Evidence to Inform Sugar-sweetened Beverage Tax Policy Development in the Caribbean

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Overview

- Rationale for Fiscal Policy
- Empirical Evidence – do taxes work?
  - Tax pass-through and Impact on Demand
- Concerns around Economic Impacts
- Tax Design Considerations
Rationale for Using Fiscal Policy and Costs of Obesity

- Extent of obesity and SSB consumption and the related health burden (importance of country-level situational analysis)
- Economic rationale
- Evidence on costs of obesity
Economics of SSB Taxes: Rationale for using Fiscal Policy

- **Over-consumption** leading to increased medical costs, lost productivity, etc.
- Negative **externalities** that are not accounted for in the “private” market
- A “**Pigouvian**” **tax** (= cost of the negative externality) helps internalize the **external costs**.
- Idea: the tax changes **relative costs** → impacts behavior choices.
- Impact can be measured by **price elasticity of demand**: % change in consumption as a result of a 1% change in price.
- Fiscal policies have broad population reach but should be considered as **part of a comprehensive policy approach**.
Costs of Obesity

Summary: Costs of obesity

- Childhood obesity
  - Poorer physical health
  - Poorer mental health
  - Greater direct medical costs
  - Greater school absenteeism
  - Delayed skill acquisition
  - Lower test results

- Adult obesity
  - Poorer physical health
  - Poorer mental health
  - Greater direct medical costs
  - Greater work absenteeism
  - Greater work presenteeism
  - Lower wages
  - Greater environmental costs

Lower utility
(Direct health effects and due to increased financial constraints)

Health and wellbeing disparities

Empirical Evidence on Impact of Sugary Drink Taxes

- Tax pass-through to prices
- Impact on taxed and untaxed beverages
Tax Pass-through: Selected examples from the Region of the Americas

Under-shifting (partial pass-through):
Barbados
Berkeley, CA
Chile
Oakland, CA
Philadelphia, PA
Seattle, WA

Full pass-through (or close to full):
Mexico
Seattle, WA
Philadelphia, PA

Over-shifting (> 100% pass-through):
Cook County
Consumption, Purchases and Volume Sold: Evidence from the PAHO report for the Region of the Americas

SSB taxes reduce demand:
Estimated price elasticity of demand based on tax evaluations in the Region of the Americas is -1.36.

- A tax that raises SSB prices by 25%, for example, is expected to reduce demand for SSBs by 34%.
Substitution to Untaxed Beverages: Selected examples from the Region of the Americas

Mexico:
- Substitution to water

Barbados:
- Non-SSB sales up, particularly water

US:
- Mixed by jurisdiction; for example:
  - Berkeley substitution to water
  - Seattle moderate substitution to non-taxed SSBs
  - Philadelphia and Cook County: no substitution overall to untaxed beverages
Concerns related to Economic Impacts

- Regressivity
- Tax avoidance: cross-border shopping
- Job loss
Concerns about Regressivity

- Progressive behavior change: low-income populations are more price sensitive
  - Tax evaluations (e.g., Mexico) show larger impact for low-income populations
- Reframing the regressivity argument around progressive health benefits
- Tap water is free; but need to ensure quality
- Return benefits to low-income populations through earmarking of revenue
Tax Avoidance: Cross-border Shopping

- Tax avoidance in the form of cross-border shopping relevant for local area taxes.

