



THE CASE AGAINST
REGULATING OR
TAXING SODA

2013

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EXECUTIVE SUMMARY

The economic crisis of 2008 and the anemic recovery have strained state and local budgets while hurting working families, making new “sin” taxes politically appealing. Activists argue their health consequences ease health spending while raising revenue at the same time, but these taxes are not the cure for obese people and obese budgets their backers imply. They target those least able to afford price increases, are based on equivocal medical evidence, and will not keep the promises their advocates make.

- There is no convincing scientific evidence that a soft drink tax will meaningfully reduce population body mass or obesity prevalence.
- There is evidence that consumers will substitute higher-calorie foods and beverages for highly taxed products.
- The evidence marking soft drinks—which only provide seven percent of Americans’ daily caloric intake—as a principal cause of obesity is weak.

- Instead of placing the burden of balancing budgets on those who can afford to make sacrifices or on cutting back misguided government efforts, soda taxes place a disproportionate burden on the poor.
- Polls consistently show approximately two-thirds of Americans oppose these taxes.
- When citizens are offered the opportunity to approve or reject soda taxes at the ballot box, they reject them by wide margins.

The complexity of the obesity problem demands proven and comprehensive policy solutions, not dubious and discriminatory ones. Legislators owe their constituents policies that do not put constituents’ money, jobs, and businesses on the line.



INTRODUCTION



CLAIM:

“Among adults, over the course of a year we could keep 150,000 people across New York State from becoming obese, including 60,000 in our city.”¹

—New York City Mayor Michael Bloomberg

EVIDENCE:

“Our results suggest that a 20 percentage point change will lead to a decrease in BMI of 0.06.”²

—Researchers from Yale, Emory, and Bates College

EVIDENCE:

“The results also show that household members in the lowest income quartile also may not see reductions in weight.”³

—Researchers from Duke-National University of Singapore

EVIDENCE:

“Contrary to our hypothesis, sugar-sweetened beverages were not shown to be positively associated with weight gain.”⁴

—Researchers from the University of Minnesota

Discriminatory taxes on soft drinks are not a new idea, but the self-anointed “food police” and activist governments have brought them back with a vengeance. Activists hold out a river of plentiful tax revenue for politicians and public sector interests while at the same time promising good health from reduced consumption and new government spending programs.

In truth, there is little evidence that a soft drink tax can deliver.

- Studies funded by organizations that have endorsed such taxes show trivial reductions in population obesity even when punitive tax rates are imposed.
- The evidence for the alleged independent epidemiological link between soft drink consumption and obesity incidence is weak.
- A soft drink tax (like any specific tax on a non-luxury item) places the burden of unbalanced public budgets squarely on the backs of the working poor.

Tax backers claim that the financial impact of soda taxes on poor consumers is outweighed by its alleged benefits to their health. However, if the tax does not deliver the promised obesity reduction the benefits to poorer taxpayers do not materialize. Tax backers do not have an effective defense against this charge, electing instead to “re-frame” the matter and dodge the question.⁵

Proponents have several things to gain from pushing soda tax proposals:

- Health bureaucracies that back a soda tax with sequestered funds can expand their influence and their budgets.
- Healthcare unions and hospital associations see soda taxes as a “get out of budget cuts free” card.
- Soda taxes offer politicians the opportunity to raise general fund revenue without raising income or general sales taxes.

When they are asked to weigh in on soda taxes, voters see through the false promises. In Maine and Washington State, discriminatory taxes on food items and non-alcoholic beverages were overturned by referendums with greater than 60 percent support. Voters in two cities in California decided in 2012 to reject overwhelmingly one-cent-per-ounce excise taxes on soft drinks. National polls show widespread and consistent opposition to soft drink taxes, with opponents typically leading by more than 20 percentage points.

HISTORY



Discriminatory taxes on disfavored goods are older than the United States. Adam Smith and Samuel Johnson wrote about excise taxes on various goods in the mid-eighteenth century. The Stamp Act of 1765 to which the American Revolution traced its origin contained taxes on playing cards and other gambling paraphernalia.

