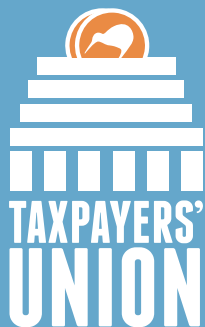


FIZZED OUT:

WHY A SUGAR TAX WON'T CURB OBESITY



YOUR MONEY, YOUR VOICE

Promoting sensible restraint of government expenditure

AUTHOR



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“ Proposing a 20% tax on sugar, as some groups have suggested, appears to be more about value judgements on sugar than actually helping New Zealanders towards better health outcomes.”

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FOREWORD: CHRISTOPHER SNOWDON



If you regularly consume more calories than you expend, you will get fat. This is a simple truism, but beneath it lies a web of complexity. There are thousands of food products and thousands of ways to be physically active. People live under different circumstances, in different environments and have different tastes. It would be absurd to blame a single ingredient, let alone a single product category, for the rise in obesity that has been witnessed around the world. Nevertheless, that is what single issue pressure groups like FIZZ have sought to do. This excellent report shows why their campaign to use tax as a weapon against sugar is dangerous nonsense.

The shipwreck of the Danish fat tax should be the world's lighthouse in regard to health-related taxes on food and drink. All the unintended consequences associated with them were on display in the fifteen months of this ill-fated experiment. The impact on fat consumption was trivial and the effect on obesity was non-existent. Danish consumers switched to cheaper brands of the same products and bought them from cheaper stores, sometimes in cheaper countries. Inflation rose, jobs were lost and people on low incomes suffered most severely from the rising cost of living. Little wonder, then, that the tax was swiftly repealed by an overwhelming majority in the Danish parliament in 2012.

There are important lessons here but if the 'public health' lobby has learned them it is only so they can repeat them exactly, this time with sugar. There is no reason to expect a different outcome.

As numerous studies have shown, people tend to be flexible in how much they are prepared to pay for the food and drink they enjoy. They would sooner make sacrifices in other areas of the household budget than change their eating habits. The Danish experience is not unique in demonstrating this. The evidence from the USA, where a number of states have introduced soda taxes, tells the same story.

Faced with a dismal record of failure in the real world, campaigners for food and drink taxes have retreated into a world of statistical models in order to prove that policies which don't work in practice can be made to work in theory. But there is no running away from the facts outlined in this report. Taxing fat, sugar or soda is an effective method of raising government revenue precisely because people keep on buying them.

A sugar tax is attractive to politicians because it allows them to engage in mass pick-pocketing with a sense of moral superiority. They need to be reminded that there is nothing moral about introducing a regressive stealth tax when you know that demand is inelastic. Taxing food and drink won't make the poor healthier, but it will certainly help to ensure they stay poor.

It is not good enough to say that anything is worth a try in the campaign against obesity. A policy that is known to incur significant costs without reaping any measurable rewards is a policy that should be rejected without a second thought.

Christopher Snowdon is Director of Lifestyle Economics at Britain's Institute of Economic Affairs.

EXECUTIVE SUMMARY:

In recent years calls for taxes on unhealthy foods have been growing. Newly established public health advocacy groups such as “FIZZ” are calling for a 20 per cent tax on sugar-sweetened beverages. Their aim is a “sugar free New Zealand by 2025.”¹ Such advocacy is prevalent² and has grown in line with New Zealanders’ expanding waistlines. While there is no doubt New Zealanders today are heavier than previous generations³ this paper argues the causes are many and varied, including levels of physical activity, overall calorie intake and genetic predisposition. Proposing a 20 per cent tax on sugar as some groups have suggested appears to be more about value judgements on sugar than actually helping New Zealanders towards better health outcomes.

Sucrose intake for New Zealanders fell between 1997 and 2008 while obesity rates continued to rise. This throws doubt on sugar’s perceived role as central villain in the battle of the bulge.

Close consideration of the international experience casts further doubt on the case for such a tax suggesting it is unlikely to be effective, but may place a heavy burden on a nation’s economy.

The risks of such a proposed tax are best illustrated by the experience of Denmark who enacted an excise tax on saturated fats in 2011 only to abolish the tax a year later.

The tax resulted in a public infuriated by an abrogation of their choices, substitution to non taxed foods, negative economic impacts including job losses, and by one survey no reduction in consumption of the targeted foods by 90 per cent of consumers.⁴

It also seems an odd time for such vociferous advocacy given active promotion by the food industry of lower sugar options driven by shifts in preferences by more health conscious consumers. As with the drive a decade ago for ‘low fat’ food options, consumers are voting with their mouths and demanding low sugar alternatives. The market is already responding to consumer demand.

