled first committee vote on Tuesday, with Assemblyman Richard Bloom, D-Santa Monica, concluding he lacked the votes. Assembly Bill 2782 is likely done for the year, the latest setback for a protracted but largely unsuccessful public health campaign. Citing soaring obesity and diabetes rates, public health officials and physicians call the ubiquity of sugary drinks a leading menace to healthy living. Many evoke battles against the tobacco industry in warning that beverage companies are concealing the risk of their product. Year after year, that campaign has met defeat in Sacramento. Two nights ago TV3 was doing its bit to pressure Health Minister Jonathan Coleman into introducing a sugar tax in NZ by running 'Jamie's Sugar Rush'.
Cameron Slater	Blog post Whale Oil Beef Hooked – April 13, 2016	TV3 Pimps Sugar Tax	<a href="http://www.whaleoil.co.nz/2016/04/tv3-pimps-sugar-tax/">http://www.whaleoil.co.nz/2016/04/tv3-pimps-sugar-tax/</a>	Year after year, that campaign has met defeat in Sacramento. Two nights ago TV3 was doing its bit to pressure Health Minister Jonathan Coleman into introducing a sugar tax in NZ by running 'Jamie's Sugar Rush'.
Stacey Kirk	Stuff- News article April 11, 2016	Prime Minister John Key holds firm against sugar tax, despite poll indicating public support	<a href="http://www.stuff.co.nz/national/politics/78805245/prime-minister-john-key-holds-firm-against-sugar-tax-despite-poll-indicating-public-support">http://www.stuff.co.nz/national/politics/78805245/prime-minister-john-key-holds-firm-against-sugar-tax-despite-poll-indicating-public-support</a>	John Key's response to pressure to implement a sugar tax.
Colmar-Brunton	PDF – Poll methodology 10 April 2016	ONE News Colmar Brunton Poll 2 – 6 April 2016	<a href="http://colmarbrunton.co.nz/wp-content/uploads/160410-ONE-News-Colmar-Brunton-Poll-report-2-6-Apr-2016-prelim.pdf">http://colmarbrunton.co.nz/wp-content/uploads/160410-ONE-News-Colmar-Brunton-Poll-report-2-6-Apr-2016-prelim.pdf</a>	Methodology for the Colmar-Brunton poll which measured, amongst other things, public support for a sugar tax similar to the one in the UK.
Riahnon McConnell	News Article 8 April 2016	Wellingtonians want sugar tax on soft drinks	<a href="http://www.stuff.co.nz/dominion-post/news/wellington/78456825/Wellingtonians-">http://www.stuff.co.nz/dominion-post/news/wellington/78456825/Wellingtonians-</a>	3 Wellington MPs, including Peter Dunne, respond to poll showing 70% of Wellingtonians are in favour of a tax on sugary drinks, saying that there is not enough evidence it will actually work.



Eric Crampton (Head of Research, NZ Initiative)	Blog post – Offsetting Behaviour April 5, 2016	Against Hypothecation	<a href="http://www.bmi.com/content/352/bmi/1627">http://www.bmi.com/content/352/bmi/1627</a>	<a href="http://www.nytimes.com/2016/03/29/upshot/how-britains-soda-tax-plan-could-spur-new-low-sugar-drinks.html?_r=0">http://www.nytimes.com/2016/03/29/upshot/how-britains-soda-tax-plan-could-spur-new-low-sugar-drinks.html?_r=0</a>	Blog post about why a tax should make sense without promises of using the revenues in an attractive way.
Gulland, A.	New Item  Published online 21 March 2016 BMJ	Headline writers find sweet spot with sugar tax	<a href="http://www.thelocal.se/20160322/why-there-wont-be-a-sugar-tax-in-sweden">http://www.thelocal.se/20160322/why-there-wont-be-a-sugar-tax-in-sweden</a>	<a href="http://www.nzherald.co.nz/news/article.cfm?c_id=1&amp;objid=11610731">http://www.nzherald.co.nz/news/article.cfm?c_id=1&amp;objid=11610731</a>	Described media response (mostly negative) to UK announcement that a tax on sugary drinks would be implemented in 2018. Including: "The Sun newspaper's front page featured a mock-up photograph of Osborne dressed as the English rapper Dizzee Rascal, accompanied by the headline "Fizzy Rascal." However, the newspaper intimated that the tax was bonkers, noting that the levy had not worked in other parts of the world and would hit poor people the hardest. The Independent's front page featured a cartoon of a sinister and overweight chancellor proffering a spoon of sugar while hiding a bottle marked "Budget—toxic." Its editorial described a "bittersweet budget," with eye catching announcements such as the sugar tax "distracting the public's attention from another disappointing set of figures on the wider economy." The newspaper said that the tax had the potential to change the face of the nation but added, "In principle this has always been a fine idea but the danger is surely that it will simply deprive poorer families of spending power if they have to pay more for their soft drinks."
Margot Sanger-Katz	News article New York Times March 29, 2016	How Britain's Soda Tax Plan Could Spur New Low-Sugar Drinks	<a href="https://www.washingtonpost.com/opinions/britains-flat-idea-to-tax-soda-and-other-sugary-drinks/2016/03/21/186e3ad0-">https://www.washingtonpost.com/opinions/britains-flat-idea-to-tax-soda-and-other-sugary-drinks/2016/03/21/186e3ad0-</a>	Article by the Swedish Minister of Health, after the announcement of a UK sugar tax, about why Sweden will not be implementing one.	
Gabriel Wikström	News article 22 Mar 2016	Why there won't be a sugar tax in Sweden	<a href="http://www.nzherald.co.nz/news/article.cfm?c_id=1&amp;objid=11610731">http://www.nzherald.co.nz/news/article.cfm?c_id=1&amp;objid=11610731</a>	Article by Katherine Rich, chief executive of the New Zealand Food and Grocery Council, about the UK sugar tax and evidence from Mexico.	
Katherine Rich	News article March 24, 2016	Realistic support more effective than sugar tax	<a href="https://www.washingtonpost.com/opinions/britains-flat-idea-to-tax-soda-and-other-sugary-drinks/2016/03/21/186e3ad0-">https://www.washingtonpost.com/opinions/britains-flat-idea-to-tax-soda-and-other-sugary-drinks/2016/03/21/186e3ad0-</a>	Article by the Swedish Minister of Health, after the announcement of a UK sugar tax, about why Sweden will not be implementing one.	
Catherine Rampell	Opinion	Britain's flat idea to tax soda and other sugary drinks		As easy as it is to scapegoat the "empty calories" of a Coke, taxes such as this one — and similar ones proposed for the United States — will likely do little to slim down the populace. That's because a lot of things have to go right for a soda tax to reverse rising obesity rates. First you have to assume that the tax will be passed on to	