Non-alcoholic beverages were first singled out for discriminatory taxation during World War I, when the federal government was looking for more revenue to fund military operations. Taxes were levied on the manufacture of bottled sodas and soda fountain sales. A similar temporary soft drink tax to raise revenue was enacted at the federal level in 1932 to offset revenue lost because of the Great Depression.⁶

These early measures were based on soda's then-status as a luxury good that could be sacrificed by people with means in times of national hardship. Whatever the justification for the tax, they seem to have brought in far less revenue than complaints: Neither tax lasted five years before repeal.⁷

MODERN SODA TAX MOVEMENTS

In the early 2000s, public health activists, most prominently Kelly Brownell of the Rudd Center for Food Policy and Obesity and Michael Jacobson of the Center for Science in the Public Interest, began a coordinated campaign to place discriminatory taxes on

foods they identified as “unneeded calories.”⁸ Jacobson and Brownell sought to see taxes imposed on (at the very least) soft drinks, potato chips, and butter.

The special emphasis on soda alone can be traced to a 2001 study in *The Lancet* which claimed to show a relation between soda consumption and obesity, even though its authors conceded that “there is no clear evidence that consumption of sugar per se affects food intake in a unique manner or causes obesity.”⁹ Despite equivocal findings by subsequent studies, this study provided the trigger to begin a wide-ranging push for punitive action against soft drinks.

THE TRIUMVIRATE BEHIND THE PUSH

- The funding muscle is provided by the Robert Wood Johnson Foundation, a billion-dollar private foundation founded from the estate of a past chairman of Johnson and Johnson that has donated tens of millions to obesity activist campaigns.
- The older of the two activist arms is the Center for Science in the Public Interest, a litigious group founded in 1971 that has promoted scare campaigns against a wide variety of foods, often based on unsound science.
- The powerful newcomer in the activist leadership is the Rudd Center for Food

Policy and Obesity, founded in 2005. Backed by the institutional heft of Yale University and a million-dollar grant from the Robert Wood Johnson Foundation, the Rudd Center promotes draconian restrictions on commercial speech, regulation on the contents of foods, and most prominently excise taxes on soft drinks.

Activists like Jacobson and Brownell claim that soft drinks create costs to the medical system that consumers or producers of soft drinks do not bear, leading to socially harmful overconsumption. They claim that taxes levied on so-called “sugar-sweetened beverages” reduce these costs and therefore benefit society. (These kinds of taxes are called “Pigouvian” after an early-20th-century British economist named Alfred C. Pigou who described the possibility of using taxes to remedy the costs from pollution.) This argument rests on two claims that tax supporters hope will not be thoroughly examined.

- The first claim is that such taxes will actually reduce obesity and its related healthcare costs.

The Robert Wood Johnson Foundation has funded teams of researchers to investigate the potential obesity-reduction benefits to increased taxes on soft drinks. Well-designed studies, including those funded by the Robert Wood Johnson Foundation itself, have thus far failed to show a significant change in population body mass that will reduce health costs.

- The second claim is that soft drinks are a particularly malign source of calories in the American diet. Despite claims that there is convincing evidence that increased consumption of soft drinks has caused the rise in population obesity, the scientific literature is actually quite equivocal (where it is not lacking outright). Multiple reviews of the literature have called for better study design.

The weakness of the evidence has not stopped politicians and public health activists from claiming that soda taxes are a cure-all for healthcare costs and state budget deficits.

SODA TAXES WILL NOT WORK AS ADVERTISED



Empirical studies of models of proposed taxes and current differential taxation of soda versus other foodstuffs have shown little to no change in population levels of obesity. Even worse, when the results are tested in more accurate dynamic models of human metabolism (rather than the static 3500 calorie/pound model most people are familiar with) the outcomes are less impressive.

SMALL TAXES DO NOT IMPROVE OBESITY OUTCOMES

Jacobson and Brownell's original proposal for soda taxes in 2000 called for levies of approximately one cent per can of soda to finance public health education.¹¹ The effects of small taxes on soda and other foods have been examined by economists. In two important studies (both with funding support from the Robert Wood Johnson Foundation), researchers found evidence that small levies neither raise intended revenue nor curb obesity.

The first study was conducted by researchers from Yale and Emory Universities and assessed the impacts of changes in soft drink taxation between 1990 and 2006 on youth consumption of soft drinks.¹² The researchers surveyed state differential soft drink taxation (which they defined as the level of total soft drink taxation net

of general grocery taxation). They found that increasing the tax rate decreased consumption of soft drinks by 6 calories per day but did not reduce total consumption of calories.¹³ **People kept drinking caloric beverages; they just drank ones exempt from the tax (like juice or milk).**

Researchers from the RAND Corporation and the University of Illinois-Chicago published a second study finding little effect on children's BMI from present levels of soda taxation.¹⁴ The authors reported that a one-percentage-point increase in the soda tax rate yielded a decrease in average child BMI of 0.013 kg/m².¹⁵ In a 10 year-old boy of average height, that corresponds with a weight loss of less than one-tenth of a pound.