Aside from the draconian restrictions on personal choice a sugar tax would entail, there are several reasons why such a policy intervention is a bad idea:

NEW ZEALANDERS ARE CONSUMING LESS ADDED SUGAR

Sucrose (the typical added sugar)⁵ median daily intake by New Zealand males between 1997 and 2008/09 fell while obesity rates for males rose. Females showed a statistically insignificant decrease in sucrose intake while obesity rates rose.⁶

1 <http://www.fizz.org.nz/> accessed on 10 April 2015

2 See for example <https://www.consumer.org.nz/articles/sugar>

3 A recent Ministry of Health report found rates of obesity has increased for both men and women see *A Focus on Nutrition: Key findings of the 2008/09 New Zealand Adult Nutrition Survey* (2011 University of Otago and Ministry of Health) (hereafter *New Zealand Adult Nutrition Survey*)

4 “Fat Tax has little effect” *Politiken* November 23, 2011 data retrieved from <http://politiken.dk/newsinenglish/ECE1459080/fat-tax-has-little-effect/> on 6 July 2015 retrieved on 13 April 2015

5 Parnell, W; Wilson, N; Alexander, D; Wohlers, M; Williden, M; Mann, J and Gray, A “Exploring the relationship between sugars and obesity” in *Public Health Nutrition*: 11(8) pages 860-866 (2007)

6 *New Zealand Adult Nutrition Survey* Sucrose figures are on page 308. The change in obesity is summarised on page XXVI. This is in line with the English and Australian experience see for example Barclay, A. and Brand-Miller, J “The Australian Paradox: A substantial decline in Sugars intake over the same timeframe that overweight and obesity have increased” in *Nutrients* (2011)

SUGARY DRINKS ARE A SMALL PROPORTION OF TOTAL ENERGY INTAKE

Of New Zealanders' total energy intake only 1.6 per cent comes from the added sugar content of sugar-sweetened non-alcoholic beverages.

THE DANISH FAT TAX DID NOT WORK

Denmark experimented by introducing a tax on saturated fats aimed at reducing the intake of fatty foods in 2011 which was subsequently repealed in 2012, just one year later, by the Danish government.

IT MAY NOT CHANGE BEHAVIOUR

Advocates hope an increase in price will lead people to eat less sugar. Unfortunately evidence suggests consumers may change their behaviour in response to food taxes less than advocates hope. Similar taxes in Mexico and Denmark have had little, if any, impact on overall consumption of the targeted product.

UNINTENDED CONSEQUENCES

The Danish tax became very unpopular in part because compliance costs for Danish businesses became high and the tax made Danish producers less competitive. The economic situation reached such a point that the Danish Chamber of Commerce and two trade unions (HK Commerce and the Allied Workers Union) joined forces to place advertisements calling for the tax to be repealed.⁷

FOOD TAXES ARE REGRESSIVE

Lower income people spend more of their income on food so such taxation disproportionately affects the least well-off.

SUGAR-SWEETENED BEVERAGE CONSUMPTION IS FALLING GLOBALLY

Advocates of the tax are pushing for its introduction in the context of increased consumer preference for lower sugar options.



7 Snowdon "The Proof of the pudding: Denmark's fat tax fiasco" *Institute of Economic Affairs Current Controversies Paper No. 42* (2013)

NEW ZEALANDERS ARE GETTING FATTER

The World Health Organisation defines obesity and overweight as “abnormal or excessive fat accumulation that presents a risk to health.”⁸ Individuals are considered overweight or obese when they have a body mass index (BMI) in excess of 25 or 30. The BMI is a calculation derived by dividing a person’s weight by the square of their height.

Obesity rates have increased over the last three decades across the globe. New Zealanders have not escaped the fattening fate of our American, Australian or British cousins. The percentage of obese New Zealand females has risen from 20.6 per cent to 27.8 per cent and from 17.0 per cent to 27.7 per cent for males between 1997 and 2008/09.⁹

Obesity is a problem because it puts people at risk of a range of debilitating illnesses such as diabetes, heart diseases and cancer. Obesity is a growing health problem in developed countries but has now also spread to some middle income developing countries. It represents a stark shift from the problems of earlier stages in human economic development when lack of food produced emaciation and its accompanying health risks.

