

Item #27

Summary of sugar tax study published in the Lancet (Briggs, et. al.
2016)

Draft summary of Briggs et. al. (2016) study on sugar tax, prepared for internal use only, 12
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Summary

Briggs, A.D.M., Mytton, O.T., Kehlbacher, A., et al. (2016). *Health impact assessment of the UK soft drinks industry levy: a comparative risk assessment modelling study*. The Lancet. Published online 15 December 2016.

This modelling study attempts to estimate the potential effects of the proposed¹ UK levy on sugar-sweetened beverages by considering three possible industry responses:

1. Reformulation of SSBs to reduce sugar concentration;
2. An increase in the price of SSBs and potentially non-sugar sweetened beverages produced by the manufacturers of SSBs; and,
3. A change in the market share of high sugar, mid-sugar, and low-sugar SSBs.

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.

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.

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.

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 had been as described by the study for whatever number of years is necessary to have the associated health impact.

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.

Substitutions considered include:

- 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.
- 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

¹ 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.



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.

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.

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