

**The impact of sugared drink taxation and industry response
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The impact of sugared drink taxation and industry response



In *The Lancet Public Health*, Adam Briggs and colleagues¹ explore the possible health impact of the tiered levy on sugar-sweetened beverages (SSBs) that was proposed by the UK Government in March, 2016.² The focus in their analysis is on the response by the food industry. Food and drink companies could pass the tax onto consumers, reduce the sugar content of their products to reduce the amount of tax due, or increase promotion of low-sugar drinks at the expense of that for high-sugar varieties. The authors find that reformulation offers the largest potential for health improvements in terms of numbers of individuals with obesity, new diabetes cases, and tooth decay.

The main value of this study is that it points out that the industry has options and that their choices matter for health. The most likely response will be a mix of the three responses outlined in the study, but what this mix will look like cannot possibly be predicted. I think that the industry's choices are constrained and the health impact of the UK SSB tax is likely to be considerably greater than Briggs and colleagues' results suggest.

Theoretically, companies can choose to absorb the tax, in which case no health benefits would occur. However, such so-called under-shifting would be directly at the expense of profits, reducing them by the £520 million per year expected revenue from the tax.² Even with absorption of half of the tax, as Briggs and colleagues suppose in their most optimistic price change scenario, would be costly. In Mexico³ and France,⁴ SSB taxes were fully passed onto consumers, and I would consider this scenario to also be most likely for the UK. Similarly designed specific excise taxes on tobacco led to consumer prices rising by more than the tax increase (so-called over-shifting).⁵ In a sensitivity analysis, the authors helpfully show that a 100% pass-on rate would produce health benefits that surpass those of their reformulation scenarios.

Reformulation can be technically challenging and risky: removing sugar while keeping taste and other sensations equal is difficult, but if the taste or other properties of food products change, consumers might switch to alternatives offered by competitors. Moreover, reformulation might well take place without a tax. Beverage companies are acutely aware that consumers are increasingly health conscious and are making large

efforts to produce low-sugar drinks that sell equally well or better than do the high-sugar varieties.⁶ Indeed, the optimistic reformulation scenario modelled by Briggs and colleagues was inspired by reformulation efforts that took place before the announcement of an SSB tax in the UK.⁷ That said, judging by industry analysis reports, the threat of SSB taxes serves as a powerful stimulus for reformulation efforts.⁶

One of the modelled scenarios (market share worse case) suggests that an SSB tax could have a negative health impact. However, this scenario seems very unlikely to materialise as the only industry response, for the reasons outlined above. At worst, a part shift in market share from low-sugar to heavily promoted mid-sugared drinks might reduce the overall price-related and reformulation-related impact of the tax.

The effect of SSB consumption on weight in adults was based on evidence from two randomised controlled trials.^{8,9} But, monitoring of actual consumption of free-living participants is difficult, and imperfect adherence and misreporting could have led to the modest effects that investigators of these studies found. Use of well validated energy balance equations to estimate the amount of weight change suggests a roughly six-times greater impact of the tax on obesity, as Briggs and colleagues show in a sensitivity analysis.

The analysis focuses on short-term impacts that directly relate to SSB consumption, namely obesity, diabetes, and caries. These effects are most relevant to policy makers keen to show the effectiveness of their interventions. They are also important because they can be monitored, although relation of any observed changes to the tax will remain difficult. Reformulation and changes in product marketing might start before actual implementation of the tax, and the announcement of the tax and ensuing debate could influence consumption choices independent of any effect of prices.

Future work can assess the impact of SSB taxes on chronic diseases that would materialise later in time, such as heart disease, stroke, low back pain, and osteoarthritis, which would further strengthen the case for the SSB tax. The health impact of the tax on sugared drinks proposed in the UK is likely to be substantial and considerably greater than Briggs and colleagues suggest. The study usefully explores the effect of various possible

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industry responses and shows that how industry acts on the tax can have a substantial impact on the size of the health benefits. A paucity of empirical evidence for the mix of industry responses after imposition of a tax limits the confidence with which any predictions can be made. The UK tax offers an opportunity to collect data that will enable improved forecasts of the impact of such taxes in the future.

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I declare no competing interests.

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