WHAT ARE THE CAUSES?

Obesity can be caused by a range of factors but weight gains in developing countries have been influenced in large part by economic changes as people have shifted from more active occupations such as manual or farm jobs to more sedentary ones such as service sector or office jobs. People shifted from the farm to the office because the wages were better and office jobs were less physically demanding.¹⁰

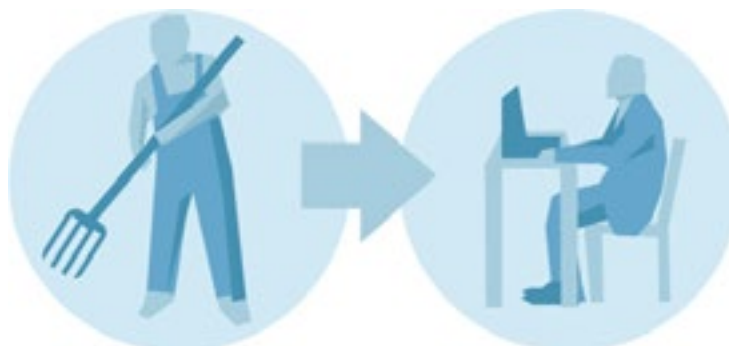
These structural changes cannot be held responsible for more recent bulging waistlines. Obesity today can be caused by a combination of a lack of physical activity, genetic predisposition, an unbalanced diet and prenatal and postnatal influences.

All of these factors have likely played some sort of role in New Zealand’s growing rate of obesity, but like many public policy issues it is difficult to divine a single cause responsible for negative outcomes.

As Christopher Snowdon from the Institute of Economic Affairs has noted:

“obesity is the result of consuming too many calories from any source”¹¹

...which suggests a tax on sugar is unlikely to be a silver bullet for the health issue of obesity.



8 World Health Organisation website: <http://www.who.int/topics/obesity/en/> accessed on 10 April 2015

9 Page XXVI of *Adult Nutrition Survey*

10 See “Supersize it” chapter 3 in Miller, Benjamin and North *The Economics of Public Issues* 17th edition (2012)

11 Snowdon, C *The Proof of the Pudding: Denmark’s Fat Tax fiasco* Institute of Economic Affairs Current Controversies paper No. 42 (May 2013)

IS SUGAR TO BLAME?

Between 1997 and 2009 median daily sugar intake for New Zealand males fell from 62 to 55 grams while females showed a statistically insignificant decrease from 45 to 42 grams. This occurred at the same time obesity rates increased in the country from 17 per cent of the population to 27.7 per cent for males and from 20.6 per cent to 27.8 per cent for females.¹²

A decline in sugar intake matched with an increase in rates of obesity actually follows trends seen in both Britain and Australia.¹³ Such a paradox casts doubt on the assertion of public health advocacy groups such as FIZZ that sugar is the demon chiefly responsible for the obesity of New Zealanders.

Research from Otago University has also questioned the link between sugar intake and obesity. Parnell et al found

*“obese children had a significantly lower intake of sugars [and energy percentage] than normal weight children”.*¹⁴

Even if sugar is primarily to blame for obesity, the amount attributable to soft drinks – the product many are calling for a tax to target – is small. The New Zealand Adult Nutrition Survey shows that only 5.0 per cent of New Zealanders’ total energy intake comes from non-alcoholic beverages with 1.6 per cent of the total energy intake from just sucrose (a proxy for the added sugar content) of sugar-sweetened non-alcoholic beverages.

It is unclear whether targeting sugar will deliver the desired improvements in public health, but international experience suggests there will be serious costs arising from such a policy that must be considered.



12 *New Zealand Adult Nutrition Survey* Sucrose figures are on page 308. The change in obesity is summarised on page XXVI.

13 Barclay, A and Brand-Miller, J “The Australian paradox: A Substantial decline in Sugars intake over the same timeframe that Overweight and Obesity have Increased” in *Nutrients* (2011) volume 3 pp491-504

14 Parnell, W; Wilson, N; Alexander, D; Wohlers, M; Williden, M; Mann, J and Gray, A “Exploring the relationship between sugars and obesity” in *Public Health Nutrition*: 11(8) pages 860-866 (2007)

THE DANISH EXPERIENCE

In response to concern about levels of obesity, the Danish government introduced in 2011 an excise tax on products containing more than 2.3 per cent saturated fat. The tax was set at 16 Kroner (approximately 3NZD) per kilogram.

