



**FISCAL AFFAIRS**

# **HEALTH TAXES POLICIES IN LATIN AMERICA AND THE CARIBBEAN: ARE WE MAKING PROGRESS?**

## **Excise Taxes and Obesity in the Pandemic Context**

**May 12, 2022**

**Patrick Petit**

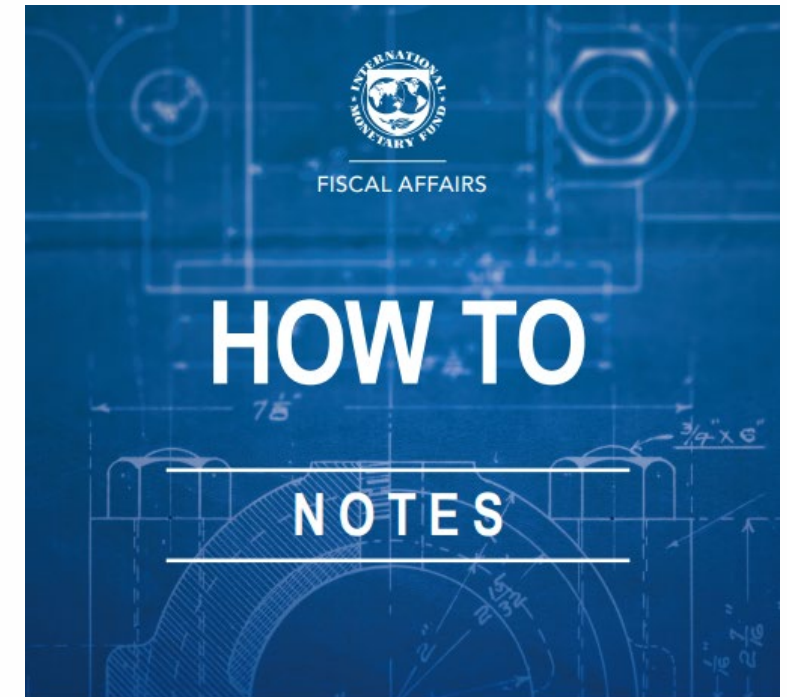
**Senior Economist**

**Fiscal Affairs Department**

**The views expressed are those of the author and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.**

# Plan

- The burden of obesity
- The cost of the pandemic and tax policy
- The cause of obesity and excise taxes
- The level, composition and revenue potential of SSB taxes
- Conclusions

