

TAXING FOOD AND BEVERAGE PRODUCTS: A PUBLIC HEALTH PERSPECTIVE AND A NEW STRATEGY FOR PREVENTION

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The power to tax and spend is considered a primary government power, and the use thereof is associated with great public health achievements. The greatest public health challenge at present stems from the increase in obesity and chronic diseases due to poor nutrition. Several taxation strategies have emerged in the health and economic literature to raise revenue, deter consumption, and address food prices and obesity directly. These proposals include taxing obese individuals, taxing problematic food products, and instituting a tax based on certain food components. This article weighs each proposal's value and disadvantages and concludes by proposing a new tax and spend strategy: a manufacturers' excise tax on all highly processed food and beverage products. This tax would be instituted to raise revenue and provide conditional funding to states and locales to directly alter their food environment. It avoids the pitfalls inherent in the other tax strategies and is a viable method to address public health and the food environment more broadly.

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INTRODUCTION

The law is a powerful tool to support and advance the health of a nation. Public health law stems from an organized society's responsibility to ensure that conditions are available to foster its population's health.¹ The law confers powers and duties on the government to protect health and simultaneously arms it with the tools necessary to improve it.²

In 2011, the Institute of Medicine (IOM) released a report stating that it is critical that public health law and policy in the United States be updated to reflect the transformation of society, scientific advances, and the evolution of public health goals and needs.³ The IOM identified several legal interventions that the government should consider to address modern public health problems, one of which is the power to tax and spend under Article I, Section 8 of the Constitution.⁴ This power is considered a primary public health power and is associated with great public health achievements, such as tobacco control and highway safety.⁵

The greatest public health challenges of today stem from the increase in chronic diseases due to poor nutrition. Data from 2009 and 2010 indicate that obesity affects over 35 percent of adult men and women⁶ and 16.9 percent of children and adolescents.⁷ Obesity places people at "increased risk for many serious health conditions,

1. LAWRENCE O. GOSTIN, *PUBLIC HEALTH LAW: POWER, DUTY, RESTRAINT* 28–29 (2d ed. 2008).

2. *Id.* at 4.

3. INST. OF MED. OF THE NAT'L ACADS., *FOR THE PUBLIC'S HEALTH: REVITALIZING LAW AND POLICY TO MEET NEW CHALLENGES 2* (2011), available at <http://www.iom.edu/~media/Files/Report%20Files/2011/For-the-Publics-Health-Revitalizing-Law-and-Policy-to-Meet-New-Challenges/For%20the%20Publics%20Health%202011%20Report%20Brief.pdf>.

4. *Id.* at 2–3; see also U.S. CONST. art. I, § 8, cl. 1.

5. GOSTIN, *supra* note 1, at 30–31.

6. Edward Livingston & Jody W. Zylke, *JAMA Obesity Theme Issue Call for Papers*, 307 *JAMA* 970, 970–71 (2012) (stating that the prevalence is 35.5 percent among adult men and 35.8 percent among adult women); see also, *F as in Fat: How Obesity Threatens America's Future 2011*, TRUST FOR AM.'S HEALTH (July 2011), <http://www.healthyamericans.org/report/88/> (indicating that adult obesity rates increased in sixteen states in 2011 and that racial and ethnic minority adults and those with less education or lower incomes continue to have the highest overall obesity rates).

7. Cynthia L. Ogden et al., *Prevalence of Obesity and Trends in Body Mass Index Among US Children and Adolescents, 1999–2010*, 307 *JAMA* 483, 485 (2012).

including coronary heart disease, hypertension, stroke, type 2 diabetes, certain types of cancer, and premature death.”⁸

The obesity epidemic is caused by many factors, but the modern food environment has been identified as the major contributor.⁹ Food preferences are formed at an early age and continue to be shaped by taste, convenience, education, and influential marketing campaigns.¹⁰ In addition, peculiar price incentives in the United States encourage unhealthy food consumption. This is especially true in low-income “food deserts” where people lack access to healthy food and thus have limited choice.¹¹

Various public health interventions based on the government’s taxing power have been proposed to address the modern food environment and obesity itself. These take many forms and are justified based on different objectives. In section I of this paper, I will review the background of food and beverage (collectively food) pricing. In sections II, III, and IV, I will then explain the rationale for, and justifications behind, using the government’s taxing and spending powers to address poor nutrition and obesity in relation to several tax proposals. These proposals include taxing specific individuals, products, nutrients, and ingredients. In these sections, I will weigh each proposal’s value and disadvantages from a public health perspective. In section V, I will propose my own tax and spend structure, based on a tax on manufacturers, as an alternative method to address public health and nutrition more broadly.

I. FOOD AND BEVERAGE COSTS

Personal adherence to dietary guidelines for health purposes can be influenced by many societal factors, but the price and access to

8. Ctrs. for Disease Control & Prevention, *Vital Signs: State-Specific Obesity Prevalence Among Adults — United States, 2009*, 59 MORBIDITY & MORTALITY WKLY. REP. 951, 951 (2010).

9. See David M. Cutler et al., *Why Have Americans Become More Obese?*, 17 J. ECON. PERSP. 93, 93–95 (2003) (relating the increase in calories consumed since the 1980s to more meals consumed and access to mass produced food); Livingston & Zylke, *supra* note 6, at 970–71 (noting that the U.S. has a higher prevalence of obesity than other countries and that people in the U.S. consume more fast food than the rest of the world); Anthony Robbins & Marion Nestle, *Obesity as Collateral Damage: A Call for Papers on the Obesity Epidemic*, 32 J. PUB. HEALTH POL’Y 143, 143–45 (2011) (discussing the large food corporations in the U.S. and how they generate high profits from marketing inexpensive, processed food to consumers).

10. See Jennifer L. Harris, Jennifer L. Pomeranz, Tim Lobstein & Kelly D. Brownell, *A Crisis in the Marketplace: How Food Marketing Contributes to Childhood Obesity and What Can Be Done*, 30 ANN. REV. PUB. HEALTH 211, 212–16 (2009).

11. See Sandra Braunstein & Risa Lavizzo-Mourey, *How the Health and Community Development Sectors are Combining Forces to Improve Health and Well-Being*, 30 HEALTH AFF. 2042, 2042–43 (2011).

quality foods plays a pivotal role.¹² Many Americans have disproportionate access to cheap, nutrient-poor, processed foods¹³—some with potentially addictive properties¹⁴—and have limited access to healthier, but more expensive whole foods.

Although obesity affects every demographic, the relationship between poverty and diet quality is profound. Economic studies confirm that there is a significant correlation between diet cost and healthy eating for the population.¹⁵ On a per-calorie basis, processed grains, sugars, and fats are relatively cheap, while fruits and vegetables are more expensive.¹⁶ Wealthier households spend more on food, have a healthier overall diet quality, and consume more fruits and vegetables. They also eat fewer calories from solid fats and added sugars.¹⁷ “Lower family income-to-poverty ratio and educational attainment” are associated with lower diet cost and a less healthy diet.¹⁸ Added sugar consumption is also highest among lower-income and minority groups.¹⁹ It is perhaps not surprising that obesity, type 2 diabetes, and heart disease are also correlated with having a low income.²⁰ In 2011, more than 33 percent of adults who earned less than \$15,000 per year were obese, compared with 24.6 percent of those who earned at least \$50,000 per year.²¹

In a report submitted to the Human Rights Council of the United Nations, the Special Rapporteur advised: “Any society where a healthy diet is more expensive than an unhealthy diet is a society that must mend its price system. This is even more imperative where the poorest are too poor to feed themselves in a manner not

12. See Adam Drewnowski, *The Cost of US Foods as Related to their Nutritive Value*, 92 AM. J. CLINICAL NUTRITION 1181, 1187 (2010).

13. *Toxic Food Environment*, HARV. SCH. PUB. HEALTH, <http://www.hsph.harvard.edu/obesity-prevention-source/obesity-causes/food-environment-and-obesity/> (last visited Nov. 11, 2012).

14. See Blake A. Gosnell & Adam S. Levine, *Reward Systems and Food Intake: Role of Opioids*, 33 INT’L J. OBESITY S54, S56 (2009); Nora D. Volkow et al., *Reward, Dopamine and the Control of Food Intake: Implications for Obesity*, 15 TRENDS IN COGNITIVE SCI. 37, 39 (2011).

15. Colin D. Rehm et al., *The Quality and Monetary Value of Diets Consumed by Adults in the United States*, 94 AM J. CLINICAL NUTRITION 1333, 1338 (2011).

16. Drewnowski, *supra* note 12, at 1187.

17. Rehm et al., *supra* note 15, at 1333.

18. *Id.* at 1335.

19. Drewnowski, *supra* note 12, at 1187.

20. Special Rapporteur on the Right to Food, *Report Submitted by the Special Rapporteur on the Right to Food*, ¶ 30, Human Rights Council, U.N. Doc. A/HRC/19/59 (Dec. 26, 2011) [hereinafter Special Rapporteur] (by Olivier De Schutter), available at http://www.srfood.org/images/stories/pdf/officialreports/20120306_nutrition_en.pdf (reporting a strong correlation between low education and low income levels and higher rates of these diseases).