	The Washington Post March 22, 2016	<a href="http://www.theguardian.com/society/2016/mar/19/extend-sugar-tax-to-biscuits-and-cereals-says-government-adviser">http://www.theguardian.com/society/2016/mar/19/extend-sugar-tax-to-biscuits-and-cereals-says-government-adviser</a>	<a href="http://www.theguardian.com/society/2016/mar/19/extend-sugar-tax-to-biscuits-and-cereals-says-government-adviser">http://www.theguardian.com/society/2016/mar/19/extend-sugar-tax-to-biscuits-and-cereals-says-government-adviser</a>	<p>consumers, rather than absorbed by suppliers through narrower profit margins. Then you have to assume that consumers are really price-elastic — econo-speak for price-sensitive — when it comes to sweetened beverages. There's conflicting evidence on this. One recent study found that price elasticity for soda has been greatly overstated; that is, small price increases don't change purchasing decisions much, especially among the poor, who seem to have strong preferences for soda. As a result, soda taxes end up being highly regressive without meaningfully changing behavior in the population with the highest obesity rates. But let's assume that earlier research, which finds greater price sensitivity, was right. One <a href="#">2013 British Medical Journal study</a> that's been cited by sugary-beverage tax advocates suggests that a levy about the size of Britain's would indeed change behavior measurably — by reducing the average Brit's daily calorie intake by a whopping two calories. And even that estimate is probably inflated, given that it's based on another optimistic assumption: that consumers nudged by the tax to drink less soda and other targeted beverages won't satisfy their sweet-tooth cravings elsewhere.</p> <p>A government health adviser has urged ministers to extend the new sugar tax to sweets, yoghurts, breakfast cereals and any foods containing dangerously large amounts of sugar. Prof Ivo Vlaev, who works with the Cabinet Office's "nudge" unit, told the Guardian: "I think the sugar tax does not cover enough ground. All products that contain unhealthy amounts of sugar should be taxed because people turn to substitutes. Vlaev also works with the behavioural insights team at Public Health England, and is a professor of behavioural science at Warwick Business School specialising in how financial incentives or penalties can drive healthier habits.</p> <p>The latest Nielsen data, compiled for FGC, shows sales volumes have returned to pre-tax levels. The slight dip in 2014 is almost impossible to see. As expected with beverage products, sales go up and down due to seasonal changes eg. people drink more in summer months. The overall net decline in sales of 0.39% (not even 1%) is not even one sip per Mexican citizen and is more likely to be attributed to other things going on in the Mexican economy during this time. New Zealand has seen a far greater decline in the consumption of sugar-sweetened sodas — a more than 4% decline in unit sales — in the same period that has been experienced in Mexico, and it's happened here without any tax at all.</p> <p><b>How will companies be taxed?</b> Soft drink companies will be taxed on the volume of sugary drinks they import or produce. Drinks that have more than 5g of sugar per 100ml will be taxed. There will be two levy bands, a high one for those products with 8g per 100ml or more and a lower band for those above 5g per 100ml. The charge will equate to 18p per litre for the lower band and 24p per litre for the higher rate. Pure fruit juices and milk-based products will be exempt from the tax. <b>When will the changes take place?</b> The government has said that the sugar tax will be introduced</p>
Scoop Independent news	News article March 19, 2016	Extend Sugar Tax to Biscuits and Cereals says Government Advisor	<a href="http://www.scoop.co.nz/stories/PO1603/S00306/sales-data-shows-mexico-sugar-tax-a-failure.htm">http://www.scoop.co.nz/stories/PO1603/S00306/sales-data-shows-mexico-sugar-tax-a-failure.htm</a>	<p>Extend Sugar Tax to Biscuits and Cereals says Government Advisor</p>
Scoop Independent news	Press Release: NZ Food and Grocery Council March 18, 2016	Sales data shows Mexico sugar tax a failure	<a href="http://www.scoop.co.nz/stories/PO1603/S00306/sales-data-shows-mexico-sugar-tax-a-failure.htm">http://www.scoop.co.nz/stories/PO1603/S00306/sales-data-shows-mexico-sugar-tax-a-failure.htm</a>	<p>The latest Nielsen data, compiled for FGC, shows sales volumes have returned to pre-tax levels. The slight dip in 2014 is almost impossible to see. As expected with beverage products, sales go up and down due to seasonal changes eg. people drink more in summer months. The overall net decline in sales of 0.39% (not even 1%) is not even one sip per Mexican citizen and is more likely to be attributed to other things going on in the Mexican economy during this time. New Zealand has seen a far greater decline in the consumption of sugar-sweetened sodas — a more than 4% decline in unit sales — in the same period that has been experienced in Mexico, and it's happened here without any tax at all.</p>
ITV News consumer editor Chris Choi	ITV News consumer report March 16, 2016	What you need to know about the new sugar tax on soft drinks	<a href="http://www.itv.com/news/2016-03-16/what-you-need-to-know-about-the-new-sugar-tax-on-soft-drinks/">http://www.itv.com/news/2016-03-16/what-you-need-to-know-about-the-new-sugar-tax-on-soft-drinks/</a>	<p>What you need to know about the new sugar tax on soft drinks</p>

Katherine Rich	News article – Food Navigator Asia.com March 10, 2016	Mexican soda tax analysis: The figures just don't back the hype	<a href="http://www.foodnavigator-asia.com/Policy/Mexican-soda-tax-analysis-The-figures-just-dont-back-the-hype?mcount">http://www.foodnavigator-asia.com/Policy/Mexican-soda-tax-analysis-The-figures-just-dont-back-the-hype?mcount</a>	in 2018 giving companies enough time to modify their product mix and promote low sugar items. Osborne said that companies would be consulted on the implementation of the tax and that the smallest producers, producing less than 6ml a year, will be "kept out of scope". Latest Nielsen sales data show almost no change in sales volumes in almost 2 years since the tax was implemented. As a result, tax revenues have exceeded government projections.
R.A. Lawson <sup>a</sup> , R.H. Murphy <sup>a</sup> , C.R. Williamson <sup>b</sup>	February 28, 2016	The relationship between income, economic freedom, and BMI	<a href="http://www.sciencedirect.com/science/article/pii/S0033350616000391">http://www.sciencedirect.com/science/article/pii/S0033350616000391</a>	ABSTRACT Objectives What explains increases in BMI (and obesity) over time and across countries? Although many microeconomic forces are likely explanations, increasingly scholars are arguing that macroeconomic forces such as market liberalism and globalization are root causes of the obesity epidemic. The purpose of this paper is to examine the impact of economic freedom on obesity conditional on the level of income and other factors. Study Design We use an unbalanced pooled cross section of up to 135 countries for 1995 and 2000–2009. Methods Our statistical model specifications include pooled OLS and fixed effects. Results First, we find that controlling for fixed effects siphons off much of the relationship previously documented between economic freedom and BMI. Second, economic freedom is associated with slightly higher BMIs but only for men in developing nations. Lastly, we show that economic freedom increases life expectancy for both men and women in developing countries. Conclusion Therefore, policies aimed at reducing obesity that limit economic liberalism may come at the expense of life expectancy in the developing world.
Cancer Research UK	February 18, 2016	Short and Sweet: Why the Government should Introduce a Sugary Drinks Tax	<a href="http://www.cancerresearchuk.org/sites/default/files/short_and_sweet_exec_sum_live.pdf">http://www.cancerresearchuk.org/sites/default/files/short_and_sweet_exec_sum_live.pdf</a>	The report predicts the impact a 20 per cent sugary drinks tax could have on obesity if current trends continue.

Katherine Rich	News article – Food Navigator Asia.com February 10, 2016	If Mexico's soda tax really works why are tax revenues still rising?	<a href="http://www.foodnavigator-asia.com/Policy/If-Mexico-soda-tax-really-works-why-are-tax-revenues-still-rising">http://www.foodnavigator-asia.com/Policy/If-Mexico-soda-tax-really-works-why-are-tax-revenues-still-rising</a>	Critical of BMJ (Colchero et al, 2016) paper. Tax revenues have exceeded projections and have continued to rise since the Mexican tax was introduced, suggesting volume consumed has not fallen as much as claimed, or is bouncing back.
Sloane, K.	Blog post February 4, 2016	Taxing sugary drinks: Empirical findings out of Mexico.	<a href="https://blogs.otago.ac.nz/pubhealtheexpert/2016/02/04/taxing-sugary-drinks-empirical-findings-out-of-mexico/">https://blogs.otago.ac.nz/pubhealtheexpert/2016/02/04/taxing-sugary-drinks-empirical-findings-out-of-mexico/</a>	University of Otago Public Health academics blog advocating that, based on Mexico's results, introducing a SSB tax in NZ could be an important component of a comprehensive government strategy to help fix the obesogenic environment in New Zealand and to also improve oral health for both children and adults. Such a tax could complement policies to restrict sales of calorie-dense foods in schools and to restrict junk food advertisements to children on all media as recommended in the ECHO Report. The extra tax revenue could be used to fund child health initiatives such as expanded fruit provision in schools, provision of healthy school lunches, or expanded dental services (see a <a href="#">previous blog</a> on SSB tax implementation) as has been done in other settings. Acknowledges that the Mexican tax was introduced at the same time as other policies that may affect consumption: Mexico has introduced a wide suite of interventions that are expected to work together to reduce SSB consumption; including restricted sales of calorie-dense foods in schools, limited airtime for junk food advertisements on children's TV programmes, and a special tax on packaged snacks.
World Health Organisation	WHO report	WHO Report: Ending Childhood Obesity	<a href="http://www.who.int/end-childhood-obesity/news/launch-final-report/en/">http://www.who.int/end-childhood-obesity/news/launch-final-report/en/</a>	The ECHO report proposes a range of recommendations for governments aimed at reversing the rising trend of children aged under 5 years becoming overweight and obese. Promote intake of healthy foods Promote physical activity Preconception and pregnancy care Early childhood diet and physical activity Health, nutrition and physical activity for school-age children Weight management
Colchero, Popkin, Rivera, and Ng.	Peer reviewed journal. BMJ January 6, 2016	Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study	<a href="#">Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study</a>   <a href="#">The BMJ</a>	Relative to the counterfactual in 2014, purchases of taxed beverages decreased by an average of 6% (>12 mL/capita/day), and decreased at an increasing rate up to a 12% decline by December 2014. All three socioeconomic groups reduced purchases of taxed beverages, but reductions were higher among the households of low socioeconomic status, averaging a 9% decline during 2014, and up to a 17% decrease by December 2014 compared with pretax trends. Purchases of untaxed