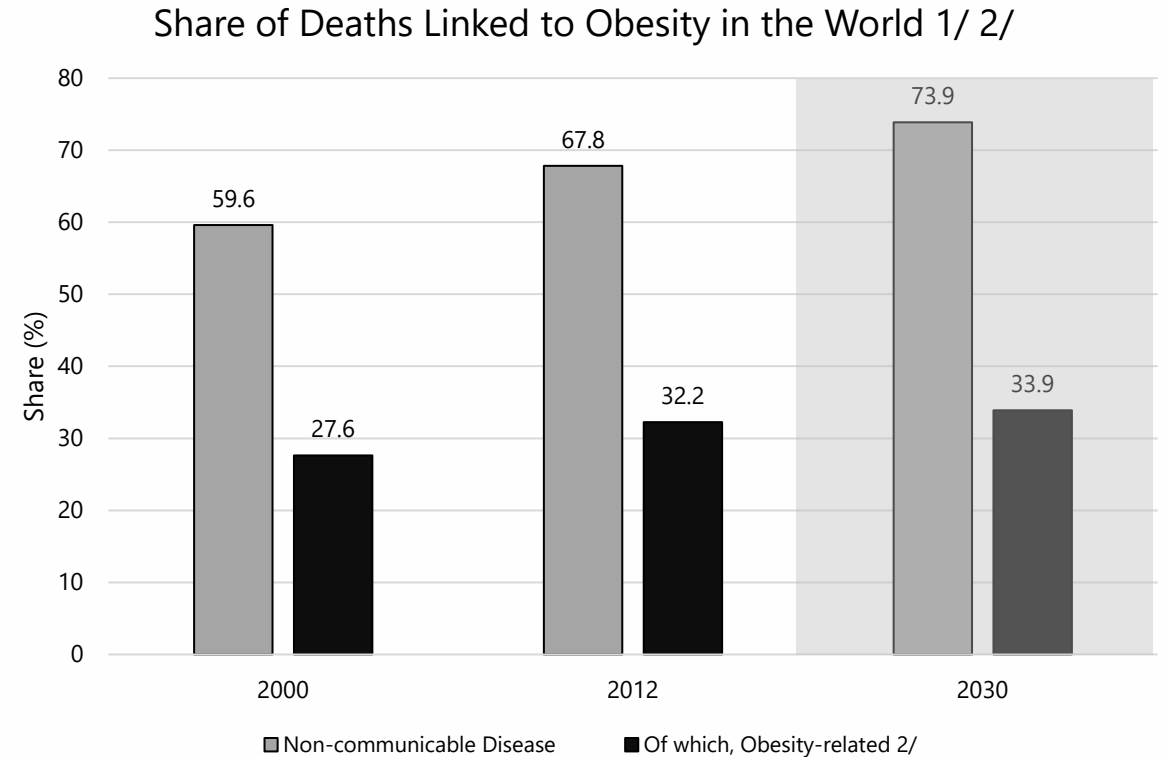


How to Apply Excise Taxes to Fight Obesity

NOTE 21/08

# 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 - this list is not exhaustive. Many of these conditions have additional risk factors, some of which could be more important than obesity.

# THE IMPACT OF THE COVID-19 PANDEMIC

- A significant economic impact
  - ▶ Economic contraction of 3.4 percent of GDP in 2020
  - ▶ Additional burden of 16 trillion USD in direct health spending and other indirect costs
  - ▶ Significant fall in tax revenue
- Many additional compounding factors, of which:
  - ▶ Stronger impact on lower income groups in a world of already growing inequality
  - ▶ Demographic challenges and impact on public finances (revenue and expenditures)

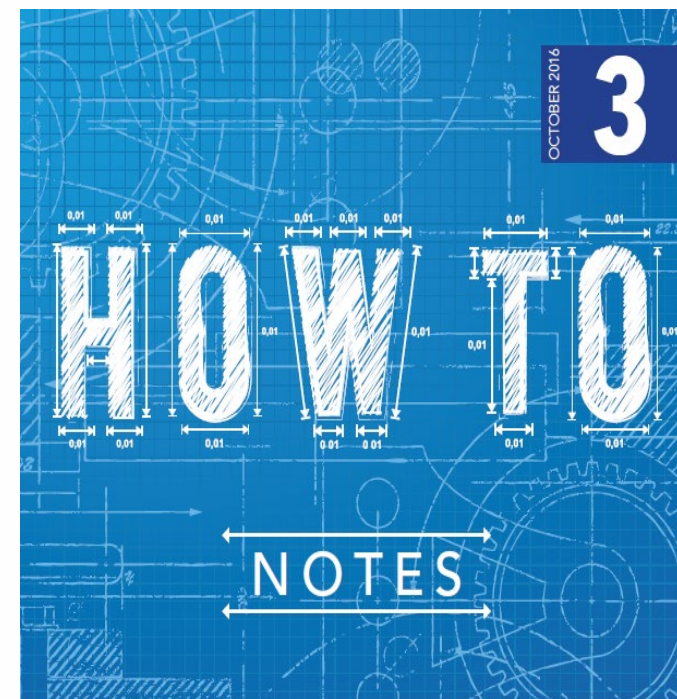
# TAX POLICY FOR A STRONG RECOVERY\*

- More progressive taxation of income
  - ▶ Individualized PIT to decrease the effective tax rate on the second earning
  - ▶ Appropriate exemption threshold, rates schedule, and top rate
  - ▶ Worker credit for low income, along with simple and limited deductions to improve compliance
- A strong and tight corporate income tax
  - ▶ Avoid tax competition through rates and incentives, but also avoid high rates on mobile capital
  - ▶ Strong international tax cooperation to avoid profit shifting
- Make full use of property taxes to improve equity
- Simple one-rate VAT with few exemptions and appropriate threshold
- Modernize excises: health and environment

\* See: de Mooij, R. R. Fenochietto, S. Hebous, S. Leduc, C. Osorio-Buitron, "Tax Policy for Inclusive Growth after the Pandemic", Fiscal Affairs Department, IMF, December 2020.

# HEALTH TAXES

- Health taxes: no deadweight loss and a WIN-WIN situation
  - ▶ Improve efficiency by pricing the negative externalities of harmful behavior
  - ▶ Adjust the underestimated personal costs of consuming harmful items (time-inconsistent choices or “internalities”)
  - ▶ Significant revenue potential in many countries
  - ▶ Tobacco, alcohol... **and SSBs ?**



## FISCAL POLICY

How to Design and Enforce  
Tobacco Excises?

FISCAL AFFAIRS DEPARTMENT | INTERNATIONAL MONETARY FUND

# RISK FACTORS OF OBESITY: CAN THEY BE TAXED?

- Which food items cause obesity?
  - ▶ Long-term caloric imbalances: 100-200 kcal/day (one soft drink) = gain of 1lbs / month
  - ▶ **Sources of extra calories:** Soft drinks, chips / potatoes, unprocessed red meat, processed meat
  - ▶ **BUT 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?)

