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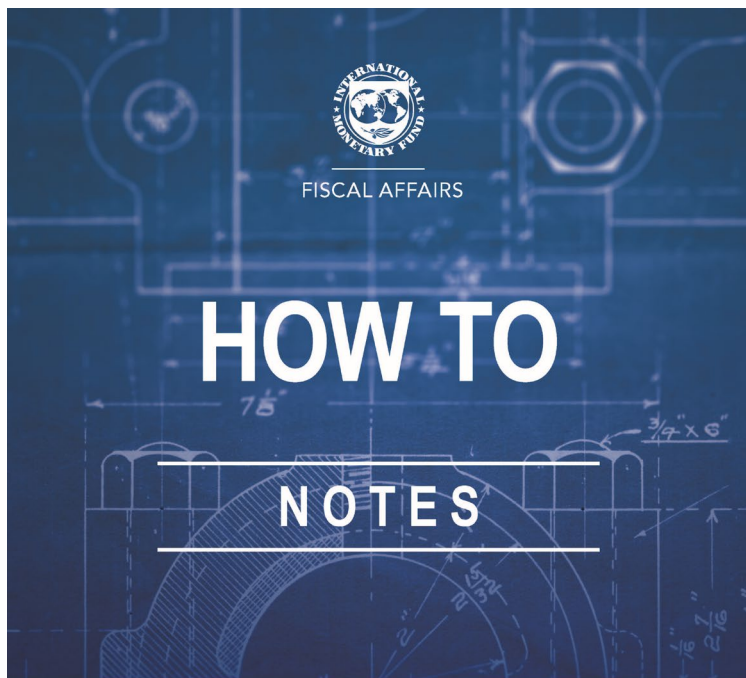
Experience with excise taxes on sugar-sweetened beverages

June 21, 2002

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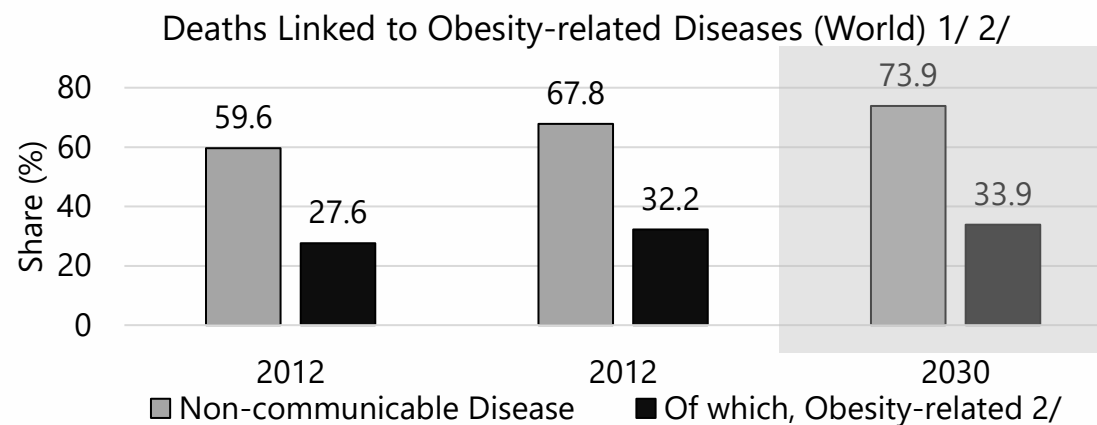
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Growing economic burden of obesity



How to Apply Excise Taxes to Fight Obesity

NOTE 21/08



- 2.8 million deaths annually directly related to obesity
- Economic loss of about 1 percent of GDP (USA)
- Can taxes play a role in fighting obesity?
 - ▶ Taxes and dietary habits
 - ▶ Revenue potential
 - ▶ Other considerations

Risk factors of obesity: can they be mitigated?

- Food habits that cause obesity—US experience
 - ▶ Long-term caloric imbalances: 100-200 kcal/day (one soft drink) = gain of 1lbs / month (but differ across individuals and countries)
 - ▶ Soft drinks, chips / potatoes, unprocessed red meat, processed meat
 - ▶ Sugar-sweetened beverages (SSBs) represent up to HALF of extra calories (mainly US evidence)
- A complex link from tax to obesity
 - ▶ Taxes → higher prices → lower consumption → Lower caloric intake → Obesity impact
(Passthrough?) (High price-elasticity?) (Substitution?)

Impact of SSB excises on obesity

- Strong reaction to price changes – i.e. high price elasticities

	Andreyeva et al. (2010) (USA)	Cornelsen et al. (2014) (38 countries)			Powell et al. (2013) (USA)	Nakhimovsky et al. (2016) 1/	Allcott et al. (2019) (USA)
		Low-income	Middle-income	High-income			
Soft drinks	-0.79	-0.74	-0.68	-0.56	-1.21	-0.6 to -1.2	-1.37
Sweets/sugars	-0.34						

- Taxes have led to a significant decrease in SSBs consumption
- But no empirical link from taxes to obesity outcome?
 1. Too early to conclude (“...*long-term caloric imbalances*”)
 2. Substitution effects towards other caloric foods
 - ▶ E.g., Harding and Lovenheim (2017): 20 percent tax on SSBs → purchases down by 10.35 percent, but related caloric intake by only 4.84 percent
 - ▶ There seem to be important limitations for high excise rates (unlike the case of tobacco for example)
- More evidence is needed; substitution effects are not well understood

Revenue potential

- Convenient and stable revenue raising requires low price-elasticity
- Trade-off between revenue and health objectives—given high elasticities
- Some countries raise significant revenue—but these are rare exceptions

Country	Share of GDP	Country	Share of GDP
Rwanda	0.16 %	Latvia	0.06 %
Cambodia	0.16 %	Mexico	0.10 %

- Much lower than tobacco (up to 2% of GDP) or fuel

Externalities and internalities

- Externalities
 - ▶ Mainly through the health care system
 - ▶ Dependent on institutional setup (e.g., out-of-pocket implies no externalities)
 - ▶ The definition of the externality is not clear (\neq burden of disease, externalities vs risk pooling)
 - ▶ Current estimates suggest a corrective tax of 10-20 percent on SSB (mainly US evidence)
- Internalities—low weight on long-term costs of short-term consumption
 - ▶ Technically difficult to assess and therefore limited quantitative estimates
 - ▶ Existing literature points to corrective taxes higher than for externalities

Overall, there is a case in favor of SSB, but trade-offs and other policy are important

- SSBs are an important risk factor of obesity—act now for long-term changes in habits
- Low taxes will have a low impact: combine with other measures
 - ▶ E.g., Awareness campaign (Mexico); restrictions to access points (school, etc.)
- Strong public acceptability
- A second look at the revenue case
 - ▶ WHO inventories more than 75 countries with SSB taxes
 - ▶ In **low-income countries**, SSBs are easy to tax, represent a higher share of revenue and spending have a higher marginal value
- Presence of externalities and internalities
- Taxes (e.g., tier-based) can nudge product reformulation

References

This presentation is based on the following:

- Petit, P., Mansour, M., and Wingender, P. “How to Apply Excise Taxes to Fight Obesity”. Fiscal Affairs Department, IMF, How to notes 21/08.

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