21. *F as in Fat*, *supra* note 6, at 6.

detrimental to their health.”²² The report recommended using taxation to encourage healthy diets by increasing the price of foods that are high in trans fat, saturated fat, added sugar, and sodium (e.g., snack foods and soft drinks), and using the revenue to make healthy foods more affordable.²³

By using the tax and spend strategy for public health purposes, the government would be seeking to alter the target food environment.²⁴ The underlying goal of this policy is to increase the price of the unhealthy choice in order to deter its consumption while simultaneously using the funds to make the healthy choice more affordable and to encourage its consumption.²⁵

Several taxing strategies have emerged in the health and economic literature to address nutrition and obesity and to raise revenue. The first is to tax the person based on the theory that obesity is a personal responsibility issue. The second is to tax a specific product associated with poor health outcomes. The third is to increase the price of inputs or problematic ingredients to increase the price of food products containing them. Lastly, I will recommend a new tax and spend proposal that will allow both the federal and state governments to address public health more broadly.

22. Special Rapporteur, *supra* note 20, at ¶ 31.

23. *Id.* ¶ 39 (“The poor are penalized for being poor, both because [unhealthy] foods and soft drinks are cheap and because healthy diets are expensive.”).

24. There is controversy over whether and how altering the farm bill would change the cost of food. The USDA provides billions of dollars in agricultural subsidies, primarily for major commodity crops, including corn, soy, wheat, and cotton. See Sarah Cohen et al., *Farm Subsidies Over Time*, WASHINGTON POST (July 2, 2006), <http://www.washingtonpost.com/wp-dyn/content/graphic/2006/07/02/GR2006070200024.html>. Economists analyzing different varieties of taxes found that the removal of corn subsidies would be equivalent to a tax on HFCS of 3.72 percent, which would abate 0.53 percent of all sweetener use. They concluded that “this policy is an ineffective way to abate sweetener use compared to a soda tax.” Zhen Miao et al., *Taxing Sweets: Sweetener Input Tax or Final Consumption Tax?*, 30 CONTEMP. ECON. POL’Y. 344, 344–61 (2011).

25. Some states might consider revising their tax codes to address current sales tax strategies on food for home consumption for public health purposes and to address regressivity when it comes to whole foods. See generally CTR. ON BUDGET AND POLICY PRIORITIES, WHICH STATES TAX THE SALE OF FOOD FOR HOME CONSUMPTION IN 2009? (2009), available at www.cbpp.org/3-16-06sf3.pdf. These states might consider removing the tax from whole food items and ingredients and maintaining the sales tax only on highly processed food and beverage items. See Jamie F. Chriqui et al., *State Sales Tax Rates for Soft Drinks and Snacks Sold Through Grocery Stores and Vending Machines, 2007*, 29 J. PUB. HEALTH POL’Y 226 (2008).

II. TAX THE PERSON

One proposed tax strategy is to tax people who are overweight, fail to lose weight, or who have diabetes.²⁶ The rationale behind this type of tax is that people should take personal responsibility for their health. Under this theory, the government's role is to engage people to manage their own disease and take care of themselves in order to save on health care costs.²⁷

A tax that targets people based on physical characteristics would be difficult to administer and is likely to be ineffective and stigmatizing.²⁸ The tax would also be especially regressive for low-income individuals who are already overweight. There is significant scientific consensus that current weight loss methods, interventions, trials, and programs are not effective in helping people lose a meaningful amount of weight or maintain weight loss or a healthy body weight.²⁹ Therefore, it cannot be expected that an overweight individual could lose enough weight to avoid the tax. Instead of deterring consumption, the tax would be a lifelong penalty for being overweight for a large percentage of the U.S. population. Further, such a tax would persistently and negatively impact those of low economic status. They would be doubly penalized for being poor: first because they do not have the resources to eat as well as the wealthy and second because a person of wealth could afford to

26. Paul Davenport, *Arizona Considering \$50 Tax for Smokers, Obese*, MSNBC (Apr. 1, 2011, 6:15 PM), http://www.msnbc.msn.com/id/42379077/ns/health-health_care/t/arizona-considering-tax-smokers-obese/.

27. *Id.*; see also Marc Lacey, *Arizona Asks To Set Fines For Risks*, N.Y. TIMES, Apr. 2, 2011, at A13.

28. The debate over efficacy and fairness of penalties for unhealthy behaviors, including maintaining a high BMI (body mass index), has made headlines in the context of health care reform. See *Health Plan Costs For Obese And Smokers Could Rise After Supreme Court Ruling*, HUFFINGTON POST (June 29, 2012), http://www.huffingtonpost.com/2012/06/29/health-plans-obese-smokers-supreme-court_n_1636139.html?view=print&comm_ref=false. Employers create workplace wellness programs, some emphasizing incentives and others instituting penalties, for certain behaviors. The Affordable Care Act limits certain types of punitive penalties but ostensibly allows financial incentives and disincentives based on weight. Consumer groups, unions and the American Heart Association caution against using this approach, arguing that a person's health status is the result of complex factors not always within his or her control. ROBERT WOOD JOHNSON FOUNDATION, HEALTH POLICY BRIEF, WORKPLACE WELLNESS PROGRAMS 4 (December 4, 2012).

29. Rebecca M. Puhl & Chelsea A. Heuer, *Obesity Stigma: Important Considerations for Public Health*, 100 AM. J. PUB. HEALTH 1019, 1021 (2010) (discussing "[a] systematic review of 80 randomized clinical trials of weight-loss interventions . . . [that] found the mean weight loss across studies to be 5% to 9% at 6 months, with a subsequent plateau across most interventions"; "[a] meta-analysis of 46 randomized controlled trials that revealed a maximum . . . of approximately 6% of body weight lost at 1-year follow-up"; and the finding that "[p]atients who have lost weight through [diet] typically regain 30% to 35% of their lost weight" after the first year, and "most (if not all) of their lost weight within 5 years").

be overweight or have diabetes and pay the tax. This tax would thus not address the poor eating practices of wealthier individuals even though it is equally unhealthy for them to consume an excess amount of unhealthy food.

In addition, singling out people with medical problems to pay a tax on those conditions is stigmatizing. Some believe that stigmatizing obese people positively influences their behavior, but research on the subject shows the opposite is true. A significant body of research reveals that adolescents and adults who suffer stigmatization based on their weight use unhealthy coping strategies, including increased eating, and adults with more exposure to stigma have higher BMIs.³⁰ Leading researchers on the topic of weight bias have concluded that:

[W]eight stigma is not a beneficial public health tool for reducing obesity or improving health. Rather, stigmatization of obese individuals poses serious risks to their psychological and physical health, generates health disparities, and interferes with implementation of effective obesity prevention efforts.³¹

Taxing the person in this case would be comparable to taxing people with lung cancer instead of taxing the tobacco products that caused the disease.³² Rather than taxing the person who uses the product—either as intended (e.g., cigarettes), more than intended (e.g., alcohol), or not as intended (e.g., firearms)—and suffers health consequences as a result, taxing the product is a better solution for public health, social justice, and equitable application of the law.

III. TAX THE PRODUCT

A second option is to tax a product associated with poor health outcomes in an effort to foster public health. Excise taxes on such products are common in the United States. Tobacco, alcohol, and firearms are contributors to the leading causes of premature death

30. Rebecca M. Puhl & Kelly D. Brownell, *Confronting and Coping with Weight Stigma: An Investigation of Overweight and Obese Adults*, 14 *OBSESITY* 1802, 1802–03, 1812 (2006); Rebecca M. Puhl & Joerg J. Luedicke, *Weight-based Victimization Among Adolescents in the School Setting: Emotional Reactions and Coping Behaviors*, 41 *J. YOUTH & ADOLESCENCE* 27, 36 (2012).

31. Puhl & Heuer, *supra* note 29, at 1019.

32. Thank you to Dr. Kelly Brownell for this analogy.

in the United States,³³ and all are subject to federal excise taxes.³⁴ Public health advocates have focused on sugary beverages as the subject of state or local tax interventions because the health risks associated with sugary drink consumption are better established in the research, discussed further below, than the risks from any other food.³⁵

A. Rationale

Sugary beverage intake is associated with weight gain, overweight, and obesity and is an independent risk factor for diabetes and heart disease.³⁶ The body does not compensate for caloric intake from sugary liquids by reducing intake of other forms of calories.³⁷ This means that people do not eat less when they consume calories from sugary beverages, as they might if they consumed the same calories from whole foods.³⁸ Sugary drink consumption is consistently associated with higher overall energy intake,³⁹ and thus the association between consumption and weight gain is stronger than for any other food. These drinks are also the most consumed snack by adults and the largest source of added sugar in the diets of all Americans.⁴⁰

Public health advocates propose that states place excise taxes on sugary beverages to dissuade consumption and raise revenue that is earmarked for public health.⁴¹ An excise tax is “a duty or impost

33. See Ali H. Mokdad et al., *Actual Causes of Death in the United States, 2000*, 291 JAMA 1238, 1239–40, 1242 (2004).

34. U.S. MASTER EXCISE TAX GUIDE (David Becker ed., 6th ed. 2008) [hereinafter TAX GUIDE]; CAMPAIGN FOR TOBACCO FREE KIDS, STATE CIGARETTE TAX RATES & RANK, DATE OF LAST INCREASE, ANNUAL PACK SALES & REVENUES, AND RELATED DATA 2 (2012), available at <http://www.tobaccofreekids.org/research/factsheets/pdf/0099.pdf>.

