Behavioral Economics and Tax Policy

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Introduction

- Taxes are an important tool to help policymakers achieve a wide variety of goals.

- My research uses insights from the field of behavioral economics to improve the design of the tax to more effectively meet the policy goal.

- Focus on seemingly unimportant incentive design choices that may actually have a large impact on a policy’s effectiveness.
Discuss the importance of two simple elements of the design of financial incentives:

1. If a tax is included in the posted price or added at the register
2. If the incentive takes the form of a tax for bad behavior or a bonus for good behavior
In the US, commodity taxes on certain products take two different forms

- Sales taxes are taken at the register
- Excise taxes are included in the posted price (and are, therefore, more “salient”)

- **Standard theory:** the form a tax takes (posted vs. register) should not affect consumption

- **Behavioral theory:** consumers may ignore less salient taxes
Previous research: tax salience matters

My research: can we use tax salience as a policy tool?

Specifically, when do we want to use a salient tax and when do we want a less salient tax?
When should we choose a salient tax?

If goal = behavior change \( \Rightarrow \) salient tax

But consider the design of recent taxes passed with the goal of changing behavior...

- Soda taxes: mostly sales tax
- Candy taxes: mostly sales tax
When should we choose a salient tax?

If goal = behavior change ⇒ salient tax

But consider the design of recent taxes passed with the goal of changing behavior...

- Soda taxes: mostly sales tax
- Candy taxes: mostly sales tax
Would we ever want a *less* salient tax?

A concern with many commodity taxes is that they are regressive – that is, they constitute a disproportionately greater burden for low-income consumers.

Goldin & Homonoff (2013) show that while rich consumers ignore less salient cigarette taxes, poor consumers respond to *all* cigarette tax increases.
This suggests that the form of a tax affects the distribution of a tax’s burden.

Since the poor pay more attention to less salient taxes than the rich, a shift towards register taxes will make a tax more progressive.

- Policy goal = reduce regressivity $\Rightarrow$ less salient tax
- Policy goal = reduce smoking for all consumers $\Rightarrow$ salient tax
Second question: are incentives more effective when they take the form of a tax for bad behavior vs. a bonus for good behavior?

To answer this question, I consider two different policies aimed at reducing disposable bag use:

- A five-cent tax on disposable bag use
- A five-cent bonus for reusable bag use
Washington Metropolitan Area Bag Regulations

- **Tax Policy:**
  - 2010: Washington, D.C. first US city to pass a bag tax
  - 2012: Montgomery County, MD passed a similar policy
  - Must charge five cents for each paper or plastic bag used

- **Bonus Policy:**
  - Stores can choose to provide their own incentives
  - Half of largest grocery chains in Washington Metropolitan Area offer customers a five-cent bonus for each reusable bag used
Should we expect that customers will have the same response to these two incentive policies?

- **Standard theory**: the form an incentive takes – a tax vs. a bonus – should not impact the policy’s effectiveness if the incentives are the same amount.

- **Behavioral theory**: individuals respond more to losses than to gains of the same magnitude, i.e., they are “loss averse” ⇒ the tax should be more effective.
Bag Use Data

- Collected data around implementation of Montgomery County tax

  - Two months before and after the implementation of the tax
  - Sixteen stores during weekdays from 11am to 8pm
  - Recorded bag use, race, and gender of each customer exiting the store
  - The final sample included data on over 16,000 customers
Selected stores from three different counties:

- Montgomery County, MD (policy change)
- Washington, D.C. (always tax)
- Arlington County, VA (never tax)
Proportion of Customers Using a Reusable Bag

- **Tax Never**
- **Tax in Post Period**
- **Tax Always**

**Locations**:
- Arlington County, VA
- Montgomery County, MD
- Washington, D.C.

**Periods**:
- Pre-period
- Post-period
Four types of store policies

- Type I: no incentive
- Type II: five-cent bonus
- Type III: five-cent tax
- Type IV: five-cent bonus AND five-cent tax

Standard model prediction: behavior in Type II and Type III stores should be the same
Percent of Customers Using a Reusable Bag

- Type I: No Incentive: 13.1%
- Type II: Bonus Only: 15.4%
- Type III: Tax Only: 44.2%
- Type IV: Bonus and Tax: 47.8%
Evidence is consistent with a model of loss aversion

Address alternative mechanisms that may cause the tax to be more effective

- Awareness of policies
- Changing social norms

Important, but do not drive the main results
Conclusion

- Research in behavioral economics has strong implications for tax policy design

- Different policy goals will require different behavioral interventions
  - Behavior change?
  - Revenue generation?
  - Regressivity?