Danish politicians had the best of intentions in introducing the tax reasoning that, all things being equal, an increase in the price of fatty foods should cause consumers to buy fewer fatty foods.

In introducing the tax, the Danish government aspired to the laudable aim of increasing the average life expectancy of Danes by three years over the next ten years. Then Health Minister Jakob Axel Nielsen said when introducing the idea in 2009,

“Higher fees on sugar, fat and tobacco is an important step on the way toward a higher average life expectancy in Denmark [because] saturated fats can cause cardiovascular disease and cancer.”¹⁵

Unfortunately for advocates of excise taxes on so-called bad foods, the real world is often more complicated and policies do not occur in a vacuum.

Just as policymakers intended, prices of fatty products rose as manufacturers passed on the additional costs to consumers. However, the ultimate price rise far exceeded expectations with some research suggesting the tax may have been responsible for price rises in excess of 20 per cent.¹⁶

The tax led many Danes to switch their purchases to discount supermarkets yet “the prices in the discount stores increased more than what could be directly justified by the tax”.¹⁷ The fact discount stores increased prices by more than the tax could justify suggests that consumers are less willing to change their consumption habits than public health advocates may have wished. Economists term consumers’ willingness to pay more, rather than consume less, when faced with higher prices “inelastic demand”. The Danish experience suggested the taxed foods fit that profile.

This same piece of research also lent credence to anecdotal suggestions of hoarding by Danes prior to the introduction of the tax.

Furthermore, the analysis points at some interesting structural effects in the food retailing sector, with some shifts in demand from high end supermarkets towards low-end discount stores a shift that seems to have been utilised by discount chains to raise the prices of butter and margarine by more than the pure tax increase, while still maintaining – and even improving the market share for butter.¹⁸

The New Zealand Beverage Guidance Panel has argued “policy options are known to be highly cost-effective in terms of public health interventions”¹⁹ but the Danish experience suggests there is dubious public health benefit to be had at real expense.

15 “Denmark imposes ‘fat tax’ on food to curb obesity” *The Independent* October 3, 2011 retrieved from <http://www.independent.co.uk/news/world/europe/denmark-imposes-fat-tax-on-food-to-curb-obesity-2364715.html> on 18 May 2015

16 Jensen and Smed *The Danish Tax on Saturated Fat: Short run effects on consumption and consumer prices of fats* University of Copenhagen Institute of Food and Resource Economics (2012)

17 *ibid* at page 1

18 *ibid* at page 18

19 *New Zealand Beverage Guidance Panel* “Policy Brief: Options to Reduce Sugar Sweetened Beverage (SSB) Consumption in New Zealand” 19th June 2014 at page 1

THE MEXICAN EXPERIENCE

Mexico introduced an excise tax on sugar-sweetened beverages (SSBs) of 1 peso per litre in January 2014. While the Mexican tax has resulted in a lot of hype, the data does not appear to offer any support in favour of a tax on sugar to reduce obesity rates.

In New Zealand, activists and media commentators have claimed success of the Mexican sugar tax based on some preliminary findings (not peer-reviewed) of a study by the National Institute of Public Health of Mexico. The study was funded by Bloomberg Philanthropies - a charitable fund which financially supports sugar tax campaign groups around the world. The study was overseen by Professor Barry Popkin, a strong supporter of sugar taxes as well as an adviser to the Mexican government about the tax. The press conference to release these findings and pronounce the tax as a success was held by Alianza por la salud alimentaria, a collective of activist groups that includes Greenpeace.

The report concludes that Mexico's tax on SSBs resulted in a 12 per cent reduction in consumption across the population and a 17 per cent reduction among low socio-economic groups and has been widely reported in New Zealand media.

Those findings do not match the actual sales data from the marketplace.

PEOPLE ARE PAYING MORE FOR THE SAME

Nielsen sales data²⁰ shows that there was no significant reduction in litres consumed in the twelve months to May 2013 (before the tax) and the twelve months to May 2015 (the first full year of data since the tax was introduced). Between these years, consumption of SSBs fell by 182 litres. 182 litres in a country that consumes over 11 billion litres of carbonated soft drinks is a flat result.

The difference between what activists claim, and what the sales data shows, results from the study being based on panel data and interviews and not actual accurate sales data. Expressed preferences are often skewed because what people say they do and what they actually do are often quite different. For example, when asked how often they use local libraries, members of the public tend to inflate their actual use. It appears here that participants have told researchers they are reducing their consumption of sugary drinks when the national sales data shows that not to be the case. The lesson here is actions speak louder than words.