35. See Kelly D. Brownell et al., *The Public Health and Economic Benefits of Taxing Sugar-Sweetened Beverages*, 361 N. ENG. J. MED. 1599 (2009).

36. See, e.g., Vasanti S. Malik et al., *Sugar-Sweetened Beverages, Obesity, Type 2 Diabetes Mellitus, and Cardiovascular Disease Risk*, 121 CIRCULATION 1356, 1356 (2010).

37. See Lenny R. Vartanian et al., *Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis*, 97 AM. J. PUB. HEALTH 667, 668–69 (2007).

38. See *id.* at 669.

39. See Gail Woodward-Lopez et al., *To What Extent Have Sweetened Beverages Contributed to the Obesity Epidemic?*, 14 PUB. HEALTH NUTRITION 499, 502–04 (2010).

40. See RHONDA S. SEBASTIAN ET AL., SNACKING PATTERNS OF U.S. ADULTS, WHAT WE EAT IN AMERICA NHANES 2007-2008 5 (2011), available at http://www.ars.usda.gov/SP2UserFiles/Place/12355000/pdf/DBrief/4_adult_snacking_0708.pdf; Jean A. Welsh et al., *Consumption of Added Sugars is Decreasing in the United States*, 94 AM. J. CLINICAL NUTRITION 726, 726 (2011).

41. Brownell et al., *supra* note 35, at 1602–03.

levied upon the manufacture, sale, or consumption of commodities.”⁴² For sugary beverages, it would be imposed on the syrup or beverage manufacturer for beverages with added caloric sweetener. The goal of an excise tax is to increase the base price of the product. Conversely, a sales tax is imposed at time of payment, after most consumers have decided to make the purchase. A sales tax encourages consumers to buy larger containers and does not impact the cost of free refills.

Against this background, two rationales have emerged to support such a tax. First, the government has a history of taxing luxury products⁴³ and products associated with disease. For example, the federal government, all fifty states, and the District of Columbia have an excise tax on tobacco products.⁴⁴ Some states implement high tobacco tax rates specifically to deter consumption. The use of an excise tax for these purposes was also the rationale behind one of America’s first taxes, an excise tax on whiskey.⁴⁵ The Supreme Court has since confirmed that the government’s use of the power to tax is legitimate even if implemented specifically to deter behavior.⁴⁶

A second rationale used to justify a sugary beverage tax is that of market failure. The low cost of sugary beverages does not reflect the negative externalities associated with the health problems resulting from consumption,⁴⁷ including higher health care, personal welfare, and lost productivity costs from overweight, obesity, and their comorbidities. The tax would account for these externalities and correct this market failure.

42. TAX GUIDE, *supra* note 34, at 26 (internal citation omitted).

43. *Id.* at 29 (discussing the luxury automobile tax).

44. CAMPAIGN FOR TOBACCO FREE KIDS, *supra* note 34, at 2; *State Legislated Actions on Tobacco Issues*, AM. LUNG ASS’N, <http://www.lungusa2.org/slati/slatiOverview.php> (last visited Nov. 11, 2012).

45. Two years after the Constitution was ratified, Congress enacted the first federal excise tax on whiskey. *See* TAX GUIDE, *supra* note 34, at 23. Alexander Hamilton was the Secretary of Treasury at that time and expressly proposed the tax on this “national extravagance” to “diminish the consumption of it,” which he thought “would be equally favorable to the agriculture, to the economy, to the morals and to the health of the society.” Steve Simon, *Alexander Hamilton and the Whiskey Tax*, ALCOHOL & TOBACCO TAX & TRADE BUREAU, U.S. DEP’T OF THE TREASURY, http://www.ttb.gov/public_info/special_feature.shtml (last visited Nov. 11, 2012).

46. *See, e.g.*, *United States v. Sanchez*, 340 U.S. 42, 44–45 (1950) (holding that a federal tax passed by Congress in order to deter the use and sale of marijuana is not unconstitutional).

47. Brownell et al., *supra* note 35, at 1601–02. *But see* SCOTT DRENKARD, TAX FOUND., OVERREACHING ON OBESITY: GOVERNMENTS CONSIDER NEW TAX ON SODA AND CANDY 9–11 (2011), available at <http://taxfoundation.org/sites/taxfoundation.org/files/docs/sr196.pdf> (arguing that the externality argument is a myth).

Unlike sales taxes, excise taxes are more amenable to earmarking, which is the dedication of revenue from a particular tax stream to a specific purpose.⁴⁸ Excise taxes represent a significant revenue stream for the government,⁴⁹ but many are earmarked for a specific fund related to the purpose of the tax. For example, federal excise taxes placed on special motor vehicle and diesel fuels are earmarked for the Highway Trust Fund to finance federal highway projects.⁵⁰

Public health advocates argue that an excise tax on sugary beverages should be earmarked for public health. For example, the funds could be redirected into low-income communities to correct the health disparities that result from a lack of access to healthy food and health care services.⁵¹ The money could also be used to fund public health programs or to specifically subsidize healthier food, such as fruits and vegetables.⁵²

People with lower incomes spend a larger percentage of their income on food than people with higher incomes.⁵³ Price elasticity varies among the population, with those at lower incomes reacting more to increased prices. If the goal of the tax is to reduce consumption, regressivity is minimized when the low-income group purchases less of the unhealthy item, thereby spending less of their income on it and potentially improving health outcomes.⁵⁴ Earmarking the tax revenue for public health initiatives specifically to benefit low-income communities seeks to address regressivity concerns.

B. Policy Discussion

Advocates analogize the potential benefits of a sugary beverage tax to the successful use of taxation as a strategy in tobacco control.⁵⁵ Tobacco taxes are credited with a reduction of smoking rates,

48. Frederick Stocker & Steven Maguire, *Earmarking of Taxes*, in ENCYCLOPEDIA OF TAXATION AND TAX POLICY 89, 89 (Joseph J. Cordes et al., eds., 2d ed. 2005).

49. See TAX GUIDE, *supra* note 34, at 27.

50. *Id.* at 33–34.

51. Brownell et al., *supra* note 35, at 1603–04.

52. Special Rapporteur, *supra* note 20, ¶¶ 39, 50.

53. Miao et al., *supra* note 24, at 345.

54. See *id.* at 359–60.

55. Kelly D. Brownell & Thomas R. Frieden, *Ounces of Prevention—the Public Policy Case for Taxes on Sugared Beverages*, 360 N. ENG. J. MED. 1805, 1806 (2009).

especially in youth, and raising revenue to fund other tobacco control programs.⁵⁶ Economists differ on the expected impact of sugary beverage taxes, but there seems to be a consensus that it could generate billions of dollars in revenue and reduce sugary beverage consumption to positively influence health.⁵⁷

State legislative bills vary in the amount of their proposed sugary beverage tax,⁵⁸ ranging from a penny per ounce⁵⁹ to two cents per ounce.⁶⁰ While all proposals would raise revenue, economists debate how large a tax on sugary beverages must be in order to reduce consumption rates.⁶¹ A penny per ounce tax would raise the price of a twenty-ounce beverage by twenty cents. Conversely, the average state tobacco tax is \$1.49 per pack,⁶² and there is a correlation between higher tax rates and lower smoking rates.⁶³ As of March 2012, the average tax of the five states that are both among the top ten states with the lowest smoking rates and the top ten states with the highest tobacco taxes is \$2.86. There is thus a concern that the proposed sugary beverage taxes are too low to impact consumption.

Economists calculate that consumers may be more sensitive to price increases for sugary beverages than for tobacco. The price elasticity for tobacco is -0.25 to -0.50,⁶⁴ which means “that if cigarette prices rise by 10%, overall cigarette smoking will fall by between 2.5 and 5%.”⁶⁵ Conversely, the price elasticity for sugary beverages is approximately -0.8, so a 10 percent increase in price

56. Karen M. Emmons et al., *Tobacco Control: A Brief Review of its History and Prospects for the Future*, 11 HEMATOLOGY/ONCOLOGY CLINICS N. AM. 177, 182–83 (1997).

57. Tatiana Andreyeva et al., *Estimating the Potential of Taxes on Sugar-Sweetened Beverages to Reduce Consumption and Generate Revenue*, 52 PREVENTIVE MED. 413, 414–16 (2011); Biing-Hwan Lin et al., *Measuring Weight Outcomes for Obesity Intervention Strategies: The Case of a Sugar-Sweetened Beverage Tax*, 9 ECON. & HUMAN BIOL. 329, 335–36, 338 (2011); Y. Claire Wang et al., *A Penny-Per-Ounce Tax on Sugar-Sweetened Beverages Would Cut Health and Cost Burdens of Diabetes*, 31 HEALTH AFF. 199, 202–04 (2012).