<p>Tim Lobstein World Obesity Federation</p>	<p>Comment in The Lancet February 2015</p>	<p>Sugar: a shove to industry rather than a nudge to consumers?</p>	<p><a href="http://www.theguardian.com/lifeandstyle/2016/jan/07/cameron-refuses-to-rule-out-sugar-tax-on-drinks">http://www.theguardian.com/lifeandstyle/2016/jan/07/cameron-refuses-to-rule-out-sugar-tax-on-drinks</a></p>	<p>beverages were 4% (36 mL/capita/day) higher than the counterfactual, mainly driven by an increase in purchases of bottled plain water.</p> <p>A gradual reduction in the sugar content of soft drinks, without replacing them with artificial sweeteners, should have a small but important effect on the prevalence of obesity, especially if there is no compensatory increase in calories consumed from other sources. Soft drinks are consumed in the greatest quantities by population groups with a higher prevalence of obesity and diabetes. And reducing the sugar content gradually should have little effect on soft drinks sales, and indeed might save the producers some of their ingredient costs. A similar approach has been tried with some success for the reduction of salt in the British diet. During the decade when the Food Standards Agency had responsibility for nutrition and a role in shaping food supplies, the salt reduction initiative was one of the agency's notable successes. The strategy was based on identifying foods that were contributing the most salt to the diet and setting targets for all manufacturers to reduce their levels by a specified amount.</p>
<p>News article</p>	<p>Cameron refuses to rule out sugar tax on drinks: Prime minister says Britain must consider measures to deal with obesity crisis in same way as it did with smoking</p>	<p><a href="http://www.theguardian.com/lifeandstyle/2016/jan/07/cameron-refuses-to-rule-out-sugar-tax-on-drinks">http://www.theguardian.com/lifeandstyle/2016/jan/07/cameron-refuses-to-rule-out-sugar-tax-on-drinks</a></p>	<p>David Cameron has refused to rule out the possibility of a sugary drinks tax in England, comparing the impact of sugar on people's health to that of smoking. The prime minister had previously ruled out any form of sugar tax but has come under increasing pressure from campaigners, experts and MPs to reverse his stance and introduce a levy as part of the government's childhood obesity strategy, expected to be published next month. The pressure intensified this week after a study published on Wednesday showed that a 10% sugary drinks tax in Mexico had led to a 12% reduction in sales of such beverages after a year. Another study published on Tuesday said reducing the amount of sugar in soft drinks and fruit juices by 40% over five years could prevent 300,000 cases of diabetes in the UK and stop 1.5 million people from being overweight or obese.</p>	
<p>Grogger, J.</p>	<p>NBER Discussion paper 2016</p>	<p>Soda Taxes and the Prices of Sodas and Other Drinks: Evidence from Mexico.</p>	<p><a href="http://ftp.iza.org/dp9682.pdf">http://ftp.iza.org/dp9682.pdf</a></p>	<p>ABSTRACT: To combat a growing obesity problem, Mexico imposed a nationwide tax on drinks with added sugar, popularly referred to as a "soda tax," effective January 2014. Since the tax took effect nationwide, there is no conventional control group that can be used as a baseline to estimate how the tax affected prices. Instead, I make use of control commodities, that is, untaxed goods that are not substitutes for the taxed drinks. I analyse data from Mexico's Consumer Price Index program, using the synthetic control method and a time-series intervention analysis. I employ a placebo inference approach, akin to permutation inference, in both cases. The estimates show that soda prices rose by more than the amount of the tax. There is less evidence that the prices of potential substitutes rose, possibly indicating that consumers did not switch to those products after the tax took effect. Some simple calculations suggest that the soda price increase could lead to a two- to four-pound reduction in mean weight. This in turn amounts to roughly 1.6 to 2.7 percent of mean body mass, which</p>

Crampton, E.	Blog post 11/01/2016	I'm addicted to Mexican Soda	<a href="http://scribblings.co.nz/the-dismal-science/2016/01/11/im-addicted-mexican-soda/">http://scribblings.co.nz/the-dismal-science/2016/01/11/im-addicted-mexican-soda/</a>	<p>compares to weight reductions that analysts have argued would have meaningful health consequences in the U.S.</p> <p>A peso per litre doesn't sound like much (and isn't much in New Zealand money), but the minimum salary reported in the sample is 59.30.** So a peso is about 1.7% of the daily minimum wage. The New Zealand minimum wage of \$14.75 gives a minimum daily salary of \$118 for an 8-hour day. A comparable soda tax in New Zealand would then be set at \$2 per litre – if the object were to make it roughly as expensive for lower income cohorts.</p> <p>Yes, the excise tax, on average, was about 10% of the purchase price of a litre of soda. But it's an excise tax, not an ad valorem tax. A peso added to a 10 peso bottle would be different from a peso added to a 5 peso bottle. I would love to know what the ex-ante price of the discount brand sodas in Mexico was. Here in New Zealand, Coke on special is about \$1.70 per litre. The discount off-brand product is about \$0.80 per litre – less than half the price. Any per-unit excise has a much larger effect on the price of the cheapest good than on the average price. If you put a 10% tax on soda in New Zealand, I wouldn't expect it to do much. You'd have reasonable substitution to off-brands among lower income or value conscious cohorts, but total effects wouldn't be huge. If you put in a \$0.20 per litre excise, I'd expect larger effects as it disproportionately hits the price of the cheapest product. If you put a \$2 per litre excise, so that the effect on affordability for the poorest cohorts were properly copied over to New Zealand from Mexico, I would expect very large effects on soda consumption, and especially among the poorest cohorts.</p>
Yuan Ma, Feng J He, Yunjian Yin Kawther M Hashem Prof Graham A MacGregor		Gradual reduction of sugar in soft drinks without substitution as a strategy to reduce overweight, obesity, and type 2 diabetes: a modelling study	<p>Summary</p> <p>We proposed an incremental and stepwise reduction in free sugars added to sugar-sweetened beverages by 40% over 5 years without the use of artificial sweeteners and assessed the effect of the proposed strategy on energy intake and weight status. In this modelling study, we used nationally representative data from the National Diet and Nutrition Survey rolling programme (NDNS RP) from 2008–12 and British Soft Drinks Association annual reports to calculate sugar-sweetened beverage consumption (both with and without fruit juices) and its contribution to free sugar and energy intake in the UK population. We then estimated the predicted reduction in energy intake resulting from the proposed strategy at an individual level. We further predicted the reduction in steady-state bodyweight for each adult using a weight loss model. By scaling up the distribution of the predicted bodyweight in the NDNS RP to the UK adult population, we estimated reductions in the number of overweight and obese adults, and the number of adults with type 2 diabetes. A 40% reduction in free sugars added to sugar-sweetened beverages over 5 years would lead to an average reduction in energy intake of 38.4 kcal per day (95% CI 36.3–40.7) by the end of the fifth year. This would lead to an average reduction in steady-state bodyweight of 1.20</p>	

			<p><a href="http://onlinelibrary-wiley.com/doi/10.1111/1756-2171.12090/full">http://onlinelibrary-wiley.com/doi/10.1111/1756-2171.12090/full</a></p>	<p>kg (1·12–1·28) in adults, resulting in a reduction in the prevalence in adults of overweight by 1·0 percentage point (from 35·5% to 34·5%) and obesity by 2·1 percentage points (from 27·8% to 25·7%). This reduction would lead to a reduction of roughly 0·5 million adults from being overweight and 1 million adults from being obese, which in turn would prevent about 274 000–309 000 incident cases of obesity-related type 2 diabetes over the two decades after the predicted reduction in bodyweight is achieved. The predicted effect was greater in adolescents, young adults, and individuals from low-income families (who consume more sugar-sweetened beverages). An incremental reduction in free sugars added to sugar-sweetened beverages without the use of artificial sweeteners is predicted to reduce the prevalence of overweight, obesity, and type 2 diabetes. The proposed strategy should be implemented immediately, and could be used in combination with other approaches, such as taxation policies, to produce a more powerful effect.</p>
<p>Emily Yucai Wang</p>	<p>Peer-reviewed research paper Rand Journal of Economics April 23, 2015</p>	<p>The impact of soda taxes on consumer welfare: implications of storability and taste heterogeneity</p>	<p><a href="http://www.nber.org/papers/w21465">http://www.nber.org/papers/w21465</a></p>	<p>The typical analysis on the effectiveness of soda taxes relies on price elasticity estimates from static demand models, which ignores consumers' inventory behaviors and their persistent tastes. This article provides estimates of the relevant price elasticities based on a dynamic demand model that better addresses potential intertemporal substitution and unobservable persistent heterogeneous tastes. It finds that static analyses overestimate the long-run own-price elasticity of regular soda by 60·8%, leading to overestimated consumption reduction of sugar-sweetened soft drinks by up to 57·9% in some cases. Results indicate that soda taxes will raise revenue but are unlikely to substantially impact soda consumption.</p>
<p>John Cawley David Frisvold</p>	<p>August 2015</p>	<p>THE INCIDENCE OF TAXES ON SUGAR-SWEETENED BEVERAGES: THE CASE OF BERKELEY, CALIFORNIA</p>		<p>One of the most commonly-proposed policies to address the high prevalence of obesity is a tax on energy-dense foods, in particular sugar-sweetened beverages (SSBs). This is based on the assumption that such taxes are largely passed through to consumers in the form of higher retail prices, leading to reduced consumption. However, relatively little is known about the extent to which taxes on SSBs are in fact passed through to consumers. We estimate the pass-through of the first city-level tax on SSBs in the U.S., which was enacted by the voters of Berkeley, California in November, 2014. We collected the prices of various brands and sizes of SSBs and other beverages before and after the implementation of the tax from a near-census of convenience stores and supermarkets in Berkeley, California. We also collected prices from stores in a control city, San Francisco, where in 2014 a similar voter referendum failed despite majority support. Estimates from difference-in-differences and other models consistently indicate that there was relatively little pass through of the Berkeley SSB tax to consumers; across brands and sizes, we estimate that retail prices rose by less than half of the amount of the tax. This is in contrast to much of</p>