“The fact is that nobody has been able to see how people will really respond under these conditions”¹⁰

—Kelly Brownell

These results create several parallel problems.

- First, revenue projections made under assumptions that soft drink consumption would not significantly change (as one might if the goal were to close a budget deficit) will not be met.
- Secondly, hopes that state budget strain from obesity would be eased by a tax are not met

since consumers substitute untaxed calories for taxed calories.

- Third, since nobody loses an appreciable amount of weight but all consumers pay the tax, consumers (especially the poorest) are worse off.

The Yale/Emory team in fact concluded that “the evidence to date is that soft drink taxes are ineffective as an ‘obesity tax.’”¹⁶

The same researchers from Yale and Emory also conducted an analysis of tax rates on adult consumption behavior. They found that a one-percentage-point increase in the soft drink tax rate reduced body mass index by 0.003 kg/m² (for a 5 ft. 10 in. person that reduction amounts to less than one tenth of a pound).¹⁷ The authors noted that “even a relatively large increase of 18 percentage points, as recently proposed by New York’s [then-] Governor Paterson may not have a substantial effect on population weight.”¹⁸

PENNY-PER-OUNCE IS NO OBESITY SOLUTION

The increased interest in soft drinks as a possible target for discriminatory taxation has also encouraged scholars to study the possible effects of taxes in line with those proposed by Brownell and then-New York City Health Commissioner Thomas Frieden, who argued in a *New England Journal of Medicine* commentary for a one-cent-per-ounce excise tax on soft drinks.¹⁹ The authors of these studies too have found no credible evidence that the soft drink tax will have its promised effects.

A prominent study published in the *Archives of Internal Medicine* on the effects of a large soda tax on population weight was conducted by researchers from the Duke-National University of Singapore Graduate Medical School.²⁰ In the study, the authors found that a tax of 20 percent on all sugar-sweetened beverages would reduce daily beverage calorie intake by 7 calories, and a 40 percent tax would reduce daily beverage calorie intake by 12 calories.²¹

The old weight-loss rule of thumb dictated that a person need only sustain a negative energy balance of 3500 calories to lose each pound of body fat.²² Under that rule, Finkelstein et al.’s value for calorie reduction from a 40 percent tax is maintained over a year yields an average individual weight loss of about 1.25 pounds.²³

However, that model is not biologically accurate, and the National Institutes of Health (NIH) recently released new guidance. An international team of researchers led by an NIH scientist constructed a dynamic model of human metabolism that accounts for the body’s response to reduced calorie needs and reduced weight.²⁴ More accurate models show that static models overestimate weight loss from dieting or calorie-reduction policy.

The model was used to test data from a study by researchers with the US Department of Agriculture that found a 10 kilogram (22 pound) weight loss from a soft drink tax according to static modeling.²⁵ More rigorous analysis showed the static model overestimated 5-year weight loss by five-fold: Instead, the dynamic