58. E.g., Kelly D. Brownell, *Want a Healthier State? Save Gov. Paterson's Tax on Sugar Soda*, N.Y. DAILY NEWS (Feb. 17, 2009, 6:35 PM), <http://www.nydailynews.com/opinion/a-healthier-state-save-gov-paterson-tax-sugar-soda-article-1.392061> (arguing in support of the then-Governor of New York's proposed 18 percent tax on sugary beverages that contained less than 70 percent juice).

59. E.g., Assemb. B. 669, 2011 Leg., Reg. Sess. (Cal.); H.B. 151, 2011 Gen. Assemb. (Vt.).

60. S.B. 2642, 2012 Leg., Reg. Sess. (Miss.).

61. See Roland Sturm et al., *Soda Taxes, Soft Drink Consumption, and Children's Body Mass Index*, 29 HEALTH AFF. 1052, 1057–58 (2010).

62. CAMPAIGN FOR TOBACCO FREE KIDS, *supra* note 34, at 1.

63. See *id.* at 1–2. As of March 2012, five of the top ten states with the lowest smoking rates are not among the top ten states with the highest taxes, but they all have other tobacco control policies in place. See *id.*

64. Frank J. Chaloupka et al., *Tax, Price and Cigarette Smoking: Evidence from the Tobacco Documents and Implications for Tobacco Company Marketing Strategies*, 11 TOBACCO CONTROL i62, i64 (2002).

65. *Id.*

should reduce consumption by 8–10 percent.⁶⁶ Thus, compared to cigarettes, the demand for sugary beverages is more elastic, and the decline in consumption should be higher at lower tax rates.

Many economists calculate that a penny per ounce tax on sugary beverages is sufficient to reduce consumption.⁶⁷ Other studies suggest that a higher tax would be necessary.⁶⁸ One study examined states with existing sales tax rates on soft drinks, finding that the largest was 7 percent, with a mean differential, or the amount more than taxes on other food, of 3.5 percent.⁶⁹ The researchers found these small taxes did not have a measurable impact on soft drink consumption or obesity among children in those states, so if reducing consumption is the goal, policymakers should consider higher taxes at the outset.⁷⁰ If the tax gets implemented but primarily raises revenue and does not decrease consumption as expected,⁷¹ lawmakers could incrementally increase the tax until it reaches a deterrent level, as has been done with tobacco over the decades.⁷² Furthermore, even small excise taxes could generate revenue that can be earmarked for other obesity prevention efforts.⁷³

States with high tobacco tax rates and low smoking rates tend to also have minimum price laws for tobacco products, which could be a useful strategy for food taxes. Minimum price laws have proven necessary because tobacco manufacturers offer price discounts, coupons, and other promotions that bypass the purpose of the tax.⁷⁴ As evidence of this, the Centers for Disease Control and Prevention (CDC) found that “cigarette manufacturers spent \$12.5 billion on marketing and promotional expenditures in 2006, 74% of which was spent to reduce the price of cigarettes at the point of

66. Tatiana Andreyeva et al., *The Impact of Food Prices on Consumption: A Systematic Review of Research on the Price Elasticity of Demand for Food*, 100 AM. J. PUB. HEALTH 216, 216, 220 (2010).

67. See, e.g., Wang et al., *supra* note 57, at 202; Andreyeva et al., *supra* note 57, at 413.

68. See Sturm et al., *supra* note 61, at 1057.

69. *Id.*

70. See *id.* at 1058.

71. Roy G. Blakely & Gladys C. Blakely, *The Revenue Act of 1918*, 9 AM. ECON. REV. 213, 235 (1919) (“Taxes such as those provided for in this title may serve one of two purposes: either to provide revenue or to discourage the buying of luxuries. The two results are not likely to be achieved in the same bill, because if the rates are high enough to accomplish the latter, not as much revenue will be produced as if the rates were lower.”).

72. See generally Emmons et al., *supra* note 56.

73. Some bills specify that funds should be earmarked, mostly for obesity prevention or children’s health efforts. See, e.g., H.B. 753, 102d Leg., 2d Sess. (Neb. 2012); H.B. 843, 2011 Reg. Sess. (N.Y.); H.B. 5432, 2011 Jan. Sess. (R.I.).

74. Cntrs. for Disease Control & Prevention, *State Cigarette Minimum Price Laws*, 59 MORBIDITY & MORTALITY WKLY. REP. 389, 389 (2010), available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5913a2.htm> (last visited Nov. 11, 2012) (explaining minimum price laws were originally implemented to protect tobacco manufacturers).

sale.”⁷⁵ Sugary beverage manufacturers can be expected to employ similar strategies. Additionally, there is no guarantee that manufacturers will pass through the tax on the price of sugary beverages alone rather than spreading the price increase among a wider range of their products. For example, manufacturers could divide the tax among all of their products, which would nullify the impact of the tax. The simultaneous enactment of minimum price laws with sugary beverage taxes could address these dual concerns.

Finally, unlike for cigarettes, substitution by consumers of similarly unhealthy products is a concern when taxing food products. In addition to price, other factors may also impact consumers' substitution decisions, such as caffeine dependence or whether they are seeking a snack, a sweet, or a thirst quencher. Possible outcomes of a sugary beverage tax include no substitution, substitution with zero calorie beverages, or substitution with caloric food or beverages.⁷⁶

Two caloric beverages have been suggested as possible substitutions: milk and juice.⁷⁷ Substitution with plain milk would be a healthful alternative for children⁷⁸ and not a likely substitute for adults because adult milk consumption is historically low.⁷⁹ Alternatively, if substitution occurs with juice, this would decrease the efficacy of the tax due the body's similar response to juice's naturally occurring sugar.⁸⁰ Nonetheless, if the tax is high enough to effectively deter purchase of sugary beverages, then consumption of products with added sugars should decline, which is the ultimate goal of the tax.

C. Excise Tax and SNAP

The Supplemental Nutrition Assistance Program (SNAP), formerly known as food stamps, provides money to low income persons to purchase food. There are few limitations on the use of

75. *Id.* at 390.

76. *See* Andreyeva et al., *supra* note 66, at 221.

77. *See* Lin et al., *supra* note 57, at 332.

78. *See* RHONDA S. SEBASTIAN ET AL., FLUID MILK CONSUMPTION IN THE UNITED STATES, WHAT WE EAT IN AMERICA, NHANES 2005–2006 1 (2010), available at http://www.ars.usda.gov/SP2UserFiles/Place/12355000/pdf/DBrief/3_milk_consumption_0506.pdf; Milk Composition, MILK FACTS, <http://www.milkfacts.info/Milk%20Composition/VitaminsMinerals.htm> (last visited Nov. 12, 2012) (detailing the vitamins and minerals found in milk).

79. SEBASTIAN ET AL., *supra* note 78, at 1–2.

80. *See* Myles S. Faith et al., *Fruit Juice Intake Predicts Increased Adiposity Gain in Children from Low-Income Families: Weight Status-by-Environment Interaction*, 118 PEDIATRICS 2066, 2072–73 (2006); Martine M. Perrigue et al., *Added Soluble Fiber Enhances the Satiating Power of Low-Energy-Density Liquid Yogurts*, 109 J. AM. DIETETIC ASS'N 1862, 1867 (2009) (finding that orange juice was less satiating than yogurt drinks).

this money; recipients can purchase all packaged food and beverages except alcohol and prepared food, e.g., rotisserie chicken.⁸¹ Recipients do not pay sales tax on food items purchased with SNAP dollars. Instituting an excise tax on sugary beverages, if passed on to consumers by manufacturers as anticipated, would increase the base price of the beverage. Thus, this type of tax would be passed on to SNAP recipients, unlike a sales tax with similar intent.

SNAP recipients⁸² purchase more sugary beverages than the general population, WIC recipients, and higher income consumers. One study of scanner data estimated that at least 1.7 billion SNAP dollars were used to purchase sugary beverages in 2011. This was a conservative estimate, and SNAP recipients are likely spending quite a bit more on these beverages.⁸³ New York City and several states have protested this use of government money and petitioned the United States Department of Agriculture (USDA) to consider piloting a change to the guidelines to remove sugary beverages from eligibility or to revise the nutritional requirements of SNAP purchases.⁸⁴ The USDA has rejected these proposals.⁸⁵ If it considers this in the future, and effectively reduces sugary beverage consumption, this policy would have had the potential to positively impact public health for the 46.2 million Americans currently receiving SNAP benefits.⁸⁶ Excise taxes would also impact SNAP purchases by increasing the price of the product on the shelf, making them an effective tool for dissuading purchase for all consumers.

81. U.S. Dep't of Agric., *Eligible Food Items*, SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM, <http://www.fns.usda.gov/snap/retailers/eligible.htm> (last updated Feb. 16, 2012).

82. In October 2011, there were 46.2 million SNAP recipients, a significant increase from the monthly average of 28.2 million SNAP recipients in 2008 and 17.2 million SNAP recipients in 2000. Danielle Kurtzleben, *Gingrich's "Uncomfortable Facts" About Food Stamps Hold Water*, U.S. NEWS & WORLD REP. (Jan. 17, 2012), <http://www.usnews.com/news/articles/2012/01/17/gingrichs-uncomfortable-facts-about-food-stamps-hold-water>. Total spending on food stamps is currently at \$75.3 billion. Alan Bjerga & Jennifer Oldham, *Gingrich Calling Obama 'Food-Stamp President' Draws Critics*, BUS. WEEK, (Jan. 25, 2012), <http://www.businessweek.com/news/2012-01-25/gingrich-calling-obama-food-stamp-president-draws-critics.html>.

