

What is the Current Evidence on Taxes and Subsidies on Food?

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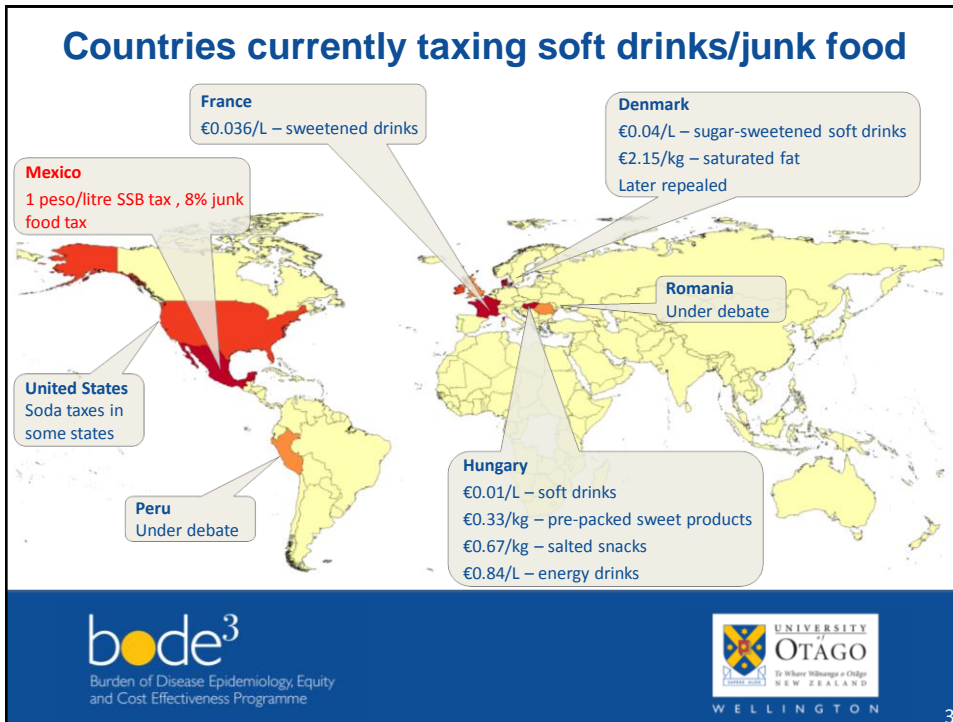
Structure

- Who is doing it?
- What is the evidence?
 - Some preliminary Aussie & NZ findings [**Not for dissemination**]
 - Latest UK findings
 - Balance of evidence across other studies...
 - Interpreted cautiously given large uncertainties
- Given what we know now, what are plausible options for NZ (if any)?

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Case example: Aussie, in progress, preliminary (Cobiac, Blakely, Wilson, Nghiem)

- Uses data we assembled on price elasticities (ie. How much food consumption responds to price change, both 'own' and 'cross' price elasticities)
- Uses Australian demography and disease epidemiology – may differ a bit for NZ (esp Māori), but likely indicative
- Uses models that estimate both gains in longer lives and less disease and net health system costs (savings)

Comparison with other nutrition interventions

Australian interventions	Cost-effectiveness \$/DALY	DALYs averted
Tax/subsidy package	Dominant	110,000
Mandatory regulation of salt	Dominant	110,000
Voluntary Tick programme	Dominant	5,300
Community-wide fruit & veg programme	Dominant	5,200
Weight Watchers	\$170,000/DALY*	54
Dietary advice on salt reduction	\$470,000/DALY*	1,700
Supermarket fruit & veg promotion	\$3.1M/DALY*	100

*Converted from 2003 to 2010 Australian dollars

Balance of evidence: I


- No one study in this area can pretend to be 'exactly correct'. There are many unavoidable uncertainties:
 - Estimating own-price elasticities, let alone cross-price elasticities, is very challenging (data, groupings, statistics)
 - Assumptions about which diseases associated with diet, and how strongly, with what time lag and for how long, etc...
 - Assumptions about competing health risks, how to measure quality of life, etc...
 - Allowing for what else will happen, e.g. concurrent marketing programmes, consumer preferences, tax pass through, etc...