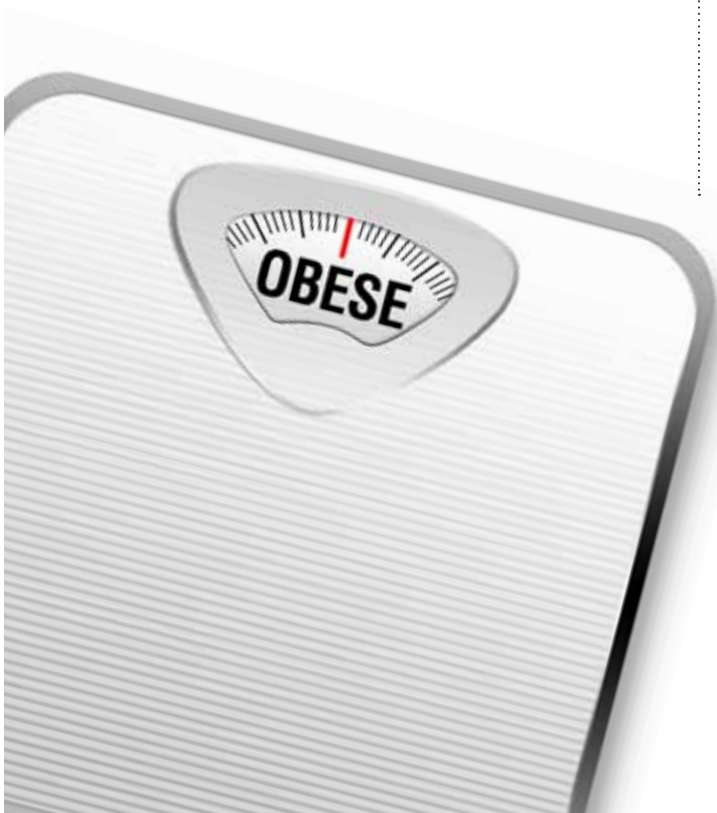


Table 1: Estimated Weight Loss from Soda Taxes

Study	Journal	Tax Rate	Calorie Loss Rate? (cal/d)	Estimated 3-yr Weight Loss (lbs)
Lin et al. 2011 ²⁹	<i>Economics and Human Biology</i>	20%	40	4
Ng et al. 2011 ³⁰	<i>British Journal of Nutrition</i>	10%	3	0.3
Finkelstein et al. 2010 ³¹	<i>Archives of Internal Medicine</i>	40%	12.4	1.24
Finkelstein et al. 2010 ³²	<i>Archives of Internal Medicine</i>	20%	7	0.7
Sturm et al. 2010 ³³	<i>Health Affairs</i>	4%	0	0
Fletcher et al. 2010 ³⁴	<i>Journal of Public Economics</i>	4%	0	0

Estimated 3-year weight loss from author's calculation using formula that 1 lb. eventual weight loss results from 10 cal/day reduction in calories.

model shows a 5-year loss of 1.8 kilograms (4 pounds).²⁶ It is also worth noting that the estimated calorie reductions proposed by Lin et al. (34-47 Calories per day) are noticeably higher than those generated by other empirical studies of the effects of sugar-sweetened beverage taxes.²⁷

Based on that model, NIH researchers proposed a new rule of thumb. They recommended that dieters cut 10 calories per day per pound of desired weight loss; the goal would be met (and weight loss would stop) after three years.²⁸ The results of plugging the predicted daily calorie reduction from various studies of soda taxes into that model are displayed in the table. Using this new model, a 10 pound predicted weight loss over three years does not occur in even the most optimistic study.

SODA TAXES CAUSE NEGATIVE UNINTENDED CONSEQUENCES

Research into possible effects of soda taxes has yielded two possible outcomes that neutralize any expected health benefits and warrant particular notice. First, lowest-income groups may be least likely to make any

changes to their calorie consumption, reducing anti-obesity gains. Second, an experiment identified that beer-purchasing households responded to a soft drink tax by buying more beer.

- Finkelstein et al. broke down the changes in calorie consumption from the tax by income quartile, and found that the lowest-income households would not change their calorie consumption even if a 40 percent tax were levied on all sugar-sweetened beverages.³⁵ They found that low-income consumers changed their consumption patterns by replacing name-brand soda with lower-price store-brand soda or untaxed caloric beverages.
- Cornell University economists conducted an experiment using volunteers on how a 10 percent sales tax on soft drinks affected beverage purchases. In addition to finding no significant impact on full-calorie soft drink purchases, they found that beer-purchasing households increased the number of beer calories purchased by 337 calories per month.³⁶

THE MEDICAL EVIDENCE TYING SODA TO OBESITY IS WEAK



The evidence tying soda consumption to obesity is methodologically weak in determining whether soda consumption or other diet and lifestyle factors are causing increased obesity rates. In addition, researchers have raised questions concerning whether publication bias in favor of studies that find rather than reject a link affects the literature. Additionally, government data indicates that soft drinks only contribute seven percent of the average American’s daily calories.³⁸

SOFT DRINKS ARE NOT THE LEADING SOURCE OF CALORIES IN THE AMERICAN DIET

Soft drink tax proponents suggest that these drinks are (to quote Michael Jacobson’s Center for Science in the Public Interest) the “leading source of calories in the American diet” and therefore valid subjects for punitive action.³⁹ This claim does not provide useful policy guidance or consumer information.

The Federal Government sponsors the National Health and Nutrition Examination Survey (NHANES) to collect data on Americans’ dietary habits. According to the National Cancer Institute’s analysis of the NHANES for 2004-2005, sugar-sweetened beverages account for seven percent of the average American’s daily calories.

So how does CSPI get that “leading source of calories” talking point? It categorizes food groups in a self-serving way.

Table 2: Classification of Food Groups and Their Contributions to Total Calorie Intake in the United States

Food Category	Calories/day
Bakery/Breads	348
Produce	73
Snacks	169
Entrees	321
Refrigerator/Frozen	62
Deli	427
Beverages	316
Total*	2,157

Data Source: National Cancer Institute, Sources of Energy among the US Population, 2005–06. Risk Factor Monitoring and Methods Branch Web site;

Author’s calculations.