83. Tatiana Andreyeva et al., *Grocery Store Beverage Choices by Participants in Federal Food Assistance and Nutrition Programs*, 43 AM. J. PREV. MED. 411, 416 (2012).

84. See, e.g., NYC DEP'T OF HEALTH & MENTAL HYGIENE, REMOVING SNAP SUBSIDY FOR SUGAR-SWEETENED BEVERAGES (2010), available at <http://www.nyc.gov/html/doh/downloads/pdf/cdp/cdp-snap-faq.pdf>.

85. U.S. DEP'T OF AGRIC., IMPLICATIONS OF RESTRICTING THE USE OF FOOD STAMP BENEFITS – SUMMARY (2007), available at www.fns.usda.gov/ora/menu/Published/snap/FILES/ProgramOperations/FSPFoodRestrictions.pdf (explaining the rationale followed in response to these requests).

86. Kurtzleben, *supra* note 82.

IV. TAX THE NUTRIENT, CALORIE, OR INGREDIENT

Another policy option is to tax elements of the food: a specific nutrient, such as fat, caloric content, or an ingredient, such as added sugar. These options are explored below.

A. Fat

The world's first fat tax made headlines when instituted by Denmark in 2011. The media reported that Denmark's tax on saturated fat was intended to address diverse issues, including obesity and cardiovascular disease,⁸⁷ and to close a budget gap.⁸⁸ Saturated fat is, however, often naturally occurring in healthy and unhealthy food, and the tax applied whether or not the taxed product is considered healthy.⁸⁹ In November 2012, the Danish government announced it was rescinding the country's fat tax because it was difficult to administer, politically disfavored, and encouraged citizens to cross the border to purchase foods covered by the tax (e.g., specialty cheeses).⁹⁰

Outdated dietary recommendations for the prevention and treatment of cardiovascular disease include advice to replace dietary fat with carbohydrates.⁹¹ Leading scientists have found that this replacement, particularly with refined carbohydrates, can negatively impact cholesterol, lead to insulin resistance, and increase the risk for obesity.⁹² One conclusion is clear: fat is not considered to be the

87. Olivia Katrandjian, *Denmark Introduces 'Fat Tax' on Foods High in Saturated Fat*, ABC NEWS (Oct. 2, 2011, 2:29 PM), <http://abcnews.go.com/blogs/health/2011/10/02/denmark-introduces-fat-tax-on-foods-high-in-saturated-fat/>.

88. Lisa Abend, *Beating Butter: Denmark Imposes the World's First Fat Tax*, TIME, Oct. 6, 2011, available at <http://www.time.com/time/world/article/0,8599,2096185,00.html>. The country has a 10 percent obesity rate, which is low for Europe, and previously banned trans fat—the one fat for which there is little debate about associated ill-health effects. *Id.*

89. Nutritionists that consider saturated fat unhealthy might still differentiate between, say, milk produced from grass-fed cows and a greasy fast-food hamburger.

90. See *A Fat Chance*, ECONOMIST (November 17, 2012), <http://www.economist.com/news/europe/21566664-danish-government-rescinds-its-unwieldy-fat-tax-fat-chance>. Public health advocates argued that the tax was too short lived to be evaluated and expressed concern that this would negatively impact other countries' motivation to pass similar measures. See Gary Sacks, *Denmark Scraps Fat Tax in Another Big Food Victory*, CROAKEY BLOG (November 19, 2012, 11:05 AM), <http://blogs.crikey.com.au/croakey/2012/11/19/denmark-scraps-fat-tax-in-another-big-food-victory/>.

91. Walter C. Willett, *Overview and Perspective in Human Nutrition*, 17 ASIA PAC. J. CLINICAL NUTRITION 1, 2 (2008).

92. Patty W. Siri-Tarino et al., *Saturated Fat, Carbohydrate, and Cardiovascular Disease*, 91 AM. J. CLINICAL NUTRITION 502, 502, 506 (2010).

primary driver of obesity.⁹³ Taxing fat to influence obesity outcomes in the United States would not be an advised strategy.

B. Calories

Enacting a tax based on calorie content is especially problematic from a health standpoint. Not all calories come with the same health benefits or detriments.⁹⁴ Specific dietary components can individually impact nutritional health and weight gain. For example, in one study researchers found that nut consumption was inversely related to weight gain while potato chip consumption was positively related⁹⁵ despite the fact that one serving of nuts is 170 calories⁹⁶ and one serving of potato chips is 160 calories.⁹⁷ Also, consider that the Frosty, a frozen dessert product at Wendy's, is fewer calories than any of the restaurant's salads. However, it would be difficult to argue the dessert is the healthier option.⁹⁸

Advocates of a calorie tax defend the idea on the grounds that taxing specific items or nutrients would lead to substitution.⁹⁹ If a calorie tax was imposed, however, substitution is just as or even more likely. Substitution may occur within or across categories and can have the unintended effect of decreasing consumption of healthier foods or positive nutrients currently derived from a higher calorie food option. This problem is especially evident when an unhealthy, lower-calorie product is a potential substitute for a

93. Robert H. Lustig et al., *The Toxic Truth About Sugar*, 482 NATURE 27, 28 (2012); see also Marni Jameson, *A Carb Reversal; Fat Was Once the Devil. Now More Nutritionists Are Pointing Accusingly at Sugar, Refined Grains*, L.A. TIMES, Dec. 20, 2010, at E1. ("'Fat is not the problem,' says Dr. Walter Willett, chairman of the department of nutrition at the Harvard School of Public Health. 'If Americans could eliminate sugary beverages, potatoes, white bread, pasta, white rice and sugary snacks, we would wipe out almost all the problems we have with weight and diabetes and other metabolic diseases.'").

94. GARY TAUBES, GOOD CALORIES, BAD CALORIES (2007).

95. See Dariush Mozaffarian et al., *Changes in Diet and Lifestyle and Long-Term Weight Gain in Women and Men*, 364 N. ENG. J. MED. 2392, 2401 (2011) (finding that vegetables, whole grains, fruit, nuts, and yogurt were inversely related to weight gain while potato chips, potatoes and fries, sugary beverages, unprocessed and processed red meat, sweet desserts, refined grains, and fruit juice were positively associated with weight gain).

96. See, e.g., *Nutrition Facts*, PLANTERS MIXED NUTS, <http://www.planters.com/varieties/nutrition-information.aspx?Site=1&Product=2900001665> (last visited Apr. 28, 2012).

97. See, e.g., *Nutrition Facts*, LAYS POTATO CHIPS, <http://www.fritolay.com/our-snacks/lays-classic-potato-chips.html> (last visited Apr. 28, 2012).

98. See WENDY'S, NUTRITION INFORMATION, <http://www.wendys.com/food/pdf/us/nutrition.pdf> (last visited Nov. 12, 2012).

99. AEIVideos, *Daniel Sumner: To Reduce Obesity, Tax Calories*, YOUTUBE (Apr. 12, 2012), <http://www.youtube.com/watch?v=IvidAtRbK38> (advocating for a calorie tax by arguing that other taxes, such as on fat or sugar, would lead to substitution between them).

higher-calorie, healthy item. Two percent milk contains essential vitamins and minerals¹⁰⁰ and is more satiating than sugary beverages, but a parent with limited resources might substitute reduced fat milk at 183 calories per twelve ounces¹⁰¹ with a “juice” drink, composed of more than 98 percent water and high fructose corn syrup at one-hundred calories per twelve ounces,¹⁰² if the latter is cheaper and seems healthier. Taxing calories also does not account for total calories consumed or required per person. It is therefore not a promising strategy to correct the mis-nutrition prevalent in the United States or to address obesity.

C. Added Sugar

High consumption of processed carbohydrates, particularly sugary products, is associated with metabolic changes, weight gain, obesity, and diabetes.¹⁰³ Research indicates that people with the highest sugar intake have the lowest micronutrient intake.¹⁰⁴ The major source of added sugar in the American diet is derived from commercially sweetened products, including sugary beverages, grain-based desserts, dairy desserts, syrups, candy, and processed cereals for children.¹⁰⁵ In a 2011 USDA study, three of the four food groups—not including alcoholic beverages—that adults relied on for snacks included products high in added sugar, i.e., sugary beverages, candy, and baked goods.¹⁰⁶

Economists at Iowa State University analyzed the difference among several added sugar taxing strategies, including taxing final products that contain added sugar and taxing sugar as an input at

100. SEBASTIAN ET AL., *supra* note 78.

101. See *Nutrient Content of Milk Varieties*, CORNELL UNIV., <http://0061459.netsolhost.com/Nutrition%20Facts/Nutrient%20Content.htm> (last updated June 4, 2010).

102. Fruit Juicy Red Hawaiian Punch comes in twelve-ounce cans that disclose one-hundred calories and twenty-five grams of sugar on the nutrition facts panel. *Product Info*, HAWAIIAN PUNCH, <http://www.hawaiianpunch.com/productinfo.php#> (last visited Nov. 1, 2012) (providing nutritional information for an eight-ounce serving).