- Strong health impact → Strong reaction to price (HIGH Price-elasticity)

	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 empirically led to a significant decrease in SSBs consumption ...

# THE IMPACT OF SSB EXCISES ON OBESITY AND THE LEVEL OF TAXATION

- No empirical link from taxes to obesity outcome... **WHY?**
  1. Too early to conclude (“...*long-term caloric imbalances*”)
  2. Substitution effects towards other high 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
    - ▶ Important constraints on high (“tobacco-style”) excise rates
- Need more evidence / Substitution effects are not well understood

Current proposals suggest use of low taxes in the range of 1 US cent per ounce (equivalent to 15-20 percent of price)



# OTHER CONSIDERATIONS ON THE LEVEL OF TAXES

- Excises have a limited and well-defined role in modern tax systems
- Externalities: impact on third party of own-consumption
  - ▶ Mainly through the health care system, but dependent on the institutional setup (e.g., out-of-pocket = no externalities)
  - ▶ The definition of the externality is not clear ( $\neq$  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 needed)
- Equity issues
  - ▶ Lower income households buy more SSBs...but have more long-term gain from reduced consumption
  - ▶ Equity is generally related to government spending (redistribution) and to personal income tax

# THE COMPOSITION OF TAXES: SPECIFIC VS AD VALOREM

- Specific excise tax: **\$ / quantity** vs Ad valorem excise tax: **% of value (price)**
- Health objectives generally motivate the use of specific excises
  - ▶ Harm is related to quantity: specific excises
  - ▶ Define the base: Sugar content / Ounces of liquid (regardless of sugar content)
  - ▶ But inflation can erode the tax → adjust regularly
- The use of sugar content thresholds
  - ▶ For example:
    - ◆ Tax applies to products with more than X grams of sugar per ounce
    - ◆ Higher tax for different brackets of sugar content
  - ▶ Better align the tax on the health impact of sugar / Can nudge product reformulation
  - ▶ Might be more demanding on administrative capacity: labelling / imports and other considerations

# THE REVENUE POTENTIAL OF SSB TAXES

- Convenient / stable revenue raising requires **LOW** Price-elasticity: Not the case
- ...But some countries raise significant revenue (...but less than tobacco)

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

- Ad valorem on SSBs have been used for a long time for revenue purposes in low-income countries
  - ▶ Convenience: formal sector is easier to tax
  - ▶ Price is easy to observe (limited valuation / transfer pricing issues)
  - ▶ Same producers are sometimes already paying ad valorem taxes on other products (e.g., beer)
  - ▶ SSBs represent a higher share of government revenue in low-income countries
  - ▶ Government spending have a higher marginal value than in high-income countries

# CONCLUSIONS

- Very high health and economic burden of obesity
- High revenue needs in the pandemic
- Strong conjunctural and structural rationale for health taxes
- Impact of SSB taxes on obesity still uncertain, but they could be part of a larger policy package
- Revenue potential is small but real
- Taxes should be specific...but can also be ad valorem
- Along with other tax policy measures, these taxes should help increase budget allocations for health financing

**THANK YOU**

# References

- Allcott, H., Lockwood, B. B., Taubinsky, D. (2019), Regressive Sin Taxes, with an Application to the Optimal Soda Tax. *Quarterly Journal of Economics* 134(3):1557–1626.
- Andreyeva, T., Long, M. W., Brownell, K. D. (2010), The impact of food prices on consumption: a systematic review of research on the price elasticity of demand for food, *American Journal of Public Health* 100(2):216-222.
- Cornelsen, L. Green, R., Turner, R. et al. (2014), What happens to patterns of food consumption when food prices change? Evidence from a systematic review and meta-analysis of food price elasticities globally. *Health Economics Early view* (online).
- Harding, M., Lovenheim, M. (2017), The effect of prices on nutrition: Comparing the impact of product-and nutrient-specific taxes. *Journal of Health Economics* 53:53–71.
- Nakhimovsky, S. S., Feigl, A. B., Avila, C., O'Sullivan, G., Macgregor-Skinner, E., Spranca, M. (2016), Taxes on Sugar-Sweetened Beverages to Reduce Overweight and Obesity in Middle-Income Countries: A Systematic Review. *PLoS One* 11(9) e0163358. doi:10.1371/journal.pone.0163358.
- Powell, L. M., Chriqui, J. F., Khan, T., Wada, R., Chaloupka, F. J. (2013), Assessing the potential effectiveness of food and beverage taxes and subsidies for improving public health: a systematic review of prices, demand, and body weight outcomes. *Public Health* 14(2):110-128.

## 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, How to notes 21/08, 2021.