Taxing Sin or Subsidizing Virtue?
An Experimental Study of the Impact on Nutrition Content of Food Choices

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◆ People Respond to Incentives
  ❖ Increase the price and people decrease the activity
  ❖ Reduce the price and people will increase the activity
Using Prices as Carrots and Sticks: Applications in Nutrition and Health Policy

**Paying people to Lose Weight**


**Taxing Consumption of Fat or Sugar**

Are Taxes and Subsidies Equivalent?

◆ Taxes have the advantage of raising revenue
◆ Taxes may also be more effective
  ❖ Increasing the price of unhealthy foods reduces the intake of calories as well as fat more than reducing the price of less calorie dense healthier foods
Why would taxes be more effective?

◆ Economics Explanation

  ❖ Income effects
    • People are relatively wealthier when subsidized and may spend some of that extra wealth on unhealthy foods

◆ Behavioral Explanation

  ❖ Taxes and subsidies may be perceived differently
    • Reference dependence and loss aversion
    • Framing (e.g. “Asian Disease Problem”)

Economics Explanation

Behavioral Explanation
What’s the Hot Topic in Economics?
Behavioral Economics

“Behavioral economics has never been hotter. It’s not just the success of books such as *Nudge*, *Predictably Irrational*, and *Basic Instincts*, but the political influence of the field: One of *Nudge*'s authors, Cass Sunstein, runs the Office of Information and Regulatory Affairs for Barack Obama, and his co-author Richard Thaler has been advising David Cameron's new *Behavioral Insight Team*, based in the Cabinet Office.”

Financial Times Magazine: By Tim Harford
“Why we do what we do” Published: January 28 2011 22:06
Behavioral Economics adds realistic psychological foundations to economics.

Key ideas: The economic model of rational decision making does not fit the data well in certain systematic ways. Allowing for psychological biases and limits on computational ability can improve fit.
The goal of our study is to isolate behavioral effects of taxes and subsidies from the well-known economic effects.

- How to isolate behavioral effects?
  - Hold the economic factors constant
  - Choose taxes and subsidies that keep the relative prices of unhealthy and healthy foods constant
  - Adjust income to offset the increased (decreased) purchasing power from a subsidy (tax).
Study Design

• Convenience Sample of college students
• Choosing typical snacks available on campus
• Treatments
  • Baseline prices
  • Subsidy with no income adjustment
  • Tax with no income adjustment
  • Subsidy with income adjusted
  • Tax with income adjusted
• LCFN vs HCFN Foods
  • 5 of each
Study Design

- The Challenge
  - Finding 5 LCFN snacks on campus that don’t require refrigeration

- Simulated shopping experience in the Moore School Behavioral Lab

- IRB approval obtained

- To do: recruitment and programming