**Total does not equal the sum of the categories because 441 calories/day are contributed by foods outside the top contributing food groups to population intake and are not classified.*

If food categories are treated equally—as in the accompanying National Cancer Institute categories—beverages are demonstrably not a larger source of calories than foods. (That’s not even completely fair to soft drinks, as the NCI “beverages” category includes alcoholic drinks, 100 percent fruit juices, and milk.) The true “leading source of calories in the American diet” is food, exactly as one would expect.

DO SOFT DRINKS CAUSE OBESITY?

Given that soft drinks are a relatively small source of calories in the diet, it should not be surprising that medical evidence finding that soda consumption causes (or is independently associated with) obesity is not clear. A 2006 review by a researcher at the University of Minnesota found that “equivocal evidence” made it “difficult to draw firm conclusions” on where sugar-sweetened beverages fit into the obesity equation.⁴⁰ The researcher found that it was not possible based on available evidence to characterize the evidence for an independent association as “convincing” because mechanisms by which soft drinks might be proved more malign as calorie sources than solid foods were not determined.⁴¹

A team from the University of Minnesota later used data gathered under a U.S. Department of Health and Human Services grant to investigate whether sugar-sweetened beverages were associated with weight gain. They concluded, “Contrary to our hypothesis, sugar-sweetened beverages were not shown to be positively associated with weight gain.”⁴²

A meta-analysis by researchers from the University of Maryland found, “The association between SB consumption and BMI was near zero, based on the current body of scientific evidence.”⁴³ A literature review of randomized studies published in the May 2011 issue of *Obesity Reviews* by a team from Purdue University and the University of Alabama at Birmingham also concluded that “the current evidence does not permit definitive conclusions” concerning the effects of reducing caloric sweetened beverage consumption on population BMI.⁴⁴

THE MEDICAL LITERATURE IS WEAK

Other reviews of the evidence purporting to link soda consumption with elevated obesity have found weaknesses in the design of studies. An analysis of the quality of reviews in the scientific literature co-authored by an Emory University public health researcher found that methodological protections against the entry of “personal subjective opinions” were not present in many studies.⁴⁵

Another analysis by University of Alabama at Birmingham researchers found publication biases in favor of studies showing associations (i.e., those blaming soda were more likely to be published).⁴⁶ Additionally, they proposed that publishers might be subject to a “White Hat Bias” by which they distort information “in the service of what may be perceived to be righteous ends.”⁴⁷

The New York Times obtained correspondence from inside the New York City Department of Health that shows how the weakness in the literature affects the anti-soda activists.⁴⁸ Before New York’s advertising campaign, multiple Department officials and consultants warned that the messages that Thomas Frieden

proposed were overly simplistic. One wrote, “The idea of a sugary drink becoming fat is absurd ... the scientists will make mincemeat of us.”⁴⁹

WHERE MIGHT “WHITE HAT” BIAS COME FROM?

As part of its obesity-reduction program, the Robert Wood Johnson Foundation advocates so-called “pricing strategies” (i.e., a complicated system of “sin” taxes and “virtue” subsidies) to “promote the purchase of healthier

“Before assigning blame for the obesity epidemic, we should have clinical evidence that an intervention to reduce the consumption of sugar-sweetened beverages is effective in achieving this goal, is either more effective or additive to the effect of other proven dietary therapies, and will reduce the long-term propensity for obesity.”³⁷

**—Michael G. Kaplan M.D.,
Maimonides Medical
Center**

foods.”⁵⁰ With the foundation on record proposing the “sin” tax model, could an RWJF-funded scholar come to the unreserved conclusion that soda taxes will not reduce obesity without losing his funding? If he could not, bias may be present.

Likewise, few consider the ideologies and personal commitments of leading researchers. The Rudd Center’s Brownell is often cited, but he has historically been

committed to punitive sin taxes against “unnecessary” food items. In a *New York Times* op-ed from 1994, Brownell proposed taxes on snack food items. With an 18-year track record of committed, public support of “sin” taxes on “junk” food and “virtue” subsidies for “public health,” the advocacy of Brownell and others in similar situations may be personal politics rather than dispassionate science.

SODA TAXES ARE REGRESSIVE



Advocates and opponents of soda taxes both acknowledge one major liability of soda taxes. They demand greatest financial sacrifice from those least able to afford it.⁵² In short, they are regressive taxes.