Piernas et al	2014	<p><a href="#">Public Health Nutrition - Current patterns of water and beverage consumption among Mexican children and adolescents aged 1-18 years: analysis of the Mexican National Health and Nutrition Survey 2012 - Cambridge Journals Online</a></p>	<p>the previous literature on the pass-through of taxes, which tended to find full or even overshifting of taxes.</p> <p>The main sources of water in US children were plain water, milk and fruit drinks among 4-8-year-olds; and plain water, milk and soda among 9-13-year-olds. As in Mexican children, total daily water intake in US children was at below recommended levels. Other Mexican studies focusing on beverage consumption patterns in children aged 1-4 and 5-11 years and adolescents aged 12-18 years showed large increases in caloric beverages from 1999 to 2006. The major beverage contributors to total energy intake in 2006 among Mexican children and adolescents were high-fat milk, fruit juice (with water/sugars added, including agua fresca) and carbonated and non-carbonated sweetened soda(5,6). Consistent with our results, these previous studies found that younger children had a higher proportion of energy from milk whereas older children and adolescents moved towards more caloric sweetened beverages. The top five beverage contributors to energy intake in our population of Mexican children and adolescents were flavoured milk beverages, caloric sweetened soda, high-fat milk, agua fresca (fruit water) and caloric coffee/tea.</p>
Tiffin, R., et al. (2015). "The Effects of A Soft Drink Tax in the UK."	Health Economics 24(5): 583-600.	<p><a href="#">The Effects of A Soft Drink Tax in the UK - Tiffin - 2014 Health Economics - Wiley Online Library</a></p>	<p>ABSTRACT: We use a demand model estimated with household-level data on beverage purchases in the UK to investigate the effects of a tax on soft drink consumption. The model is a Quadratic Almost Ideal Demand System, and censoring is handled by applying a double hurdle. Separate models are estimated for low, moderate and high consumers to allow for a differential impact on consumption between these groups. Applying different hypothetical tax rates, we conclude that understanding the nature of substitute/complement relationships is crucial in designing an effective policy as these relationships differ between consumers depending on their consumption level. The overall impact of a soft drink tax on calorie consumption is likely to be small.</p>
Jessica E. Todd and Michele Ver Ploeg	US Department of Agriculture news article	<p>Restricting Sugar-Sweetened Beverages From SNAP Purchases Not Likely To Lower Consumption</p>	<p>Results of research into pricing policies designed to influence choices by consumers on the USDA's Supplemental Nutrition Assistance Program (SNAP). Benefits are delivered to recipients through Electronic Benefit Transfer cards that can be used to purchase foods intended for home preparation and consumption at authorized retailers. (SNAP benefits cannot be used to purchase beer, wine, vitamins, and hot foods, or food that will be eaten in the stores.) Some policymakers and nutrition advocates have suggested that changes to SNAP, such as excluding SSBs from the set of allowable items that can be purchased using benefits, could directly address overconsumption of SSBs among low-income populations who receive program benefits.</p> <p>Previous research on the effect of taxing specific food items on purchases and intake has generally found mixed or small impacts on purchases and food intake because consumers substitute away from the taxed food to a nontaxed food with similar</p>



<p>Colchero MA<sup>1</sup>, Salgado JC<sup>2</sup>, Unar-Munguia M<sup>2</sup>, Hernández-Ávila M<sup>2</sup>, Rivera- Dommarco JA<sup>2</sup>.</p>	<p>Econ Hum Biol. 2015 Dec;19:129-37. doi: 10.1016/j.ehb.2 015.08.007. Epub 2015 Sep 5</p>	<p>Price elasticity of the demand for sugar- sweetened beverages and soft drinks in Mexico</p>	<p><a href="http://www.ncbi.nlm.nih.gov/pubmed/26386463">http://www.ncbi.nlm.nih.gov/pubmed/26386463</a></p>	<p>nutritional qualities. This behavior limits the impact of these types of taxes on diet quality. As opposed to raising price through taxes, lowering the price of specific food items is another approach to encouraging healthy food choices. The SNAP Healthy Incentives Pilot (HIP), conducted in Hampden County, MA, between November 2011 and December 2012, sought to improve diet quality among SNAP participants by effectively lowering the price of fruits and vegetables through targeted incentives at the point of sale. HIP gave a randomly selected group of SNAP participants an additional 30 cents in benefits for each dollar of SNAP benefits spent on targeted fruits and vegetables. These included fresh, canned, frozen, and dried fruits and vegetables that do not contain added sugars, fats, oils, or salt but did not include white potatoes or 100-percent fruit juice. The additional benefits, which were received on the participants' Electronic Benefit Cards similar to the rest of their SNAP benefits, could be spent on any SNAP-eligible foods or beverages. On average, HIP participants consumed 26 percent more of the targeted fruits and vegetables and had a Healthy Eating Index score that was 5 points (9 percent) higher than SNAP participants who did not receive the HIP benefits.</p>
<p>As Mexico's Sugary Drink Tax Turns 1 Year Old, US Health Proponents Hope It Can Sway American Voters</p>	<p>International Business Times 01/11/15</p>	<p>As Mexico's Sugary Drink Tax Turns 1 Year Old, US Health Proponents Hope It Can Sway American Voters</p>	<p><a href="http://www.ibtimes.com/mexico-sugary-drink-tax-turns-1-year-old-us-health-proponents-hope-it-can-sway-1779632">http://www.ibtimes.com/mexico-sugary-drink-tax-turns-1-year-old-us-health-proponents-hope-it-can-sway-1779632</a></p>	<p>Price elasticity for soft drinks was -1.06 and -1.16 for SSB, i.e., a 10% price increase was associated with a decrease in quantity consumed of soft drinks by 10.6% and 11.6% for SSB. A price increase in soft drinks is associated with larger quantity consumed of water, milk, snacks and sugar and a decrease in the consumption of other SSB, candies and traditional snacks. The same was found for SSB except that an increase in price of SSB was associated with a decrease in snacks. Higher elasticities were found among households living in rural areas (for soft drinks), in more marginalized areas and with lower income.</p>
<p>Mexico's National Institute of Public Health's earliest results suggest in the first three months of 2014, purchases of sugary drinks dropped by 10 percent from the same period in 2013. The results were pretty positive. In essence there was a reduction in sugary beverage intake, and there was some increase in healthier drinks, like water," Popkin said. Researchers should have more conclusive 2014 results on both consumption levels and related health impacts within a few months, he added. In the meantime, there's the corporate data. Coca-Cola Femsa, Mexico's biggest soft drink bottler, saw its drink sales drop by 6.4 percent in the first half of last year, compared to the same period in 2013, in part due to the drink tax and other economic factors. Another Mexican Coke bottler, Arca-Continental, said its drink sales slipped by 4.7 percent in Mexico for the same period.</p>	<p>Mexico's National Institute of Public Health's earliest results suggest in the first three months of 2014, purchases of sugary drinks dropped by 10 percent from the same period in 2013. The results were pretty positive. In essence there was a reduction in sugary beverage intake, and there was some increase in healthier drinks, like water," Popkin said. Researchers should have more conclusive 2014 results on both consumption levels and related health impacts within a few months, he added. In the meantime, there's the corporate data. Coca-Cola Femsa, Mexico's biggest soft drink bottler, saw its drink sales drop by 6.4 percent in the first half of last year, compared to the same period in 2013, in part due to the drink tax and other economic factors. Another Mexican Coke bottler, Arca-Continental, said its drink sales slipped by 4.7 percent in Mexico for the same period.</p>			