Even among the greatest supporters of the tax, there is some acknowledgement of its failure. In March Professor Popkin was reported in the *Washington Post* as saying the Mexican sugar tax is too low "to meaningfully affect consumption".²¹

20 See appendix.

21 "Is a soda tax the solution to America's obesity problem?" *The Washington Post* March 23, 2015 retrieved from http://www.washingtonpost.com/lifestyle/food/is-a-soda-tax-the-solution-to-americas-obesity-problem/2015/03/23/b6216864-ccf8-11e4-a2a7-9517a3a70506_story.html on 5 July 2015

WILL A TAX CHANGE BEHAVIOUR?

The implied rationale behind introducing a sugar excise tax such as those on tobacco or fuel is ostensibly to reduce consumption. However, evidence on food and drink taxes suggests consumers may not behave as public health advocates would wish.²²

One report on the Danish experience found 90 per cent of Danes were consuming the same amount of targeted fatty foods of butter, cream and cheese a year after the introduction of the tax.²³

UNINTENDED CONSEQUENCES

There is a surprising lack of consideration by those campaigning for a sugar tax of the direct costs and potential unintended consequences of the policy measures they propose.

Denmark's experience with the fat tax shows the folly of the assumption that any given policy will have direct impact within a vacuum. Denmark's fat tax was blamed for an increase in inflation to 4.7 per cent while real wages fell by 0.8 per cent.²⁴ The tax not only increased the costs of targeted foods (as was intended) but also raised administration costs for businesses who now had to figure out the saturated fat content of their products and how to adjust their prices accordingly.

The perilous economic situation wrought by the tax became so bad in Denmark that it made for an unlikely union between the Danish Chamber of Commerce and two trade unions who joined forces in pushing for the abolition of the very unpopular tax.

SUBSTITUTION EFFECTS

Obesity like many health ailments is a complex phenomenon contingent on many factors so it is hard to tease out direct correlation with any one potential contributor.

When considering the case for a food tax it is important to look not solely at consumer behaviour with respect to the targeted food but also consumer behaviour with respect to "substitutes".

Calories do not solely come from sugar and a policy which taxed sugar may simply have the effect of substituting high sugar consumption for greater consumption of other high calorie foods. The substitute good for Coca-Cola may not be Pepsi or another sugary drink or food but instead some other high calorie item unlikely to improve health.

This was the experience of a research experiment in the United States which found a tax on sugar-sweetened beverages had the effect of increasing purchases of beer in those beer purchasing households.²⁵

22 Powell, LM and Chaloupka, F.J. "Food prices and obesity: evidence and policy implications for taxes and subsidies" *Milbank Q* 2009; 87: pages 229-257

23 "Fat Tax has little effect" *Politiken* November 23, 2011 retrieved from <http://politiken.dk/newsinenglish/ECE1459080/fat-tax-has-little-effect/> on 6 July 2015

24 Snowdon, C "The Proof of the Pudding: Denmark's Fat Tax fiasco" Institute of Economic Affairs Current Controversies paper No. 42 (May 2013)

25 Wansick, B; Hanks, A; Cawley, J and Just, D. "From Coke to Coors: A Field Study of a Fat Tax and its unintended consequences" (2014)

FOOD TAXES ARE UNFAIR

Individuals on lower incomes spend proportionately more of their incomes on necessities such as food. A direct tax on food is therefore regressive, harming the poor more than higher income earners.

According to figures from Statistics New Zealand's Household Economic Survey of 2013, 18 per cent of total weekly expenditure for New Zealand's lowest income earners was spent on food.²⁶

FALLING GLOBAL CONSUMPTION

A recent report by Business Insider highlighted the decline of brand Coca-Cola (a source of added sugars and a product often demonised by advocates of a sugar tax) with sales growth falling markedly in the last five years.²⁷

The article quotes Melbourne Business School Associate Professor of Marketing Mark Ritson who considers the value of cola is in decline: "the value of that cola category is set to plummet over the next 20 years. It's no good [for Coca-Cola] being a big fish in an ever smaller pond".

Mr Ritson notes the decline is further due to more consumers making health conscious decisions:

Natural products, organic ingredients, incredibly fresh origin, local provenance — these were initially the watchwords of small groups of maven consumers, but this movement has become more and more pronounced in the developed world in recent years. And it will only get stronger in the years to come.