103. Lustig et al., *supra* note 93, at 28; Jean A. Welsh et al., *Caloric Sweetener Consumption and Dyslipidemia Among US Adults*, 303 JAMA 1490, 1490 (2010); Jean A. Welsh, et. al., *Consumption of Added Sugars and Indicators of Cardiovascular Disease Risk Among US Adolescents*, 123 CIRCULATION 249, 249 (2011).

104. See Rachel K. Johnson et al., *Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement from the American Heart Association*, 120 CIRCULATION 1011, 1015 (2009); Nelia P. Steyn et al., *Evidence to Support a Food-Based Dietary Guideline on Sugar Consumption in South Africa*, 81 BULL. WORLD HEALTH ORG. 599, 604–05 (2003).

105. See Linda Van Horn et al., *Translation and Implementation of Added Sugars Consumption Recommendations: A Conference Report from the American Heart Association Added Sugars Conference 2010*, 122 CIRCULATION 2470, 2471 (2010); Welsh et al., *supra* note 40, at 728.

106. See SEBASTIAN ET AL., *supra* note 40, at 5.

the manufacturer's production side.¹⁰⁷ They found that the second strategy, taxing sugar as an ingredient, would more effectively reduce the demand for added sugar, impose less of a tax on consumers, and lead to the lowest welfare cost. This is because manufacturers would substitute or reduce sugar in the production of the final products. These economists concluded that a tax on sweetener inputs is more efficient and preferable because it reduces sugar consumption and has a smaller impact on welfare costs.¹⁰⁸

In a subsequent study on product substitution, the same group of economists analyzed twenty-five composite food categories and compared the impact of a tax on added sugar in these foods with a tax on solid fat.¹⁰⁹ For comparison purposes, they taxed fat at a rate based on the calories equivalent to those in a sugary beverage tax of one cent per ounce. The researchers found the tax on added sugar reduced added sugar demand by 7.76 percent and solid fat demand by 1.26 percent.¹¹⁰ Consumers could more easily switch to lower sugar products because more options were available for substitution.¹¹¹ Importantly, the added sugar tax reduced demand of the highest sources of added sugar in the American diet, discussed previously.¹¹² Other studies support the argument that substitution is less of a concern for an added sugar tax than other nutrient-based taxing mechanisms.¹¹³

These economic analyses did not consider the welfare gains of consumers' improved health from reduced consumption of high sugar products. The economists noted that if improved health status was incorporated into the analysis, the lowest income group would benefit the most.¹¹⁴ More research on this type of tax strategy is clearly warranted and could lead to a potential public health victory in the future.

107. Miao et al., *supra* note 24.

108. *Id.* at 344, 359–60.

109. Zhen Miao et al., *Accounting for Product Substitution in the Analysis of Food Taxes Targeting Obesity*, HEALTH ECON., 2012, at 7–8, 14, available at <http://tinyurl.com/bkv4gkl>.

110. *Id.* at 17.

111. *Id.* 19–20.

112. *Id.* at 16–17.

113. Sinne Smed et al., *Socio-Economic Characteristics and the Effect of Taxation as a Health Policy Instrument*, 32 FOOD POL'Y 624 (2007) (analyzing several tax strategies and finding that the tax on saturated fats decreased the demand for saturated fat by 9 percent and had no impact on the demand for sugar; a similar tax on sugar decreased the demand for sugar by approximately 22 percent and increased the demand for saturated fat about 1 percent).

114. Miao et al., *supra* note 24, at 345.

V. TAX THE MANUFACTURERS

Finally, instituting a manufacturers' excise tax could be used to support public health and would avoid some of the pitfalls of the other taxing strategies discussed above. This is a form of federal excise tax on manufacturers, producers, and importers¹¹⁵ (collectively manufacturers) of a "taxable article."¹¹⁶ Current manufacturers' excise taxes cover articles ranging from vaccines to sporting goods and are most commonly calculated based on the sale price of the item.¹¹⁷ In addition to producing revenue, manufacturers' excise taxes are often specifically earmarked for purposes directly related to the tax. For example, a federal manufacturers' excise tax on the sale of coal is earmarked for the Black Lung Disability Benefits Trust Fund to finance health benefits for miners.¹¹⁸ These taxes are imposed at the point of production for efficiency of collection, but manufacturers then pass on the tax to consumers by increasing the price of the final products.¹¹⁹

I propose instituting a federal manufacturers' excise tax to address nutrition related public health issues in the United States. Under this proposal, manufacturers of highly processed food products transported in interstate commerce will be subject to the tax, with the specific purpose of earmarking the revenue for conditional funding opportunities for states and their political subdivisions. The funding will be conditioned on the grantee meeting federally defined requirements to address nutrition, food access disparities, and obesity. This strategy is explored below.

A. Background

The USDA estimates that there are more than 300,000 food products in the U.S., with 12,000 new products introduced each year.¹²⁰ Modern food technology has created a "revolution in the

115. Manufacturers' excise taxes are not placed on exports pursuant to the Export Clause of the Constitution. *See* U.S. CONST. art. I, § 9, cl. 5 ("No Tax or Duty shall be laid on Articles exported from any State."); *Ranger Fuel Corp. v. United States*, 33 F. Supp. 2d 466, 469 (E.D. Va. 1998) (holding tax on coal exports unconstitutional).

116. 26 C.F.R. § 48.0-2(a)(4)(i) (2011).

117. TAX GUIDE, *supra* note 34, at 142–43, 147–48.

118. *Id.* at 138.

119. *See* JAMES M. BICKLEY, CONG. RESEARCH SERV., RL 30304, THE FEDERAL EXCISE TAX ON GASOLINE AND THE HIGHWAY TRUST FUND: A SHORT HISTORY 1, 11 (2012), *available at* <http://www.fas.org/sgp/crs/misc/RL30304.pdf>.

120. U.S. DEP'T OF AGRIC., *supra* note 85.

mass preparation”¹²¹ of highly processed convenience foods that are low in nutrients, inexpensive, and “hyperpalatable.”¹²²

Highly processed foods have replaced whole foods in the diets of many Americans,¹²³ and for those living in low-income areas, highly processed foods may be more accessible than whole food options.¹²⁴ In addition, processed foods are more heavily promoted. For example, in 2006, food manufacturers spent over \$1.6 billion to market food and beverages to children and adolescents in the U.S., but only 0.7 percent of this total was spent on fruit and vegetable advertising.¹²⁵

Public health and economic studies have found that nutritional quality decreases and obesity increases as people consume a higher proportion of processed food in their diets.¹²⁶ A Harvard study following U.S. men and women found that increased consumption of specific processed foods significantly increased the participant’s body weight over that time period.¹²⁷ The researchers found that weight gain was most strongly associated with each additional serving of potato chips, potatoes and fries, sugary beverages, unprocessed and processed red meat, sweet desserts, refined grains, and fruit juice.¹²⁸ Fast food consumption is also independently associated with poor nutrition and increased risk for obesity,¹²⁹ with French fries, processed meat, and soda among the most frequent

121. Cutler et al., *supra* note 9, at 93.

122. Carlos Monteiro et al., *Increasing Consumption of Ultra-Processed Foods and Likely Impact on Human Health: Evidence from Brazil*, 14 PUB. HEALTH NUTRITION 5, 12 (2011).

123. See SEBASTIAN ET AL., *supra* note 40 (highlighting the prevalence of snacking among U.S. adults and the propensity to select unhealthy, processed snacks); see also Cutler et al., *supra* note 9, at 93–94.

124. See TROY C. BLANCHARD & THOMAS A. LYON, RETAIL CONCENTRATION, FOOD DESERTS, AND FOOD DISADVANTAGED COMMUNITIES IN RURAL AMERICA 5–6 (2002), available at http://srdc.msstate.edu/ridge/projects/recipients/02_blanchard_final.pdf; Braunstein & Lavizzo-Mourey *supra* note 11, at 2045.

125. Fruit and vegetable marketing expenditures were \$11,463,000 in 2006. See FED. TRADE COMM’N, MARKETING FOOD TO CHILDREN AND ADOLESCENTS 7, 9 (2008), available at <http://www.ftc.gov/os/2008/07/P064504foodmktgreport.pdf>.

126. See, e.g., Abay Asfaw, *Does Consumption of Processed Foods Explain Disparities in the Body Weight of Individuals? The Case of Guatemala*, 20 HEALTH ECON. 184, 191 (2011) (finding that an increase in consumption of processed foods leads to a greater likelihood of being obese); Cutler et al., *supra* note 9, at 94 (finding that obesity rates in different countries are correlated with access to processed foods); Bo MacInnis & Gordon Rausser, *Does Food Processing Contribute to Childhood Obesity Disparities?*, 87 AM. J. AGRIC. ECON. 1154, 1154, 1157 (2005) (finding that consumption of energy-dense processed foods by children increases the probability that they will be obese); Mozaffarian et al., *supra* note 95, at 2400 (noting a positive association between weight gain and processed foods).

127. Mozaffarian et al., *supra* note 95, at 2397, 2400.

128. *Id.* at 2397.