Regressive taxes such as a soda tax are among the worst-designed ways for governments to raise revenue, as they place the burden of tax relative to income on poorer consumers. Paying 20 cents extra for a soda is more “taxing” on someone making \$15,000 per year than it is on someone making \$100,000 per year.

There is a large body of evidence that taxes on specific products tend to be regressive unless targeted at luxury goods. A 1999 Tax Foundation study of the burden of federal excise taxes (as a percentage of Federal Adjusted Gross Income) found that those making under \$10,000 annually paid a 40-fold greater proportion of their incomes in federal alcohol beverage tax and a 200-fold greater proportion of their incomes in federal tobacco tax than individuals earning greater than \$500,000.⁵³

The findings of authors studying proposed soft drink taxes have concluded that a soda tax would more closely resemble the regressive taxes on alcohol and tobacco than a tax on yachts or private aircraft. The Yale, Emory, and Bates College research team found that “the likelihood [is] that the tax is regressive.”⁵⁴ A USDA team writes that the soda tax “is found to be regressive.”⁵⁵

CAUGHT IN THE ACT

“There are still some public health advocates who will not endorse taxes because of regressivity. Advocates need to take control of the “regressive” conversation by [...] re-framing the message that the tax is not regressive (when technically it is).”⁵¹



—Roberta Friedman,
Rudd Center for Food
Policy and Obesity,
and Christine Fry,
ChangeLab Solutions



YALE RUDD CENTER
FOR FOOD POLICY & OBESITY

ARGUING AROUND REGRESSIVITY WITH JUNK DEFENSES

The Rudd Center’s Director of Public Policy has suggested that soda taxes do not have united support within the public health community because of their regressive nature.⁵⁶ They proposed “re-framing the message that the tax is not regressive (when technically it is)” to respond.⁵⁷ However, re-framing does not change facts.

In their 2009 policy proposal, soda tax advocates Kelly Brownell and Thomas Frieden took a different tack, claiming that “the poor ... would derive the greatest benefit from reduced

consumption.”⁵⁸ In general, soda tax proponents try to claim that poor people will take advantage of increased health spending, lose weight, and consume less soda. Neither of the former two outcomes is likely, and the final “benefit” is actually an example of the soda tax’s unfairness.

- Increased health spending is far from certain: The Master Settlement Agreement with the tobacco companies and the experience of state education lotteries show that earmarking of revenues can result in diversion of existing funds to other programs.
- Consumers who substitute fruit juices, milk, alcohol, or store-brand soft drinks for their more costly name-brand sodas will not lose any weight because of the tax.
- People should be able to purchase the simple pleasures of their choice without government interference.

Soda tax advocates also place their political hopes on earmarking revenue to boost their polling performance. However, promises or recommendations to earmark revenue from “sin” taxes to health spending will not necessarily increase that spending. A 2002 report in the *Journal of the National Cancer Institute* found:

*Just 5% of the states’ share of the roughly \$16 billion yearly from the [1998 Master Settlement Agreement] payout and other tobacco-related revenues like sales and taxes have been allocated to tobacco-cessation or prevention programs—far short of the 25% the CDC recommended to reduce smoking among all age levels.*⁵⁹

This was despite the fact that the Master Settlement Agreement and the accompanying increases in tobacco tax were sold to the public as a means to pay for anti-smoking programs. Instead, the money was diverted to a plethora of state projects due to budget constraints.

Statutory earmarking does not solve this problem. Existing funds can be moved, and state lottery profits

have displayed a tendency to replace rather than supplement existing education spending.

As for the health effects, Duke-National University of Singapore researchers found evidence that the lowest-income consumers wouldn’t change their calorie consumption in response to a soda tax.⁶⁵ Instead of ordering “rounds of water,” low-income people replace higher-price soft drinks with lower-price generics or untaxed juices and milks. There are no social benefits to this behavior as the intended outcome (reduced obesity) does not occur.

If the soda tax isn’t making anybody thinner, reducing soda consumption (especially among adults) should not be regarded as a good thing. Instead of improving health, the tax punishes a simple pleasure that people of all incomes enjoy. After a tax is imposed, high-income people can absorb the tax and continue consumption as normal. If lower-income people continue consuming caloric beverages, just different ones that they don’t like as much, the soda tax creates a negative and unequal outcome with no public benefits.

THE HEALTHCARE COSTS CONUNDRUM

Advocates for taxes on unhealthy food items, including soda, argue that their proposals increase tax revenue without compromising economic growth because their costs to taxpayers are canceled out by benefits from reducing so-called “externalities.” Tax proponents argue that people do not bear the costs of their healthcare and that because they don’t pay for their health care people drink too much soda and get fat. Therefore, they reason, taxes can guide consumers to drink less soda and not get fat.⁶⁶ Healthcare costs paid for by governments rather than fat people are one example of an economic externality.