<a href="#">Kate Sloane</a>	<a href="#">Blog post August 18, 2015</a>	What the Pacific & Mexico can tell us about soft drink taxes and public health	<a href="https://blogs.oiaoo.ac.nz/pubhealthexpert/2015/08/18/what-the-pacific-mexico-can-tell-us-about-soft-drink-taxes-and-public-health/">https://blogs.oiaoo.ac.nz/pubhealthexpert/2015/08/18/what-the-pacific-mexico-can-tell-us-about-soft-drink-taxes-and-public-health/</a>	<p>Yet even without drink taxes, American attitudes toward junk food and sugar-rich drinks already may be changing. Nearly two-thirds of Americans said they avoid soda in their diet while more than half said they avoid sugar, a July Gallup poll indicated.</p> <p>The Pacific Island Countries and Territories (PICTs) account for many of the highest rates of obesity and diabetes in the world. The Secretariat of the Pacific Community <a href="#">policy discussion document</a> published early in August 2015 (McDonald, 2015), outlines several important messages about sugar sweetened beverage (SSB) tax and other regulatory measures from the Pacific, including: 1. Already half PICTs have implemented a tax on sugar drinks, over and above the tax on other food and beverages (Figure 1). In April 2014 the Cook Islands adopted a NZ\$9.80 tax per kg of sugar on sugar sweetened soft drinks which is equivalent to NZ\$0.38 additional cost for a can of coke. In the Pacific this was the highest value of SSB tax known to date.</p> <p>2. The effectiveness of SSB taxation in improving health outcomes depends on how the SSB tax is designed including communication of a clear health goal, using excise tax, taxing on volume or sugar content, taxing a broad range of SSBs, introducing an adequate tax rate (e.g. 20+%), investing revenue back into health, and ensuring affordable healthy alternative beverages.</p>
Kantar Worldpanel.	5 Mar 2015.	Efecto de los impuestos a alimentos y bebidas saborizadas (Rough translation: The Effect of the Tax on Foods and SSBs)	<a href="http://www.kantarworldpanel.com/press-releases/2015/03/05/01">www.kantarworldpanel.com/press-releases/2015/03/05/01</a>	
World Health Organization, Regional Office for Europe.	WHO report, Copenhagen, 2015.	Using price policies to promote healthier diets.	<a href="http://www.euro.who.int/_data/assets/pdf_file/0006/273662/Using-price-policies-to-promote-healthier-diets.pdf?ua=1">http://www.euro.who.int/_data/assets/pdf_file/0006/273662/Using-price-policies-to-promote-healthier-diets.pdf?ua=1</a>	<p>A WHO publication providing information on the use of price policies to promote healthy diets and exploring policy developments from around the WHO European Region. It examines the economic theory underpinning the use of subsidies and taxation and explores the currently available evidence. The publication includes several case studies from WHO European Member States where price policies have been introduced. It concludes with some observations about the design of more effective price policies.</p> <p>Mexico's National Institute of Public Health study indicates the Federal sugar-sweetened beverage tax is successfully reducing purchases in Mexican households</p>
Alianza por La Salud	Alianza por La Salud., 16 Jun 2015.	Fizzed out: why a sugar tax won't curb obesity.	<a href="http://www.alianzasalud.org.mx">www.alianzasalud.org.mx</a>	
New Zealand Tax Payers' Union.	New Zealand Tax Payers' Union. Report. 2015.		<a href="http://www.taxpayers.org.nz/fizzed-out">www.taxpayers.org.nz/fizzed-out</a>	<p>KEY FINDINGS:</p> <ul style="list-style-type: none"> <li>Only 1.6 per cent of New Zealanders' total energy intake comes from the added sugar content of sugar-sweetened non-alcoholic beverages</li> <li>New Zealanders' consumption of sugar and sugar sweetened beverages is trending downward</li> </ul>

International Diabetes Federation	IDF report	Framework for Action on Sugar	<p><a href="http://www.idf.org/sites/default/files/Framework-for-Action-on-Sugar-010615.pdf">http://www.idf.org/sites/default/files/Framework-for-Action-on-Sugar-010615.pdf</a></p>	<ul style="list-style-type: none"> <li>New Zealanders are still getting fatter despite consuming less calories, suggesting that we're not burning as many calories</li> <li>Sugar taxes hurt the poor and do not result in the decreased consumption tax-supporters claim</li> <li>Similar taxes overseas have not worked - Mexico's tax on soda resulted in no decrease in consumption based on Nielsen sales data, despite recent claims to the contrary by New Zealand campaigners</li> </ul>
				<p>While recognising that access to sugar and other refined carbohydrates is important as a treatment for hypoglycaemia in people with diabetes, IDF believes there is sufficient evidence of the need for concerted action to reduce sugar intake by the general population. IDF therefore advocates the following specific measures:</p> <ol style="list-style-type: none"> <li>The introduction of clear, unambiguous, colour-coded front of pack labelling which gives total sugar content, including all types of sugar, including those with alternative names (such as high fructose corn syrup).</li> <li>A ban on advertising of sugar-sweetened beverages and high sugar foods to children and adolescents.</li> <li>Revision of healthy eating guidelines to reduce consumption of foods with naturally high sugar content (eg certain fruits and fruit juices).</li> <li>A ban on sponsorship of sporting events by manufacturers of sugar-sweetened beverages or high sugar foods.</li> <li>A ban on selling sugar-sweetened beverages and high sugar foods in canteens and vending machines in schools and policies to restrict access in workplaces.</li> <li>An obligation to make clean drinking water freely available in all schools, places of employment and in public open spaces.</li> <li>Government incentives (including taxes) to reduce consumption of sugar-sweetened beverages and high sugar foods. Taxation is well-recognised to influence consumption (e.g. tobacco, alcohol). The health risks of excess sugar consumption demand similar action to reduce consumption. Similar measures have been introduced in France and Mexico with a tax on sugar sweetened beverages.</li> <li>Government incentives to promote production of leafy vegetables and fruit in preference to sugar. Sugar has calories, but no other nutritional value. Dietary recommendations all around the globe emphasize that sugar-containing foods should be consumed in very limited amounts. Agricultural subsidies should support those recommendations by promoting production of healthy foods.</li> <li>Government incentives to increase availability and affordability of fresh vegetables, fresh fruit and clean drinking water. Fresh vegetables and fruits should form the basis of any diet. Government incentives should promote availability and consumption of vegetables and fruits rather than sugar.</li> </ol>

				<p>10. A regulatory framework for reformulation of processed foods to reduce sugar content.</p> <p>11. Public health campaigns to educate people about the health risks associated with excess sugar intake.</p> <p>12. Further research to be undertaken to establish links between sugar intake and diabetes.</p> <p>Article in Spanish in which the soda industry in Mexico explains that sales have fallen by only 2.5% in terms of volume, and that this amounts to a reduction in caloric intake of 6.2 calories (1.6g of sugar) per person per day. In addition, the industry claims the sugar tax has resulted in the loss of 1700 jobs.</p> <p><b>Abstract:</b> To combat a growing obesity problem, Mexico imposed a nationwide tax on drinks with added sugar, popularly referred to as a "soda tax," effective January 2014. I analyze data on taxed and untaxed products collected as part of Mexico's Consumer Price Index program to estimate how prices responded to the tax. Prices of regular sodas jumped by more than the amount of the tax in the month that the tax took effect. The prices of other taxed drinks also rose, though by a smaller amount. Diet-soda prices rose as well, suggesting that consumers may have substituted toward diet sodas after regular sodas became taxable. The prices of bottled water, pure (untaxed) juices, and milk were largely unchanged. A companion analysis of untaxed comparison products showed no general price increases around the time that the soda tax was imposed.</p>
Grogger J.	<p>CNN news article July 7, 2015</p> <p>NBER Working Paper May 2015</p>	<p>Rough translation: "Soft drink producers cut 1700 jobs due to tax"</p> <p>Soda Taxes and the Prices of Sodas and Other Drinks: Evidence from Mexico Working Paper 21197  <a href="http://www.nber.org/papers/w21197">http://www.nber.org/papers/w21197</a></p>	<p><a href="http://www.cnnexpansion.com/tecnologias/2015/07/07/refresc-uel-as-elimin-an-1700-empleos-por-impuesto">http://www.cnnexpansion.com/tecnologias/2015/07/07/refresc-uel-as-elimin-an-1700-empleos-por-impuesto</a></p>	
Laura Cornelsen, Rosemary Green, Alan Dangour, Richard Smith	<p>Peer-reviewed journal</p> <p>J Public Health (2014) doi: 10.1093/pubmed/fdu032 First published online: May 22, 2014</p>	<p>Why fat taxes won't make us thin</p>	<p><a href="http://pubhealth.oxfordjournal.s.org/content/early/2014/05/21/pubmed.fdu032.full">http://pubhealth.oxfordjournal.s.org/content/early/2014/05/21/pubmed.fdu032.full</a></p> <p><b>Abstract</b>          Increasing prevalence of overweight and obesity has led policy-makers to consider health-related taxes to limit the consumption of unhealthy foods and beverages. Such taxes are currently already in place in countries in Europe (e.g. Hungary, France and Finland) and in various states in the USA. Although these taxes are possibly efficient in reducing by a small amount the consumption of targeted products if the tax is fully transmitted to the consumer, there is too little available evidence on what will be consumed instead and whether these food substitutions undermine the hoped-for health benefits of the tax. We also know very little on how the food supply side will respond and what overall impact this will have. Without a proper appreciation of the potential indirect impacts we do not know the overall impact of taxes foods on unhealthy foods and beverages and further that there is a very real possibility that they may not be beneficial for health after all.</p>	
Crampton, Eric	<p>Blog post – The Dismal Science October 13, 2014</p>	<p>Sugar Tax</p>	<p><a href="http://sciblogs.co.nz/the-dismal-science/2014/10/13/sugar-tax/">http://sciblogs.co.nz/the-dismal-science/2014/10/13/sugar-tax/</a></p> <p>Paternalistic regulations on consumption are insulting. They're classist in application. When they're based on "costs through the public health system", they are unlimited in potential range. And when they're packaged up as "let's tax soda and subsidise healthy foods", you empower an army of rent-seekers to argue over the edge cases.</p>	