This report and other evidence suggests groups of consumers are already making choices to shift towards healthier options. The increasing availability of lower or no sugar options with artificial sweeteners such as Coke Zero, Just Juice 50% less sugar, Coca Cola Life and Pepsi Next, provides anecdotal support for Mr Ritson's contention that the market for high sugar drinks is already declining.

In spite of these changes advocates for the tax continue to view the industry in an antagonistic fashion. Writing in the Pacific Health Dialogue Professor Roby Beaglehole has argued that the greatest barrier to a sugar tax may be the sugar industry itself which he asserts "has vested interests in maintaining the status quo".²⁸

The change in product focus for multi national corporations, Coca-Cola and Pepsi, simply reflect commercial realities in a dynamic market place.

Professor Beaglehole is probably right to suggest the industry would prefer to maintain the status quo but in the real world of dynamic markets, the status quo doesn't often last long. Changing preferences toward healthier options force companies like Coca-Cola to shift their production to best suit those healthy preferences or risk going out of business.

26 New Zealand Household Economic Survey 2013 data retrieved from <http://nzdotstat.stats.govt.nz/wbos/Index.aspx> on 18 May 2015

27 "The End of the Coke era" Business Insider April 9, 2015 retrieved from <http://www.businessinsider.com.au/what-is-the-future-for-the-coca-cola-brand-soda-sales-decline-2015-4> on 14 April 2015

28 Beaglehole, R "Sugar Sweetened Beverages, obesity, diabetes and oral health" *Pacific Health Dialog* March 2014 Volume 20 Number 1 at page 41

CONCLUSION

The evidence on excise food taxes suggests such policy interventions are ineffective. A tax on sugar would represent a sledgehammer one size fits all approach viewing a reduction in sugar intake as a panacea for the serious weight problems faced by some New Zealanders.

In considering whether someone is healthy it is important to take a more holistic approach which considers their overall diet and physical activity instead of their consumption of so-called bad foods.

The experience of Denmark suggests excise food taxes can have unfortunate unintended consequences when implemented in the real world.

Sucrose intake for New Zealanders fell between 1997 and 2008 while obesity rates continued to raise throwing doubt on sugar's perceived role as central villain in the battle of the bulge.

At a time when consumer preferences globally and locally appear to be shifting toward lower sugar products the case for the tax is further weakened.

Substitution from taxed sugar to untaxed high calorie food as has been the experience in Denmark and in a United States field study, which suggests a strong likelihood that a sugar tax would represent zero health gain but at a real cost to the New Zealand economy.



APPENDIX: NIELSEN SALES DATA

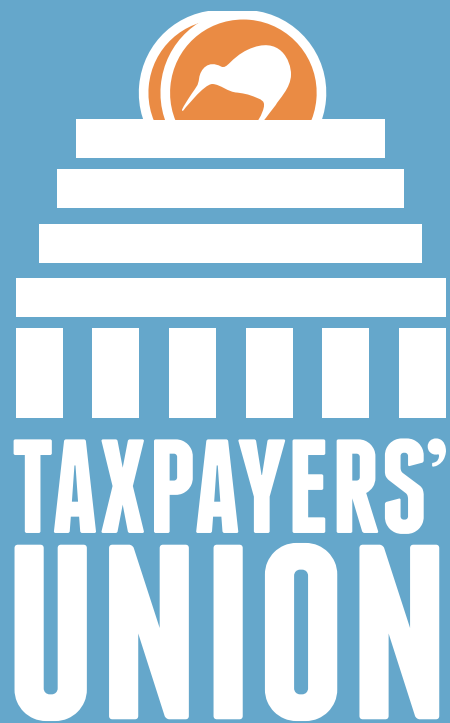
CARBONATED SOFT DRINKS SALES IN MEXICO

TOTAL MEXICO	Total sales (Pesos '000)		
Moving Annual Total	May-13	May-14	May-15
Carbonated soft drinks	103354522.3	111,585,133.4	122,501,542.6
% change		8.0%	9.8%

TOTAL MEXICO	Litres ('000)		
Moving Annual Total	May-13	May-14	May-15
Carbonated soft drinks	11,092,531.2	11,120,041.8	11,092,349.4
% change		0.2%	-0.2%

TOTAL MEXICO	Unit Sales ('000)		
Moving Annual Total	May-13	May-14	May-15
Carbonated soft drinks	1,953,838.1	1,958,685.6	1,953,813.2
% change		0.2%	-0.2%

Source: The Nielsen Company



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