129. Tamkeen Khan et al., *Fast Food Consumption and Food Prices: Evidence from Panel Data on 5th and 8th Grade Children*, 2012 J. OBESITY 1, 1 (2011).

fast food purchases.¹³⁰ No matter the venue, the same foods are associated with weight gain.¹³¹

Obesity, its comorbidities, and the negative health outcomes related to poor nutrition are of national concern.¹³² Yet, nutrition related issues have been mischaracterized as a failing in personal responsibility,¹³³ and the major food corporations spend millions of dollars lobbying against reform.¹³⁴ The United States spends more on health care, almost \$2.5 trillion in 2009, than all comparably wealthy nations and yet simultaneously scores lower on the major indicators of population health, including life expectancy.¹³⁵ Chronic disease drives the majority of U.S. health care spending, and the additional spending due to obesity diverts funds from other nationally important investments, such as education.¹³⁶

Moreover, in 2012, the IOM found that funding for public health is unstable, which “weakens the ability of public health departments to prevent disease and protect the health of their communities.”¹³⁷ More resources are necessary for prevention and to fund these agencies, which have the expertise to prevent further increased incidence of chronic disease and improve health outcomes.¹³⁸

130. See Kerri N. Boutelle et al., *Nutritional Quality of Lunch Meal Purchased for Children at a Fast-Food Restaurant*, 7 CHILDHOOD OBESITY 316, 318 (2011) (stating that additional highly purchased items included sweet desserts).

131. Compare *id.* with Mozaffarian et al., *supra* note 95, at 2397.

132. See *F as in Fat*, *supra* note 6, at 3 (arguing that obesity is a challenging issue facing the U.S., affecting both the health of its citizens and the economy).

133. 151 CONG. REC. H8927 (daily ed. Oct. 19, 2005) (statement of Rep. Steve Chabot) (debating the Personal Responsibility in Food Consumption Act of 2005, H.R. Res. 554, 109th Cong. (2005), and stating “This bill is about self-responsibility . . . If you eat too much, you get fat. It is your fault. Do not try to blame somebody else.”); see also Kelly D. Brownell et al., *Personal Responsibility And Obesity: A Constructive Approach To A Controversial Issue*, 29 HEALTH AFF. 379, 380–82 (2010); Jennifer L. Pomeranz, *A Historical Analysis of Public Health, the Law, and Stigmatized Social Groups: The Need for Both Obesity and Weight Bias Legislation*, 16 J. OBESITY S93, S95 (2008) (discussing that HIV-AIDS was once considered to be solely a failing of personal responsibility, but the government quickly understood that the death toll required it to take deliberate action).

134. For example, in 2011, Coke and PepsiCo reported spending \$4,740,000 and \$2,610,000 respectively on lobbying. See Nancy Watzman, *Food and Media Companies Lobby to Weaken Guidelines on Marketing Food to Children*, SUNLIGHT FOUND. REPORTING GROUP BLOG (Dec. 5, 2011, 11:38 AM), http://reporting.sunlightfoundation.com/2011/Food_and_media_companies_lobby/.

135. *Reallocation of Health Dollars and New Sources of Funds Needed to Strengthen Nation’s Public Health Capacity*, NAT’L ACADS. (Apr. 10, 2012), <http://www.iom.edu/Reports/2012/For-the-Publics-Health-Investing-in-a-Healthier-Future/Press-Release.aspx>.

136. See *id.*

137. INST. OF MED. OF THE NAT’L ACADS., FOR THE PUBLIC’S HEALTH: INVESTING IN A HEALTHIER FUTURE 3 (2012), available at http://www.iom.edu/~media/Files/Report%20Files/2012/For-the-Publics-Health/phfunding_rb.pdf.

138. *Id.* at 1–2.

Thus, a manufacturers' excise tax on those who produce highly processed food, explained further below, would help to generate revenue that could be earmarked for public health. Because the modern food environment creates issues of accessibility, regressivity, and health disparities, such a tax would not be instituted to deter consumption. Unlike the sugary beverage taxes discussed above, this is a revenue generating measure to provide states with financial assistance to meaningfully address modern public health problems, especially chronic disease related to poor nutrition.

B. The Plan Defined

1. Manufacturers

The manufacturers of taxable articles include the obvious producers and importers of highly processed food products typically found in retail outlets under brand names or private labels, but also manufacturers of food sold to fast food establishments. To tax one and not the other would encourage consumption of the same offensive products simply purchased at a different type of retail outlet. Fast food outlets receive their processed products through a distribution network.

Federal law already provides a method to identify the manufacturers who would be subject to this tax. A regulation adopted pursuant to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (the Bioterrorism Act) requires owners, operators, and agents in charge of domestic and foreign facilities "engaged in manufacturing/processing, packing, or holding of food for human consumption in the United States" to register their facilities with the Food and Drug Administration (FDA).¹³⁹ Facilities exempt under the Bioterrorism Act would not be subject to this tax. This includes farms, retail and nonprofit food establishments, restaurants, fishing vessels, and USDA-regulated facilities that produce meat, poultry, and eggs.¹⁴⁰ To implement the tax, Congress could direct the FDA to identify those registered facilities that manufacture the taxable articles and designate them as subject to the tax.

139. 21 C.F.R. § 1.225(a) (2011).

140. 21 C.F.R. § 1.226(b)-(g) (2011). Foreign facilities are also exempt if the food from such facilities undergoes final manufacturing/processing before reaching the United States. *Id.* § 1226(a).

2. Taxable Articles

Several groups have defined processed foods, also called packaged food. The definition of processed foods published by members of the food industry would be too over inclusive for a manufacturers' excise tax from both a public health standpoint and business perspective.¹⁴¹ The definition of highly processed foods used in a paper by the CDC,¹⁴² on the other hand, is more specific and similar to university researchers' definition of "ultra-processed food products."¹⁴³ These definitions separate highly processed food from unprocessed, minimally processed, and primary processed items. Only highly processed items, which have undergone a second processing into a readily edible form, would be taxable articles. This definition captures all the processed foods found to increase BMI and lead to poor nutrition outcomes in the studies reviewed above.

Minimally processed items and ingredients, such as dairy and cooking oils, would therefore not be subject to the tax. From a public health perspective, only highly processed foods should be the target of a tax, even if other issues, such as whole food access and price, are addressed. Items such as dairy are considered healthy from a nutritional standpoint, and ingredients used for cooking, which should be encouraged, are not the types of processed products this tax seeks to target. Thus, the IRS could use the CDC food classification to define the parameters of the tax to attach to highly processed food products only.

3. Internal Revenue Code

The proposed manufacturers' excise tax is consistent with the federal government's historical use of its taxation power. Prior to the Internal Revenue Code of 1939, Congress passed a series of annual revenue acts.¹⁴⁴ The Revenue Acts of 1918 and 1932 had

141. Eleanore Alexander et. al, *Major Multinational Food and Beverage Companies and Informal Sector Contributions to Global Food Consumption: Implications for Nutrition Policy*, 7 GLOBAL HEALTH, no. 1, 2011, at 1, 1–2.

142. Asfaw, *supra* note 126, at 186 (defining highly processed foods as “[f]ood items that have undergone secondary processing into a readily edible form . . . [and] are expected to contain high level[s] of added sugars, fats and salt.”).

143. Monteiro et al., *supra* note 122, at 8 (defining ultra-processed food products as the “processing of a mix of [processed] ingredients and [unprocessed] foodstuffs in order to create durable, accessible, convenient and palatable ready-to-eat or ready-to-heat food products liable to be consumed as snacks or to replace home prepared dishes.”).

144. See TAX GUIDE, *supra* note 34, at 25.

provisions for excise taxes to be paid by manufacturers of luxury items, including chewing gum and candy.¹⁴⁵

Manufacturers' taxes are usually based on the sales price of products that are relatively expensive. For example, the tax on sports fishing equipment is 10 percent of the sales price of a fishing pole (not to exceed \$10).¹⁴⁶ Calculating a manufacturers' excise tax based on the sales price of foods will not achieve the desired result because highly processed food products are quite cheap.¹⁴⁷ Other methods are available to determine the correct calculation. For example, the "gas guzzler tax" on luxury automobiles increases as the automobile's fuel economy decreases,¹⁴⁸ and coal is taxed on the lower of an amount per ton produced or a percentage of the sales price.¹⁴⁹ The proposed tax on manufacturers of highly processed food should therefore be calculated based on the number of taxable articles produced or imported. Economists at the IRS could determine the precise method to ensure the taxing strategy is the most efficient and effective for present purposes.

4. Conditional Funding

The Supreme Court describes the conditional funding arrangement as akin to a contractual relationship between the federal government and the states.¹⁵⁰ Through this tax and spend mechanism, the federal government would be able to generate revenue to be earmarked for conditional funding programs. Congress could then use its spending power to encourage and support nationwide public health efforts at the state level¹⁵¹ by attaching conditions to

145. Blakely, *supra* note 71, at 235; Roy G. Blakey & Gladys C. Blakey, *The Revenue Act of 1932*, 22 AM. ECON. REV. 620, 621 (1932). A "Tax on Beverages" was included in the Revenue Act of 1918, which mostly addressed alcoholic beverages but also included a "tax of one cent for each ten cents or fraction thereof paid for all goods bought at a soda fountain." Blakey, *supra* note 71, at 233-34.