Balance of evidence: III Latest UK findings

Oxford group we collaborate with in previous slide, 20% SSB tax in UK:

- ↓ number of obese adults by 1.3% (95% UI: 0.8% to 1.7%)
- ↓ number of overweight adults by 0.9% (95% UI: 0.6% to 1.1%)

Overall and income specific effect on prevalence of overweight and obesity of 20% sugar sweetened drink tax in UK: econometric and comparative risk assessment modelling study

 OPEN ACCESS

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Other evidence of note: IV

- Basic economic theory: prices up → sales down
- For other products, excise taxes are very effective for protecting health: tobacco tax, alcohol tax
- Some evidence for sales taxes on sugar-sweetened beverages reducing sales (France, Ireland)
- Evidence for 15% reduction in sales of fats (Danish saturated fat tax) – in first year

Equity impacts

- Study by ourselves in NZ finds that across 20-odd food groups, low-income people and Māori tended to change their consumption of foods more in response to price changes... entirely consistent with economic theory, and data price impacts for other products such as tobacco.
- Further, Māori, Pacific and low-income groups tend to have greater absolute burden of diet-related disease, which with greater responsiveness to price suggests we should see greater health gains for taxes and subsidies among these populations.

Ni Mhurchu C *et al.* *Food Prices and Consumer Demand: Differences across Income Levels and Ethnic Groups.* *PLoS One* 2013;8(10):e75934.

If a sugar-sweetened drinks tax to prevent obesity & diabetes

- Opportunities to learn from other countries eg, France, Hungary, Mexico.
- Likely to have majority public support (given Australian survey data)
- The tax revenue could be recycled into healthy school lunches (and/or school dental service etc).
- No significant impact on NZ food exports.

Evidence V: Studies that we draw on

1. Eyles, H., et al., Food pricing strategies, population diets, and non-communicable disease: a systematic review of simulation studies. PLoS Med, 2012. 9(12): p. e1001353.
2. Ni Mhurchu, C., et al., Effects of price discounts and tailored nutrition education on supermarket purchases: a randomized controlled trial. Am J Clin Nutr, 2010. 91(3): p. 736-747.
3. Ni Mhurchu, C., et al., Food Prices and Consumer Demand: Differences across Income Levels and Ethnic Groups. PLoS One, 2013. 8(10): p. e75934.
4. Blakely, T., et al., Do effects of price discounts and nutrition education on food purchases vary by ethnicity, income and education? Results from a randomised, controlled trial. Journal of Epidemiology and Community Health, 2011. 65(10): p. 902-8.
5. Gortmaker, S.L., et al., Changing the future of obesity: science, policy, and action. The Lancet, 2011. 378(9793): p. 838-847.
6. Basu, S., et al., Palm oil taxes and cardiovascular disease mortality in India: economic-epidemiologic model. BMJ, 2013. 347: p. f6048.
7. Briggs, A.D., et al., Overall and income specific effect on prevalence of overweight and obesity of 20% sugar sweetened drink tax in UK: econometric and comparative risk assessment modelling study. BMJ, 2013; 347: p. f6189.
8. Basu, S., et al., Averting obesity and type 2 diabetes in India through sugar-sweetened beverage taxation: a economic-epidemiologic modeling study. PLoS Medicine, In Press.

Some policy options for NZ

- **Taxes on high saturated fat and high salt foods** will probably have large positive health impacts, but very uncertain size of impact.
- **Taxes on sugar-sweetened drinks** are almost certainly pro-health, but with less magnitude of impact that fat and high salt food taxes.
 - Nevertheless, this is (in our view) the first tax that should be implemented.
- **Subsidies on fruit and veges** are possibly/probably beneficial, but depends on what types of food people buy more of due to fruit & veges being cheaper. (This will vary by country and context.)
 - Politically it may be appealing though to ‘balance’ a tax elsewhere.
- Finally, **packages of taxes and subsidies are probably best**, and we suspect better still if (say) combined with other food policies such as less confusing food labelling and food reformulation (as done to reduce salt levels in NZ bread).