<p>PWC</p>	<p>R&amp;C Trendwatch July 2014</p>	<p>Anticipating the rise of junk food and soda taxes in emerging markets</p>	<p><a href="http://www.pwc.com/gx/en/industries/retail/consumer/publications/r-and-c/trendwatch-anticipating-rise-junk-food-taxes-markets.html">http://www.pwc.com/gx/en/industries/retail/consumer/publications/r-and-c/trendwatch-anticipating-rise-junk-food-taxes-markets.html</a></p>	<p>In a context of growing middle classes demanding improvements in public healthcare, sin taxes are an easily collectable, easily justifiable means to raise revenue. A soda tax could become an attractive source of revenue and would likely find support among sections of the middle class. Only 5.2% of Vietnam's population is overweight, for example, but the government is motivated to raise revenue and protect its domestic drinks manufacturers (the tax was apparently proposed by Vietnam's tea producers). Although the proposed soda levy of 10% is projected to collect a modest \$8.46 million per year, it is an easily collectable tax that would mostly affect foreign manufacturers.</p>
<p>ECSIP Consortium for European Commission DG Enterprise and Industry.</p>	<p>EC, 2014.</p>	<p>Food taxes and their impact on competitiveness in the agri-food sector.</p>	<p>Non-harmonised taxes on high sugar, salt and fat products can affect the competitiveness of the agri-food industry, especially small businesses in the sector. Taxes on these products can reduce their consumption but not necessarily consumption of the targeted ingredients. The impact on the European agri-food sector needs to be assessed further. These are the main conclusions of a study, Food taxes and their impact on competitiveness in the agri-food sector' commissioned by the Directorate-General for Enterprise and Industry.</p> <p><b>Impact on consumption</b> The study found that food taxes in general achieve a reduction in the consumption of the taxed products and as a result, consumers may instead purchase similar non-taxed or less heavily taxed items. It also shows that consumers may simply buy cheaper brands of the taxed products, thus potentially not lowering their consumption of the ingredient the tax aims to target (i.e. salt, sugar or fat). Equally, consumers may be able to buy other products with similar levels of sugar, salt or fat to those that are taxed.</p> <p><b>Impact on competitiveness</b> The study was able to confirm some of the impacts of food taxes on the competitiveness of the agri-food sector. Food taxes lead to an increase in administrative burden, notably if the tax is levied on ingredients or if the rules defining which products are liable under the tax are highly differentiated and complicated. The exact impact on profitability, employment and investment needs to be further explored, but there are some indications that these may be negatively affected. No definitive conclusions are possible due to the limited number of available cases and the short time span between the introduction of taxes and the study. The competitiveness of individual firms, especially of small and medium-sized enterprises (SMEs), within an EU country can be more directly affected by food taxes. When consumers switch to cheaper brands, it reduces the competitiveness of premium brand producers. Likewise, substitution from taxed products to non-taxed products reduces the competitiveness of producers of the taxed products compared to producers of the non-taxed products. The degree to</p>	

Gill JMR, Sattar N.	Peer reviewed journal The Lancet 2014	Fruit juice: just another sugary drink?	<a href="http://www.thelancet.com/journal/series/landia/article/PIIS2213-8587(14)70013-0/fulltext?eventid=begin">http://www.thelancet.com/journal/series/landia/article/PIIS2213-8587(14)70013-0/fulltext?eventid=begin</a>	which individual competitiveness is affected is highly influenced by the product category that is taxed (as brand loyalty may be strong enough to prevent consumer switching) and by whether many similar products escape tax (which makes substitution to non-taxed products easier).
Sonia Rodriguez-Ramirez <sup>1</sup> , Elsa Gaona-Pineda <sup>1</sup> , Lucia Cuevas-Nasu <sup>1</sup> and Teresa Shamah-Levy <sup>1</sup>	FASEB journal. (Federation of the American Societies for Experimental Biology) 2014	Consumption of sugar-sweetened and non-sugar-sweetened beverages of urban Mexican children (810.26)	<a href="http://www.faseb.org/content/28/1/Supplement/810.26.short">http://www.faseb.org/content/28/1/Supplement/810.26.short</a>	The evidence for a role of sugar-sweetened beverages (SSBs) in the development of obesity and associated comorbidities, although not fully resolved, is becoming increasingly convincing, with supporting data from both prospective cohort studies and randomised trials. <sup>1</sup> The obesogenic effect of SSBs seems to be simply a consequence of the excess calories provided by their consumption, rather than of any specific adverse effects of fructose-containing sugars that they contain, <sup>2</sup> with no clear evidence that excess energy intake from SSBs is any more harmful than is excess energy intake from any other source.
Carmen Piernas, Simon Barquera and Barry M Popkin	April 2014	Current patterns of water and beverage consumption among Mexican children and adolescents aged 1–18	<a href="http://www.ncbi.nlm.nih.gov/pubmed/24866372">http://www.ncbi.nlm.nih.gov/pubmed/24866372</a>	<p><b>Objective:</b> To estimate the consumption of sugar-sweetened and non-sugar-sweetened beverages (SSBs and Non-SSBs) of pre-school and school-age children in urban Mexico. <b>Methods:</b> This analysis included pre-school (n=211) and school-age children (n=115), from the study "Food consumption in Mexican population", which is a cross-sectional, multi-stage, stratified study, representative of the urban area in Mexico. Dietary data were collected using three multiple-pass 24-h recalls, in non-consecutive days. The beverage consumption was categorized in: 1) SSBs with non-Benefit (regular soft drinks, sweetened coffee and tea, sweetened beverages), 2) SSBs with some benefit (milk-based beverage), 3) Non-SSBs (diet soft drinks, unsweetened coffee and tea, and unsweetened milk), and 4) Plain water. The average of the three days of volume (ml) and energy (kcal) was obtained. Results are weighted by design. <b>Results:</b> The consumption in pre-school-age children was: 83 ±14.2 ml/d of regular soft drinks; 27±10.2 ml/d of sweetened coffee and tea; 216±21 ml/d of other sweetened beverages; 120±17 ml/d of sweetened milk; 19±5 ml/d diet soft drinks; 194±16 ml/d of unsweetened milk; and 335±35.4 ml/d of plain water. In school-age children the consumption was: 153±16.4 ml/d of regular soft drinks; 26±7.6 ml/d of sweetened coffee and tea; 215±24 ml/d of other sweetened beverages; 119±18 ml/d of sweetened milk; 22±6.6 ml/d diet soft drinks; 80±12 ml/d of unsweetened milk; and 460±48.3 ml/d of plain water. The energy from SSB in both groups is approximately 15% of the total energy.</p> <p><b>Abstract:</b> Objective: To evaluate patterns of water consumption from plain water, beverages and foods among Mexican children and adolescents and to compare actual patterns of total daily water intake with the Dietary Reference Intakes (DRI). Design: We analysed one, 24-h dietary recall from Mexican children and adolescents. We calculated intakes of total daily water and water from foods and from beverages.</p>

Fletcher, J. Frisvold D., et al	Health Economics 2014	Non-Linear effects of soda taxes on consumption and weight outcomes	<a href="http://onlinelibrary.wiley.com/doi/10.1002/hec.3045">http://onlinelibrary.wiley.com/doi/10.1002/hec.3045</a>	<p>Actual total water intake per capita was subtracted from the DRI for water to calculate the shortfall. Setting: Mexican National Health and Nutrition Survey in 2012. Subjects: Mexican children and adolescents (n 6867) aged 1–18 years. Results: Approximately 73 % of children and adolescents aged 1–18 years reported drinking plain water. Beverages and plain water represented 65.5 % and 26.5% of total daily water intake, respectively. Among 1–3-year-olds, the top three main sources of water were from foods, plain water and water from plain milk. Among 4–8- and 9–13-year-olds, the main sources were from foods, plain water and agua fresca (fruit water). Among 14–18-year-olds, the main sources of water were plain water, water from foods and soda. A higher proportion of 1–3-year-olds and 4–8-year-olds met the DRI for water (38 % and 29 %, respectively). Among 9–13-year-olds and 14–18-year-olds, 13–19 % of children met the DRI for water. Conclusions: Total daily water intakes remain below DRI levels in all age groups. Although plain water still contributes the greatest proportion to daily water intake among fluids, caloric beverages are currently major sources of water especially among older children and adolescents.</p> <p><b>ABSTRACT</b> The potential health impacts of imposing large taxes on soda to improve population health have been of interest for over a decade. As estimates of the effects of existing soda taxes with low rates suggest little health improvements, recent proposals suggest that large taxes may be effective in reducing weight because of non-linear consumption responses or threshold effects. This paper tests this hypothesis in two ways. First, we estimate non-linear effects of taxes using the range of current rates. Second, we leverage the sudden, relatively large soda tax increase in two states during the early 1990s combined with new synthetic control methods useful for comparative case studies. Our findings suggest virtually no evidence of non-linear or threshold effects.</p>
Basu S, Vellakkal S, Agrawal S, Stuckler D, Popkin B, Ebrahim S.	Peer-reviewed journal PLOS One January 2014	Averting Obesity and Type 2 Diabetes in India through Sugar-Sweetened Beverage Taxation: An Economic-Epidemiologic Modeling Study	<a href="http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001582">http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001582</a>	<p><b>Abstract:</b> We sought to estimate the potential health effects of such a fiscal strategy in the middle-income country of India, where there is heterogeneity in SSB consumption, patterns of substitution between SSBs and other beverages after tax increases, and vast differences in chronic disease risk within the population. Using consumption and price variations data from a nationally representative survey of 100,855 Indian households, we first calculated how changes in SSB price alter per capita consumption of SSBs and substitution with other beverages. We then incorporated SSB sales trends, body mass index (BMI), and diabetes incidence data stratified by age, sex, income, and urban/rural residence into a validated microsimulation of caloric consumption, glycemic load, overweight/obesity</p>

