



**FISCAL AFFAIRS**

# **Eleventh IMF- Japan High-Level Tax Conference for Asian Countries**

## **Should Excise Taxes Be Used to Fight Obesity?**

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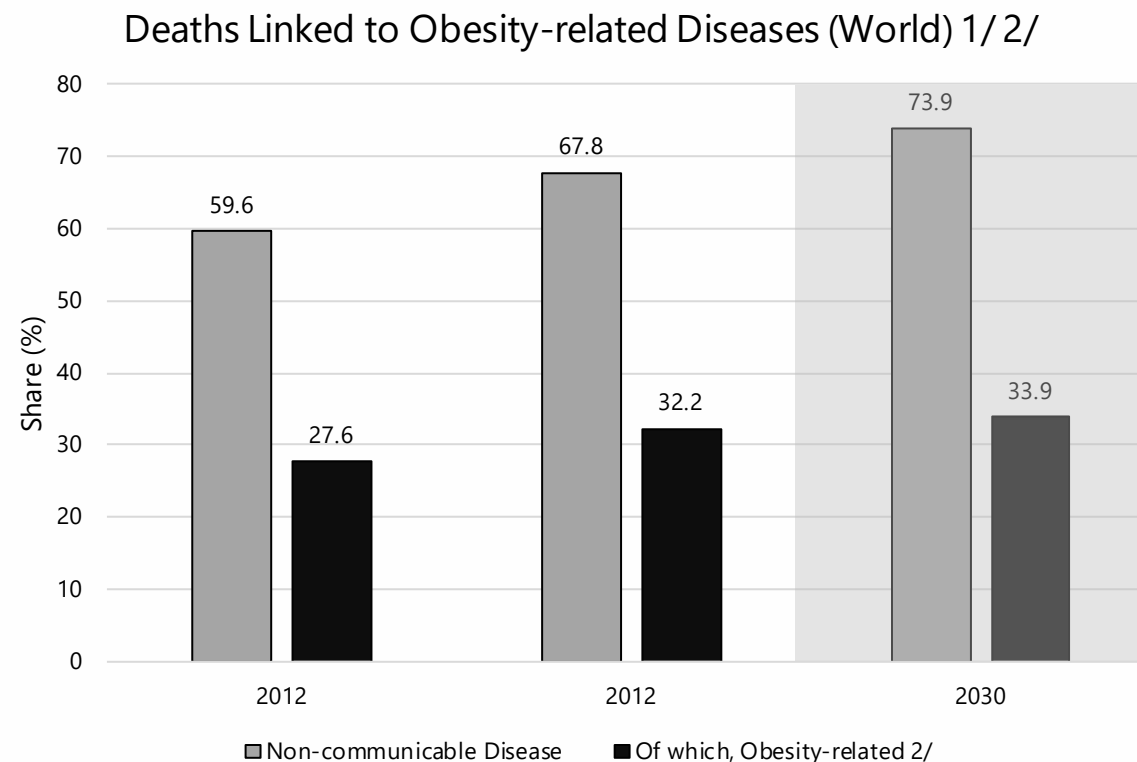
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# The Economic Burden of Obesity in the World

- The economic burden of obesity is large and growing
- Direct responsibility for 2.8 million deaths annually
- Economic burden of about 1 percent of GDP in the USA
- Can tax play a role in fighting the obesity epidemic?



1/ Communicable diseases include "Communicable, maternal, perinatal and nutritional conditions".  
2/ Main conditions only. Many of these conditions have additional risk factors, some of which could be more important than obesity.

# What Is the Cause of Obesity, and Can It Be Taxed?

- Which food items cause obesity?
  - ▶ Normal caloric intake: men  $\pm$  2500 kcal / women  $\pm$  2000 kcal (NHS)
  - ▶ Weight gain is caused by long-term caloric imbalances
  - ▶ 100-200 kcal/day (one soft drink) = weight gain of 1lbs / month (significant individual differences)
  - ▶ **Sources of extra calories**: Soft drinks, chips / potatoes, unprocessed red meat, processed meat
  - ▶ More difficult to target than tobacco/alcohol + impact not always negative (e.g., tobacco)
  - ▶ BUT sugar-sweetened beverages (**SSBs**) represent up to **HALF** of extra calories (mainly US evidence)
- A complex link from tax to obesity
  - ▶ Taxes  $\rightarrow$  Higher prices  $\rightarrow$  Lower consumption  $\rightarrow$  Lower caloric intake  $\rightarrow$  Obesity impact
    - (Passthrough?)
    - (High price-elasticity?)
    - (Substitution?)
- Can excises taxes be used to pursue any public policies?
  - ▶ Externalities & Internalities / Revenue raising / Other major policy for which taxes are the best instrument

# Excise Taxes, Externalities and Internalities

- Externalities: impact on third party of own-consumption
  - ▶ Mainly through the health care system
  - ▶ Dependent on the institutional setup (e.g., out-of-pocket = no externalities)
  - ▶ The definition of the externality is not clear (≠ burden of disease, externalities vs risk pooling)
  - ▶ Evidence gathering, and point to a tax of 10-20 percent of price on soft drinks (US evidence)
- Internalities: underweighting long-term costs of short-term consumption
  - ▶ Technically difficult to assess and therefore limited number of estimations
  - ▶ Estimates so far point to corrective taxes higher than for externalities
  - ▶ More research probably needed

Limited but interesting evidence that Externalities / Internalities are significant  
More research needed

# Excise Taxes and Revenue-raising

- Convenient and stable revenue raising → Low Price-elasticity ?
- Passthrough and Price elasticities are in fact high:

	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						

1/ 9 middle-income countries

- Equity issues
  - ▶ Lower income household buy more SSBs...
  - ▶ ...but greater long-term gain from reduced consumption
- Revenue-raising and health objectives are antagonistic

Revenue-raising case is weak

# Excise Taxes and Health Objectives

- High Price elasticity → High health impact ?
- Taxes have led to a significant decrease in SSBs consumption ...
- ...But no empirical link from taxes to obesity outcome...**WHY?**
  1. Too early to conclude (“...*long-term caloric imbalances*”)
  2. Apparent significant substitution effects towards other products
    - ▶ 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
    - ▶ Important constraints on high (tobacco-style) excise rates

Need more evidence / Substitution effects are not well understood

# Overall, Not a Strong Case so Far, But...

- High obesity burden and SSBs are a major cause: Act pre-emptively?
- Low taxes will have a low impact, so combine with other measures
  - ▶ E.g., Awareness campaign (Mexico)
  - ▶ E.g., Restrictions to access points (school, etc.)
- A second look at the revenue case
  - ▶ WHO inventories 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
  - ▶ Often an ad-valorem in low-income countries / Health-motivated taxes should be specific
  - ▶ No VAT exemption on products related to obesity !
- Taxes (e.g., tiers-base) can nudge product reformulation

**Thank You!**



# References

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## SEE ALSO:

- Allcott, H., Lockwood, B. B., Taubinsky, D. (2019), Should We Tax Sugar-Sweetened Beverages? An Overview of Theory and Evidence. *Journal of Economic Perspectives* 33(3):202–227.

## THIS PRESENTATION IS BASED ON THE FOLLOWING TEXT:

- Petit, P., Mansour, M., and Wingender, P. “How to Apply Excise Taxes to Fight Obesity”. Fiscal Affairs Department, IMF, Forthcoming How to notes 2021.