A soda tax is a poor method to address healthcare finance.

- First, if people do pay the costs of their healthcare, soda taxes are just taxes.
- Second, taxes to remedy an externality are not effective if they do not properly address the cause of the economic externality.

- Finally, there is absolutely no credible evidence of moderate soft drink consumption by the non-obese being a problem that will lead to government health spending. Taxing soda punishes the non-obese for the immoderacy of others.

Given the propensity of consumers to replace taxed calories with un-taxed calories and the weakness of the evidence that soda is an independent contributor to obesity, there is little evidence that soda taxes will make people thin and correct any cost problem.

Since these limitations hold, the soda tax will have social costs that its advocates do not consider. Under such a circumstance, the soda tax goes from being a tax that remedies externalities to a regressive moralist sin tax.

HOW MUCH IS A “PENNY PER OUNCE,” ANYWAY?

A common proposal for punitive soda taxes is to set the tax amount at a fixed one cent per ounce of served

soft drink. The Rudd Center’s Brownell and CDC head Thomas Frieden proposed this level of taxation in 2009.⁶⁷

It doesn’t sound like very much money, but it adds up quickly. A twelve-pack of 12-ounce cans of soda would cost \$1.44 more than it does without the tax. For store-brand soft drinks, that would amount to an estimated price increase of 48 percent.⁶⁸

When considered in per-gallon terms, the tax comes to \$1.28. According to a Tax Foundation analysis, that tax amount would exceed every single state’s excise tax on beer.⁶⁹ Even including the federal excise tax on beer, the proposed soda tax would exceed the excise tax burden on beer in 45 states and the District of Columbia.⁷⁰ A “penny-per-ounce” is not small, but in fact steep compared to taxes on comparable items.

Are Lottery Revenues a Model for Soda Taxes?	
State	What they’re saying now
FL	“It was a replacement to existing dollars that diminished over time.” —Arthur Johnson, Palm Beach County Superintendent, CBS News, 2007 ⁶⁰
IL	“The belief that that’s additional money, above and beyond what we would normally get, that’s the part that’s not true.” —Michael Johnson, IL Association of School Boards, CBS News, 2007 ⁶¹
VA	“It has replaced state general fund revenue, so you could make the case that... that money either went to transportation, prisons, higher education or to balance the budget. Who knows?” —Chesapeake City Superintendent James Roberts, The Virginian-Pilot, 2011 ⁶²
OK	“Legislators merely substitute general revenue funds with lottery dollars so the schools don’t really gain any additional funding” —O. Homer Erickson, Dean of the School of Business, University of Missouri, Kansas City, NY Times, 2007 ⁶³
NE	“Diverting lottery funds into the general fund was one of many ways to make up for the lost revenues” —Bruce Snyder, Accounting Supervisor, NE Department of Administrative Services, NY Times, 2007 ⁶⁴

THE POLITICS OF SODA TAXES



Soda taxes are definitively unpopular. Since 2008, soda taxes have been put to a referendum vote four times: Four times, the tax has been repealed or has failed to pass.

TAKING SIDES

The interests that push soda taxes stand to gain influence and money if they are enacted. The public health triumvirate hopes to win influence in writing food and beverage regulations. Healthcare workers' unions and hospital associations want to use new revenue to avoid budget cuts and have lobbied heavily to see soda taxes enacted. Politicians who favor soda taxes use them to raise general fund revenue and as bargaining chips in budget struggles.

- In New York, a joint-venture pressure group of the 1199 SEIU labor union (which represents healthcare workers) and a hospital trade association spent millions to lobby in favor of then-Gov. David Paterson's soda tax proposal to avoid budget cuts.⁷²

- Philadelphia Mayor Michael Nutter relented on his 2011 soda tax demand in exchange for a property tax increase.⁷³
- El Monte, California's proposed soda tax, which was rejected by over 75 percent of voters in a 2012 referendum, came amid a bond downgrade to junk status and a declared fiscal emergency.⁷⁴

WHAT DO VOTERS THINK?

“This was a case of overreach, with [the group that proposed the soda tax] overestimating its power and looking to impose its ideas about how to live on the public.”

**—Nathaniel Bates,
Richmond,
California City
Councilmember⁷¹**

As polls and referendum results indicate, opposition to soda taxes is widespread. Consumers and community groups are rightly wary of increased grocery bills. Distribution drivers concerned about possible job losses and hours reductions in Philadelphia and New York actively protested soft drink taxes when they were proposed in those jurisdictions.⁷⁵ Businesses fear administrative headaches and sales losses to other jurisdictions.