Gibson, J.	Peer-reviewed journal article Global Food security April 2013	The crisis in food price data	<a href="http://www.sciencedirect.com/science/article/pii/S2211912413000187">http://www.sciencedirect.com/science/article/pii/S2211912413000187</a>	prevalence, and type 2 diabetes incidence among Indian subpopulations facing a 20% SSB excise tax. The 20% SSB tax was anticipated to reduce overweight and obesity prevalence by 3.0% (95% CI 1.6%–5.9%) and type 2 diabetes incidence by 1.6% (95% CI 1.2%–1.9%), if SSB consumption continued to increase linearly in accordance with secular trends. Key limitations of this estimation approach include the assumption that consumer expenditure behavior from prior years, captured in price elasticities, will reflect future behavior among consumers, and potential underreporting of consumption in dietary recall data used to inform our calculations. <b>Abstract:</b> Many studies estimate impacts of higher food prices on consumer welfare. Yet reliable data on real welfare levels in poor countries are rare since surveys prioritize collecting nominal living standards data over price data. Narrower questions about the impacts of prices on food quantity consumed and on the availability of nutrients are poorly answered. Most studies ignore coping responses that involve downgrading food quality to maintain quantity and therefore overstate nutritionally harmful effects of rising prices. A full accounting for the impacts of food prices on food security requires spatially detailed food price data and household survey data on both the quantity and the quality of foods. Surprisingly few developing countries have these required data.
Briggs A, Mylton O, Kehlbach A, Tiffin R, Rayner M, Scarborough P.	BMJ 2013;347:f6189.	Overall and income specific effect on prevalence of overweight and obesity of a 20% sugar-sweetened drink tax in UK.	<a href="#">Abstract/FREE Full Text</a>	<b>Results</b> A 20% tax on sugar sweetened drinks was estimated to reduce the number of obese adults in the UK by 1.3% (95% credible interval 0.8% to 1.7%) or 180 000 (110 000 to 247 000) people and the number who are overweight by 0.9% (0.6% to 1.1%) or 285 000 (201 000 to 364 000) people. The predicted reductions in prevalence of obesity for income thirds 1 (lowest income), 2, and 3 (highest income) were 1.3% (0.3% to 2.0%), 0.9% (0.1% to 1.6%), and 2.1% (1.3% to 2.9%). The effect on obesity declined with age. Predicted annual revenue was £276m (£272m to £279m), with estimated increases in total expenditure on drinks for income thirds 1, 2, and 3 of 2.1% (1.4% to 3.0%), 1.7% (1.2% to 2.2%), and 0.8% (0.4% to 1.2%). <b>Conclusions</b> A 20% tax on sugar sweetened drinks would lead to a reduction in the prevalence of obesity in the UK of 1.3% (around 180 000 people). The greatest effects may occur in young people, with no significant differences between income groups. Both effects warrant further exploration. Taxation of sugar sweetened drinks is a promising population measure to target population obesity, particularly among younger adults.
Malik VS, Pan A, Willet WC, Hu FB.	Am J Clin Nutr2013;98:1084-102.	Sugar-sweetened beverages and weight gain in children and	<a href="#">Abstract/FREE Full Text</a>	<b>Results:</b> Thirty-two original articles were included in our meta-analyses: 20 in children (15 cohort studies, $n = 25,745$ ; 5 trials, $n = 2772$ ) and 12 in adults (7 cohort studies, $n = 174,252$ ; 5 trials, $n = 292$ ). In cohort studies, one daily serving increment of SSBs was associated with a 0.06 (95% CI: 0.02, 0.10) and 0.05 (95% CI: 0.03, 0.07)-unit increase in BMI in children and 0.22 kg (95% CI: 0.09, 0.34 kg) and 0.12 kg (95% CI:



Finland Ministry of Finance	Government document 2013	adults: a systematic review and meta-analysis.	<p>0.10, 0.14 kg) weight gain in adults over 1 y in random- and fixed-effects models, respectively. RCTs in children showed reductions in BMI gain when SSBs were reduced [random and fixed effects: -0.17 (95% CI: -0.39, 0.05) and -0.12 (95% CI: -0.22, -0.2)], whereas RCTs in adults showed increases in body weight when SSBs were added (random and fixed effects: 0.85 kg; 95% CI: 0.50, 1.20 kg). Sensitivity analyses of RCTs in children showed more pronounced benefits in preventing weight gain in SSB substitution trials (compared with school-based educational programs) and among overweight children (compared with normal-weight children).</p> <p><b>Conclusion:</b> Our systematic review and meta-analysis of prospective cohort studies and RCTs provides evidence that SSB consumption promotes weight gain in children and adults.</p>
Sweator D, Hogg S, Welch V, Winkler J.	The Grocer UK news article Dec 20, 2013	Sugar Tax Working Group report [in Finnish, abstract in English]. 2013.  Soft drinks: making the healthy choice the cheaper choice.	<p><a href="http://www.vml.fi/vm/fin/04_julkaisut/a_asiakirjat/01_julkaisut/075_verotus/20130131_Sokeri/soke_riverotyeroeryhmat_METTL.pdf">www.vml.fi/vm/fin/04_julkaisut/a_asiakirjat/01_julkaisut/075_verotus/20130131_Sokeri/soke_riverotyeroeryhmat_METTL.pdf</a></p> <p><a href="http://www.thegrocer.co.uk/health-topics/soft-drinks-making-the-healthy-choice-the-cheaper-choice/353070.article">http://www.thegrocer.co.uk/health-topics/soft-drinks-making-the-healthy-choice-the-cheaper-choice/353070.article</a></p>
Flannery N.	News article - Forbes	Mexico May Make Coca-Cola Give Up Cane Sugar	<p>Possible repercussions of Mexican sugar tax – change to using corn syrup instead of cane sugar.</p> <p><a href="http://www.forbes.com/sites/athanielparish/flannery/2013/11/07/fin-response-to-new-soda-tax-coca-cola-bottler-considers-switch-from-sugar-to-high-fructose-corn-syrup-in-mexico/#2c929ddc46ca">http://www.forbes.com/sites/athanielparish/flannery/2013/11/07/fin-response-to-new-soda-tax-coca-cola-bottler-considers-switch-from-sugar-to-high-fructose-corn-syrup-in-mexico/#2c929ddc46ca</a></p>
Finkelstein EA <sup>1</sup> , Zhen C, Bilger M, Nonnemaker J, Farooqui AM, Todd JE.	J Health Econ. 2013 Jan;32(1):219-39. doi: 10.1016/j.jhealeco.2012.10.005.	Implications of a sugar-sweetened beverage (SSB) tax when substitutions to non-beverage items are considered.	<p>Article with data about Australians cutting back on soft drink consumption</p> <p><a href="http://www.roymorgan.com/fin/dings/5286-soft-drinks-down-among-younger-australians-june-2013-201311102236">http://www.roymorgan.com/fin/dings/5286-soft-drinks-down-among-younger-australians-june-2013-201311102236</a></p> <p><a href="http://www.sciencedirect.com/science/article/pii/S016762961200166X">http://www.sciencedirect.com/science/article/pii/S016762961200166X</a></p>

