

## Jury still out on whether sin taxes change behavior



David M. Kall | Thursday, March 9, 2017

In March 2015, Berkeley, California was the first city in the nation to pass such a law subjecting sugary beverages to a tax, of a penny-per-ounce.

And last year, much was made of new sugar-sweetened beverage tax laws in Boulder, Colorado, and three California jurisdictions, Albany, Oakland, and San Francisco. Boulder's tax is 2 cents per ounce; Albany's is one-cent per ounce; Oakland passed a one percent increase of the general sales tax; and San Francisco's beverage tax is one-cent per ounce.

Philadelphia took a different approach; lawmakers implemented that city's taxing protocol, which took effect on January 1, 2017, by way of the [Sugar-Sweetened Beverage Tax](#), which several stakeholders, like the American Beverage Association and City View Pizza, challenged in state court. At the end of December, the Philadelphia County Court of Common Pleas [dismissed](#) the suit in its entirety, in an opinion that we [explained](#) when it came out. Thus, the 1.5 cents tax per fluid ounce on the distribution of certain sugar filled beverages, as well as the accompanying reporting requirements on the amounts sold and taxes due, remain in tact.

It is likely that we will see more of these kinds of laws. Lawmakers in Massachusetts, for example, are currently considering something similar.

### To what extent are sin taxes effective?

In January, an economist at the Wharton School, and another from Dartmouth College, issued a National Bureau of Economic Research (NBER) working paper titled [Regressive Sin Taxes](#) (Paper), in which the authors question what the optimal sin tax is in light of the diverse policy considerations at issue. NBER working papers are circulated for discussion and comment purposes, and have not been peer-reviewed, or subjected to the review by the NBER Board of Directors that accompanies official NBER publications.

The authors define sin taxes as those that discourage the intake or usage of goods, like cigarettes, alcohol, unhealthy junk foods, and energy inefficient appliances, that people over-consume for reasons related to poor self control, inattention, and incorrect beliefs.

The policy arguments of this "corrective logic," holding that when sin taxes discourage the consumption of such goods, they have the potential to increase social welfare, boil down to the following:

- **Regressivity**, or the extent to which the tax causes harm to lower income consumers more than high income consumers. The authors note that cigarettes and sugary drinks are consumed

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disproportionately by the poor, and energy efficient subsidies are taken up disproportionately by the rich, a phenomenon that has led to forceful opposition to the taxes on the grounds of fairness and equality;

- **Revenue recycling**, a tool by which some argue that a tax's regressivity can be offset by transferring the revenue from the tax to low-income consumers;

A hypothesis related to both of these suggests that a corrective tax could confer greater benefits on the poor than on the rich. An example of this might be seen when poor consumers are the main users of a harmful good, such that their reduced consumption leads to benefits that accrue disproportionately to that group.

The Paper contains numerous mathematical calculations, ultimately showing that "that the optimal commodity tax can be written as the sum of two terms: the 'corrective benefits' (representing the welfare gains from reducing harmful behavior), and the 'regressivity costs' (representing the welfare costs of shifting net resources from poorer to richer consumers)." Several factors matter, such the income level of those consuming the harmful goods, the extent to which a tax's regressivity can be offset, the extent to which income plays a role in the consumption of the good in the first place, and the price elasticity of the good.

More usefully, in a podcast, one of the authors, Benjamin Lockwood, the Wharton researcher, discussed what everyone really wants to know: how much of a sin tax would actually change consumer behavior? He first cited a study estimating that a 20 percent reduction in sugary beverage consumption could trigger health benefits "akin to [receiving] a check [in an amount] between \$100 or \$300 each year."

One the other hand, he pointed out that a critical question from an economics perspective is whether people account for the negative effects of their consumption when making their consumption decisions. "[I]t's not enough for something to have negative consequences to justify taxing it." Indeed,

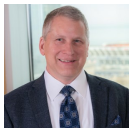
There's a growing literature in behavioral economics that studies the tendency for people to underweigh distant consequences and overweigh the upfront benefits or costs of doing something. This can explain everything from why we save less for retirement than we should or intend to, or why we exercise less than we ought to. A reason for being interested in sugary soda and sugary beverages is that those [choices] also have this kind of discrepancy between the upfront joy of sipping a soda and this delayed health consequence that happens far down the road.

At this point, the jury is still out. Even so, Lockwood ventured an estimate, the best he could do "because we're still waiting to see the evidence come in. But [based on] the economic research so far, my guess is that somewhere in the range of 3 cents to 4 cents per ounce — rather than the 2 cents per ounce that we're seeing now — would be in the ballpark."

That said, Lockwood pointed to cigarette taxes as being relatively ineffective at stopping people. He wonders whether soda consumption is driven by addiction, not unlike that to cigarettes, in which case, if one has been smoking for a number of years, he will simply pay the higher price.

Notwithstanding all of this, on February 27, 2017, Buzzfeed reported that grocers and beverage distributors in Philadelphia have revealed that since the city's 1.5 cents tax per fluid ounce tax took effect on January 1, 2017, "sales have slid by as much as 50 [percent]." And Berkley's 1 cent per ounce tax, which has been in force since March 2015, has caused consumption of soda and other sugary beverages in low-income neighborhoods to drop by 21 percent.

Mexico is another jurisdiction with a beverage tax. HealthAffairs.org cited a new study that shows that since its rollout of its 1 peso per liter measure at the beginning of 2014, purchases of the sugar-sweetened beverages subject to the tax decreased by 5.5 percent in 2014, and 9.7 percent in 2015. In addition, households at the lowest socioeconomic level showed the largest decreases in consumption, with a 9.0 percent decrease in 2014, and a 14.3 percent decrease in 2015. Not surprisingly, purchases of untaxed beverages, including diet sodas, unsweetened carbonated and uncarbonated waters, juices, and dairy and substitute dairy products, increased 2.1 percent. 1 peso is equivalent to about a nickel.



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