

Item #31

Summaries of Professor John Gibson's research

Two draft summaries of Professor John Gibson's research prepared by Ministry of Health
and extended abstract for, at the time, unpublished paper on Mexico's sugar tax, 10
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Dr John Gibson's Research Findings Relevant to Sugar Tax

A tax on sugary food and beverage items is proposed as a way of influencing consumer purchases through higher prices. Knowing how consumers are likely to respond to higher prices is therefore important for tax policy. For this reason, as part of its ongoing monitoring of evidence on sugar taxes, the Ministry of Health has been watching an important piece of research led by Dr John Gibson. Dr Gibson, a professor of economics at Waikato University, is the recipient of a grant from the Marsden Fund to research consumer response to higher prices resulting from taxation of unhealthy foods. Although Dr Gibson's research is not due to be completed until 2018, his results to date have shed light on some key issues related to the taxation of sugar-sweetened beverages (SSBs).

Much of the debate around SSB taxation has focused on consumers choosing between two options when prices rise:

- Continuing to purchase the same amount of the taxed item and either spend more overall or reduce spending on other items; or,
- Purchasing less of the taxed item, possibly using the money saved to purchase other items (substitution).

However, as Dr Gibson points out, for most foods and beverages that might be subject to a tax, the tax and any resulting price rise will typically apply to a wide *category* of items (such as all SSBs, not just 300ml cans of Fanta, for example). Within any food or beverage category there may be a wide range of specific items, each with its own price point. This raises the possibility of a third option for consumer response to a price rise: Switching to a lower priced item *within* the category to offset the effect of the tax.

In other words, if a tax caused the prices of SSBs to rise, consumers might switch from smaller cans and bottles to larger-sized bottles, or from premium brand products to budget brands. Because larger bottles and budget brands are cheaper, consumers might be able to purchase just as much SSB as before the tax without increasing their spending. If the goal of the tax is to reduce SSB consumption, this response by consumers could make the tax ineffective. This issue is particularly relevant for SSBs because, as Dr Gibson points out, there is in fact a wide range of varieties, brands and sizes, with large price differences within this category.

A key piece of Dr Gibson's work in 2016 was to explore how well this *within*-category switching option has been reflected in earlier research on the effects of sugar taxes. His review of published studies shows that most studies have failed to identify this response. More importantly, he finds that the failure to identify switching *within* the product category results in significantly *over*-estimating the reduced consumption of SSBs in response to a tax. Dr Gibson concludes that it is likely that a tax on SSBs would have a much smaller effect on consumers' sugar intake than most studies have suggested.

John Gibson's Key Messages on Sugar Tax

A tax on sugar-sweetened beverages (SSBs) has been proposed to encourage consumers to choose healthier options.

There are two major unknowns in the relationship between sugar taxes and consumer behaviour:

- A tax is not always passed through to prices.
- Consumers don't always cut back when prices rise.

The sugar tax debate has tended to focus on only two possible consumer responses to higher prices:

- **Option 1: No change in SSB consumption.**
 - To maintain consumption, consumers either increase their spending or cut back on other things.
- **Option 2: Reduced SSB consumption.**
 - Consumers cut back and may spend money saved on other items (including possibly unhealthy ones).

A tax on SSBs will apply to a wide category of items each with its own price point (Eg. 330ml Coke, 750ml Fanta, 2 litre Budget lemonade).

So there is a third option for consumers:

- **Option 3: Switching within the SSB category.**
 - Consumers purchase lower priced SSBs (through brand, variety or container size changes) to offset the effect of the tax.

The range of prices for SSBs is wide so the potential for this is large.

Within-category switching makes it possible to purchase the same amount (or more) than before the tax without spending more.

Dr Gibson has reviewed previously published studies of SSB taxes. His review:

- Shows that most have failed to identify within-category switching.
- Shows that the failure to identify within-category switching results in significantly *over*-estimating reduced consumption of SSBs.
- Concludes that a tax on SSBs is likely to have a much smaller effect on SSB intake than most studies have suggested.

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