- Evidence on cross-border shopping from U.S. evaluations:
  
  **Philadelphia, PA:**
  - Cross-border shopping offset tax impact by 24%

  **Cook County, IL:**
  - Cross-border shopping offset tax impact by 22%

  **Seattle, WA:**
  - No cross-border shopping offset
Concerns about Job Loss

- Industry argues that tobacco, alcohol, and SSB taxes will lead to job losses.
- But models need to account for income and substitution effects and tax revenue.
- Examples of evidence from sweetened beverage tax evaluations:
  - **Mexico:**
    - No significant changes in employment associated with the SSB and nonessential food-related industries or commercial establishments, and no increase in unemployment.
  - **Philadelphia:**
    - No increase in unemployment claims and no reduction in overall employment.
  - **San Francisco:**
    - No reduction in overall employment.
Tax Design Considerations

- Tax base and substitution
- Tax type and rate: specific per unit versus ad valorem
- Flat versus tiered taxes
- Estimation of and earmarking of tax revenue
The appropriate **tax base** depends on the objective of the tax

- Public health objective to reduce sugar intake suggests a tax on *all* forms of SSBs including:
  - Energy drinks, soda, sports/isotonic drinks, fruit drinks, and teas/coffees
  - Taxing *dairy*? Add sweetened/flavored milk to the tax base
  - *Free sugars*? The base would include **100% fruit juice**

- Broader tax base helps to minimize substitution
Tax Design: What Type of Tax?

- Excise tax versus sales tax
  - Excise tax incorporated in shelf price (vs point-of-sale) – more apparent to consumers
  - Applicable regardless of where items are sold

- Specific (per unit) versus ad valorem (% of price) excise tax
  - Specific: quantity discounts are still taxed
  - Specific: reduces incentives to switch to cheaper brands
  - Ad valorem: levied early in the value chain has a smaller impact on price
  - Specific: needs to be adjusted for inflation
Tax Design: What Tax Rate?

• How large should the tax be to generate a meaningful impact?

• For specific taxes ($ per liter) – need to collect data on SSB prices to set tax amount at the policy target
  - 2017 survey in Antigua and Barbuda showed SSB price ($EC) of ~$9.65/L suggesting that a tax of $3/L would equate on average to a 30% tax.

• Recent taxes in Mexico, Barbados and Dominica were implemented at low rates of ~10%; Barbados just announced an increase to 20%

• Ranges in the U.S. from 1 cent/oz to 2 cents/oz

• Flat per unit tax across SSB types equates to a lower % tax on higher priced SSBs; e.g., based on 2017 Cook County data, a 1¢/oz tax equates to:
  - 37% for soda, 28% for juice drinks, and only 7% for energy drinks
Tax Design: Tiered Taxes

• Tiered tax rate based on sugar content

  ➢ E.g., UK tax with thresholds of 5g/100ml (tax of 18p/L) and 8g/100ml (tax of 24p/L) ~ based on current exchange rates, this equates to a tax of about 0.7¢/oz for sugar content above 18g/12oz and 0.9¢/oz above 28g/12oz

  ➢ Need to determine country-specific distribution of volume by sugar content to inform determination of cut points for tax tiers (see figure for example for U.S.)

  ➢ Need to consider tax administration capacity
Tax Design: Earmarking of Tax Revenue

• A portion of the tax revenue may be earmarked for specific government programs.

• Earmarking can be important to help garner public support.

• Earmarking for nutrition and physical activity-related programs can complement the intended health impact of the tax.

• Earmarking toward low-income and minority populations can help to address tax regressivity and health disparities.
Fiscal Policy Approaches to Address SSB Consumption: Important Issues for Moving Forward

- Understanding of context, health issues and full range of costs
- Providing the evidence base, including substitution effects and impacts on health
- Addressing concerns related to:
  - Job loss: point that $ not taken out of economy
  - Cross-border shopping: need for discussion with retailers
  - Regressivity: reframing discussion around progressive health benefits; redistribute tax revenue
- Tax design considerations: base, type, rate, structure
- Estimating revenue generation and cost savings; earmarking revenue
- Addressing concerns related to burden of implementation
  - Need for clear plan on how the tax will be implemented/operationalized
- **Comprehensive policy platform is needed**
- **Comprehensive evaluation of intended and unintended effects is critical to inform effective policy development**


Available from: https://p3rc.uic.edu/resources/p3rc-publications-by-type/
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