When voters have had the opportunity to approve or reject soda tax increases, they have rejected them. In the last five years, four soda taxes have reached a referendum ballot: All have been rejected. In 2008, Mainers rejected a set of “sin” tax

Table 3: Public Votes on Soda Taxes

Jurisdiction	Year	Measure	Principal Soft Drink Tax Level	Vote For Tax	Vote Against Tax	Result of Vote
State of Maine	2008	Dirigo Tax Referendum, Question 1	42 cents/gallon	35.35%	64.65%	TAX REPEALED
State of Washington	2010	Tax Law Amendments, Initiative 1107	21 cents/gallon	39.56%	60.44%	TAX REPEALED
City of Richmond, Calif.	2012	City of Richmond Business License (Soda Tax), Measure N	\$1.28/gallon	33.02%	66.98%	TAX FAILED
City of El Monte, Calif.	2012	City of El Monte Beverage License Fee Ordinance, Measure H	\$1.28/gallon	23.85%	76.15%	TAX FAILED

Source: Official Election Returns.

Table 4: National Soda Tax Polling

Month	Firm	Favor	Opposed	Margin
December 2012	AP-NORC	31%	59%	-28%
May 2012	Rasmussen Reports	33%	63%	-30%
March 2012	Harris Interactive/Healthday	38%*	62%	-24%
March 2011	Rasmussen Reports	32%	59%	-27%
June 2010	Harris Interactive/AdWeek	31%	56%	-25%
April 2010	Thomson-Reuters/NPR	32%	50%	-18%
March 2010	Rasmussen Reports	33%	56%	-23%

Source: Polling firms. *Public poll release disclosed only opposed number; remainder from 100 percent has been allocated to "Favor."

increases including a soda tax earmarked to the state's health insurance program by 28 percentage points. Likewise in 2010, Washington voters repealed a soda tax by a 20-point margin (while re-electing a Democratic U.S. Senator on the same day). In 2012, two California cities, Richmond and El Monte, rejected soda tax proposals by 34 and 52 percentage points, respectively.

The voters' discontent has extended to soda tax proposers as well: Mississippi State Representative John Mayo, who had served the 25th District since 2000, proposed a soda tax in 2011. (It did not pass.) He was defeated in the election later that year.

National polling has shown consistent objection to taxes on soda. Opposition in polls has remained steady over the past three years despite activist attempts to make soda taxes visible parts of their agendas.

Polls showing support for soda taxes always include a promise of increased public spending, usually on health services. Activists are well aware that the public does not support soda taxes without such promises. Indeed, the New York State Health Commissioner responded that an adverse result in the respected Siena poll stemmed from a lack of such promises in the question, which he called "context."⁷⁶ However, given that Maine's soda tax (which also included additional taxes on alcoholic beverages) was earmarked to health spending and overwhelmingly repealed, this does not seem to hold water.

Additionally, both 2012 California measures were rejected despite advisory provisions that directed most funding to health programs and public parks. If voters perceive promises of increased spending as not credible, they will reject soda taxes. Based on the experiences of statutorily earmarked lottery revenues, they have every reason to be skeptical.

CONCLUSION



Soda taxes are not an effective anti-obesity or revenue-generating policy. By failing to drive reductions in total calorie consumption, focusing on a small contributor to total calorie intake, and placing the burden of state and local deficits on the grocery bills of poorer consumers, soda taxes cause policy problems.

- While the tax pushers hope that they will decrease spending on obesity-related diseases, evidence funded by tax-supporting groups finds little evidence that they will change calorie purchasing behavior.
- Soft drinks contribute only seven percent of Americans' daily calorie intake, making them poor targets for an "obesity tax." Arguments that soft drinks contribute uniquely to obesity are under-supported.

- Soda taxes take a bigger bite out of poor consumers' incomes than other consumers' incomes. Since the tax won't reduce obesity, they will get nothing for their money. Proponents of soda taxes recognize this but are unwilling to come to terms with the unintended consequences of their proposal.

Only personal responsibility, not government compulsion, can reverse the trend of obesity in America. Evidence and common sense suggest that people who want to make beverage choices that come with calories will find ways to get them in spite of any tax.

Nationwide, people are rewarding solutions to obesity that empower personal responsibility and rejecting those based on bashing disfavored food items. Success will come from finding and enacting empowering policies, not ham-handed tax efforts.

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