	Epub 2012 Oct 23.	Journal of Public Health Policy. 34(3): 403-423. 2013	A typology of beverage taxation: Multiple approaches for obesity prevention and obesity prevention-related revenue generation.	would result in a decrease in store-bought energy of 24.3 kcal per day per person, which would translate into an average weight loss of 1.6 pounds during the first year and a cumulated weight loss of 2.9 pounds in the long run. We do not find evidence of substitution to sugary foods and show that complementary foods could contribute to decreasing energy purchases. Despite their significantly lower price elasticity, the tax has a similar effect on calories for the largest purchasers of SSBs.
Chriqui, J.F., Chaloupka, F.J., Powell, L.M., Eidson, S.S.	Peer-reviewed journal European Food & Feed Law Review. 2012, Vol. 7 Issue 6, p341-343. 3p.	Finnish Sugar Tax Working Group Delivers an Interim Report	<a href="http://eds.b.ebscohost.com/eds/detail/detail?sid=e23abb02-6f35-437c-8123-5b38cc8b6b47%40sessionmgr1198&amp;vid=0&amp;hid=113&amp;bddata=JnNpdGU9ZWRzLWxpdmU%3d&amp;preview=false#AN=84979594&amp;db=asx">http://eds.b.ebscohost.com/eds/detail/detail?sid=e23abb02-6f35-437c-8123-5b38cc8b6b47%40sessionmgr1198&amp;vid=0&amp;hid=113&amp;bddata=JnNpdGU9ZWRzLWxpdmU%3d&amp;preview=false#AN=84979594&amp;db=asx</a>	In July 2012, a working group exploring the options regarding the introduction of a sugar tax in Finland delivered an interim report.1 The report presents possible sugar tax models as well as the preliminary conclusions of the working group. With its proposals, the working group aims to alter the eating habits of the Finns whose consumption of foodstuffs with high sugar levels has grown significantly in recent decades.2 The working group notes a lack of evidence on the causality between consumption of sugar and obesity, but still the suggestions of the working group are founded on the assumption of a link between sugar intake and obesity.
Mytton OT, Clarke D, Rayner M.	BMJ2012;344:e2931	Taxing unhealthy food and drinks to improve health	FREE Full Text	<p><b>Conclusion</b> Health related food taxes could improve health. Existing evidence suggests that taxes are likely to shift consumption in the desired direction, although policy makers need to be wary of changes in other important nutrients. However, the tax would need to be at least 20% to have a significant effect on population health.</p> <p><b>Key to a successful health related food tax</b></p> <ul style="list-style-type: none"> <li>• Taxing a wide range of unhealthy foods or nutrients is likely to result in greater health benefits that would accrue from narrow taxes; although the strongest evidence base is for a tax on sugar sweetened beverages</li> <li>• Taxation needs to be at least 20% to have a significant effect on obesity and cardiovascular disease</li> </ul>

Eyles H, Mhurchu N, Nghiem N, Blakely T.	PLoS Med2012;9:e101353. <a href="#">CrossRef</a> <a href="#">Medline</a>	Food pricing strategies, population diets, and non-communicable disease: a systematic review of simulation studies.	<ul style="list-style-type: none"> <li>Taxes on unhealthy foods should ideally be combined with subsidies on healthy foods such as fruit and vegetables</li> </ul> <p><b>METHODS AND FINDINGS:</b> Electronic databases, Internet search engines, and bibliographies of included studies were searched for articles published in English between 1 January 1990 and 24 October 2011 for countries in the Organisation for Economic Co-operation and Development. Where ≥ 3 studies examined the same pricing strategy and consumption (purchases or intake) or health outcome, results were pooled, and a mean own-price elasticity (own-PE) estimated (the own-PE represents the change in demand with a 1% change in price of that good). Objective 1: pooled estimates were possible for the following: (1) taxes on carbonated soft drinks: own-PE (n = 4 studies), -0.93 (range, -0.06, -2.43), and a modelled -0.02% (-0.01%, -0.04%) reduction in energy (calorie) intake for each 1% price increase (n = 3 studies); (2) taxes on saturated fat: -0.02% (-0.01%, -0.04%) reduction in energy intake from saturated fat per 1% price increase (n = 5 studies); and (3) subsidies on fruits and vegetables: own-PE (n=3 studies), -0.35 (-0.21, -0.77). Objectives 2 and 3: variability of food pricing strategies and outcomes prevented pooled analyses, although higher quality studies suggested unintended compensatory purchasing that could result in overall effects being counter to health. Eleven of 14 studies evaluating lower socio-economic groups estimated that food pricing strategies would be associated with pro-health outcomes. Food pricing strategies also have the potential to reduce disparities.</p> <p><b>CONCLUSIONS:</b> Based on modelling studies, taxes on carbonated drinks and saturated fat and subsidies on fruits and vegetables would be associated with beneficial dietary change, with the potential for improved health. Additional research into possible compensatory purchasing and population health outcomes is needed.</p>
Ng S, Ni Mhurchu N, Jebb S, Popkin B.	Br J Nutr2012;108:536-51.	Patterns and trends of beverage consumption among children and adults in Great Britain, 1986-2009	
Winkler J.	Br J Nutr2012;108:395-6.	Why soft drinks taxes will not work.	Proposals to tax less healthy products incorporate two assumptions: the tax will be translated directly into price increases, and consumers will recognise the rise. With soft drinks, both are unlikely. The pricing of soft drinks is extremely complex. Both

<p>Morega LT, Mallard S, Mann J.</p>	<p>BMJ2012;345:e7492</p>	<p>Dietary sugars and body weight: systematic review and meta-analyses of randomised controlled trials and cohort studies.</p>	<p><a href="http://www.bmj.com/content/346/bmj.e7492">http://www.bmj.com/content/346/bmj.e7492</a></p>	<p>nominal shelf prices and continuous price promotions vary between outlets, regions and seasons, even between supermarkets. Discounts of 50 % or 'better than half price' are common, and so a 10 % tax is easily absorbed or concealed. It is difficult for consumers to determine the 'normal' price. Any increase would be invisible behind the marketing fireworks. Those who propose policies must consider their political context. In 2007, after a trade dispute with Brazil, the European Union began reducing the price of sugar by 36 %<sup>( 2 )</sup>. The proposed tax would not even restore the price level to what it was 5 years ago.</p>
<p>Thow, A.M., Qvested, C., Kun, R. et al.</p>	<p>Health Promotion International .26(1): 55-64.</p>	<p>Taxing soft drinks in the Pacific: implementation lessons for improving health.</p>	<p><a href="http://heapro.oxfordjournals.org/content/early/2010/08/24/heapro.dag057.full">http://heapro.oxfordjournals.org/content/early/2010/08/24/heapro.dag057.full</a></p>	<p>In trials of adults with ad libitum diets (that is, with no strict control of food intake), reduced intake of dietary sugars was associated with a decrease in body weight (0.80 kg, 95% confidence interval 0.39 to 1.21; P&lt;0.001); increased sugars intake was associated with a comparable weight increase (0.75 kg, 0.30 to 1.19; P=0.001). Isoenergetic exchange of dietary sugars with other carbohydrates showed no change in body weight (0.04 kg, -0.04 to 0.13). Trials in children, which involved recommendations to reduce intake of sugar sweetened foods and beverages, had low-participant compliance to dietary advice; these trials showed no overall change in body weight. However, in relation to intakes of sugar sweetened beverages after one year (follow-up in prospective studies, the odds ratio for being overweight or obese increased was 1.55 (1.32 to 1.82) among groups with the highest intake compared with those with the lowest intake. Despite significant heterogeneity in one meta-analysis and potential bias in some trials, sensitivity analyses showed that the trends were consistent and associations remained after these studies were excluded. <b>Conclusions.</b> Among free living people involving ad libitum diets, intake of free sugars or sugar sweetened beverages is a determinant of body weight. The change in body fatness that occurs with modifying intakes seems to be mediated via changes in energy intakes, since isoenergetic exchange of sugars with other carbohydrates was not associated with weight change.</p>
<p>Kotakorpi K, Härkänen T, Pietinen P, Reinivuo H,</p>	<p>2011</p>	<p>The welfare effects of health-based food tax policy.</p>	<p><a href="http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1959273">http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1959273</a>.</p>	

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Kamerow D.	BMJ 2010;341:c3719		The case of the sugar-sweetened beverage tax.	<a href="#">FREE Full Text</a> <a href="http://www.sciencedirect.com/science/article/pii/S0047272710001222">http://www.sciencedirect.com/science/article/pii/S0047272710001222</a>	
Jason M. Fletcher a, David E. Frisvold b, *, Nathan Tefft	Peer-reviewed journal article Journal of Public Economics September 2010		The effects of soft drink taxes on child and adolescent consumption and weight outcomes		<b>Abstract:</b> Childhood and adolescent obesity is associated with serious adverse lifetime health consequences and its prevalence has increased rapidly. Soft drink consumption has also expanded rapidly, so much so that soft drinks are currently the largest single contributors to energy intake. In this paper, we investigate the potential for soft drink taxes to combat rising levels of child and adolescent obesity through a reduction in consumption. Our results, based on state soft drink sales and excise tax information between 1989 and 2006 and the National Health Examination and Nutrition Survey, suggest that soft drink taxation, as currently practiced in the United States, leads to a moderate reduction in soft drink consumption by children and adolescents. However, we show that this reduction in soda consumption is completely offset by increases in consumption of other high-calorie drinks.
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