146. TAX GUIDE, *supra* note 34, at 142.

147. See Drewnowski, *supra* note 12, at 1186-87 (finding that fats, carbohydrates, and sugars had very low food costs per one-hundred grams); Rehm et al., *supra* note 15, at 1338 (noting that diet quality increased with diet cost).

148. *Id.* at 135-36.

149. *Id.* at 138.

150. *Pennhurst State Sch. & Hosp. v. Halderman*, 451 U.S. 1, 17 (1981); see also *Printz v. United States*, 521 U.S. 898, 936 (1997) (O'Connor, J., concurring).

151. See *Fullilove v. Klutznick*, 448 U.S. 448, 474 (1980) ("Congress has frequently employed the Spending Power to further broad policy objectives by conditioning receipt of federal moneys upon compliance by the recipient with federal statutory and administrative directives.").

the receipt of federal funds by the states and their political subdivisions.¹⁵²

The Supreme Court has specified that Congress's spending power is subject to several requirements, all of which would be met here. First, Congress must exercise the spending power "in pursuit of the general welfare."¹⁵³ Second, it must be clear and unambiguous about the terms of accepting funds so states can exercise the choice "cognizant of the consequences" of participation.¹⁵⁴ Third, the Court has suggested that conditional grants should be related to a federal interest in national programs and projects.¹⁵⁵ Finally, the conditional grant cannot be barred by other constitutional provisions, meaning the federal government cannot ask states to violate the constitution by undertaking the required conditions.¹⁵⁶

First, Congress clearly would be seeking to advance the general welfare through this conditional funding program. The Court has allowed Congress to determine what constitutes the general welfare,¹⁵⁷ and the Court has upheld conditional funding in the context of public health programs in the past.¹⁵⁸

Second, states must be given a "legitimate choice" whether to accept the funds,¹⁵⁹ so Congress must clearly specify the conditions of the acceptance so grantees can "exercise their choice knowingly, cognizant of the consequences of participation."¹⁶⁰ Congress has a history of unambiguously defining the terms and conditions of similar funding initiatives. For example, under the Public Health Service Act, the federal government provides formula grants to the states for the prevention of HIV-AIDS,¹⁶¹ with funding conditioned on the states undertaking and refraining from specific practices.¹⁶² This is akin to the public health conditional funding strategy proposed in this Essay. Under this plan, Congress would delegate the administration of this federal grant to the CDC. The CDC has vast experience in both monitoring public health and administering

152. *South Dakota v. Dole*, 483 U.S. 203, 206 (1987).

153. *Id.* at 207.

154. *Id.*; see also *Pennhurst State Sch. & Hosp.*, 451 U.S. at 17.

155. *Dole*, 483 U.S. at 207-08.

156. *Id.* at 208, 210.

157. *Fullilove v. Klutznick*, 448 U.S. 448, 474 (1980).

158. *Rust v. Sullivan*, 500 U.S. 173, 173-76 (1999) (upholding Title X of the Public Health Service Act as constitutional); see also *Steward Machine Co. v. Davis*, 301 U.S. 548, 548-50 (1937) (sustaining the Social Security Act against constitutional challenge).

159. *Nat'l Fed'n of Indep. Bus. v. Sebelius*, 132 S. Ct. 2566, 2602 (U.S. 2012).

160. *Dole*, 483 U.S. at 207.

161. 42 U.S.C. § 300ee-12 (2006).

162. 42 U.S.C. §§ 300ee-13 to -16 (2006).

grants to support public health programs.¹⁶³ Conditional funding opportunities would be available directly to states and local governments or to nonprofit organizations in coordination or cooperation with the states.¹⁶⁴ The qualifying grantees would then need to agree to undertake the specific predefined practices delineated in the table below. None are so coercive as to raise concerns that the grantees are not able to exercise free choice.¹⁶⁵

Third, the proposed conditional funding program is related to the national interest in public health and maintaining the federal programs related to health care spending. In addition to the yearly estimate of almost \$2.5 trillion spent on health care in general, experts analyzed the cost of obesity and obesity-related diseases. They found that in 2006 the increased prevalence of obesity was responsible for almost \$40 billion of increased medical spending from all payers, government and private, compared to a baseline of \$78.5 billion in 1998. A current accepted estimate of medical costs related to obesity is \$147 billion per year as of 2008,¹⁶⁶ including preventive, diagnostic, and treatment services. Overall, Medicare and Medicaid spending are 8.5 percent and 11.8 percent higher, respectively, due to obesity. For example, Medicare spent \$7 billion in 2006 for obesity-related prescription drug costs alone.¹⁶⁷

Finally, Congress would commission the IOM to work with the CDC to determine best practices, with measurable outcomes and methods for evaluation. The CDC would provide funding to state and local governments and health agencies on the condition that they enact policies, laws, or regulations in the manner specified to

163. See generally *CDC Budget, Grants, and Funding*, CTR. FOR DISEASE CONTROL, <http://www.cdc.gov/stltpublichealth/GrantsFunding/index.html> (last visited Apr. 28, 2012). Cf. *Hillsborough Cnty. v. Automated Med. Labs, Inc.*, 471 U.S. 707, 721 (1985) (addressing a dispute under the Public Health Service Act, the Supreme Court noted that Congress delegated authority to the FDA to promote the regulation, because, as an agency, the FDA can monitor the effects of the federal program on a continuous basis and identify whether regulated entities are meeting the goals of the federal legislation).

164. See, e.g., 42 U.S.C. §§ 254c(f), 300ee-33 (2006).

165. *Nat'l Fed'n of Indep. Bus. v. Sebelius*, 132 S. Ct. 2566, 2604 (U.S. 2012). This second requirement additionally means that "the financial inducement offered by Congress" cannot be "so coercive as to pass the point at which 'pressure turns into compulsion.'" *Id.*

166. Eric A. Finkelstein et al., *Annual Medical Spending Attributable to Obesity: Payer- and Service-Specific Estimates*, 28 HEALTH AFF. 822, 822 (2009); see also Ctrs. for Disease Control & Prevention, *Causes and Consequences, OBESITY & OVERWEIGHT*, <http://www.cdc.gov/obesity/causes/economics.html> (last visited Apr. 28, 2012) ("Indirect costs [associated with overweight and obesity] relate to morbidity and mortality costs. Morbidity costs are defined as the value of income lost from decreased productivity, restricted activity, absenteeism, and bed days. Mortality costs are the value of future income lost by premature death.").

167. Finkelstein et al., *supra* note 166, at 822; see also Barbara Bartlein, *Will Obesity Make Medicare go Bankrupt?*, DAILY FINANCE (Dec. 2, 2009, 1:00 PM), <http://www.dailyfinance.com/2009/12/02/will-obesity-make-medicare-go-bankrupt/>.

advance public health, prevent obesity, and address nutrition and food related disparities.¹⁶⁸ Table 1 presents several best practices considered and analyzed by separate committees for the CDC and IOM. These strategies could be included in the conditional funding grants program. None of these strategies would require potential grantees to violate the constitution. In fact, many of these best practices were developed through their successful enactment in state and local jurisdictions.

TABLE 1

Best Practices	Potential Methods
Promote the availability of affordable healthy food and beverages in the community, retail setting, and farmers markets through fiscal policies and economic incentives. ¹⁶⁹	Create incentive programs to attract supermarkets and grocery stores to underserved neighborhoods (e.g., tax credits, grant and loan programs, and small business and economic development programs). ¹⁷⁰ Encourage participation in government nutrition assistance programs; ¹⁷¹ “encourage farmers markets to accept Special Supplemental Nutrition Program for Women, Infants and Children (WIC) food package vouchers and WIC Farmers Market Nutrition Program coupons; and encourage and make it possible for farmers markets to accept [SNAP] and WIC Program Electronic Benefit Transfer (EBT) cards by allocating funding for equipment that uses electronic methods of payment.” ¹⁷²
Enact local ordinances to discourage unhealthy food and beverage consumption. ¹⁷³	Adopt land use, conditional licensing, and zoning ordinances to restrict unhealthy food near schools and playgrounds. ¹⁷⁴

168. In many states the health department is the responsible agency, but other agencies would likely be involved. There are thousands of local health agencies and fifty-nine state health agencies (including fifty states, DC, and eight territories). The majority of the fifty-nine state health agencies have rulemaking authority. See ASS’N OF STATE & TERRITORIAL HEALTH OFFICIALS, 2 ASTHO PROFILE OF STATE PUBLIC HEALTH 30 (2011), available at <http://www.astho.org/Display/AssetDisplay.aspx?id=6588>.

169. Laura Kettel Khan et al., *Recommended Community Strategies and Measurements to Prevent Obesity in the United States*, 58 MMWR RECOMMENDATIONS & REPORTS 1 (2009), available at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm>; INST. OF MED. & NAT’L RESEARCH COUNCIL OF THE NAT’L ACADS., LOCAL GOVERNMENT ACTIONS TO PREVENT CHILDHOOD OBESITY 9 (2009) [hereinafter LOCAL GOVERNMENT ACTIONS].

170. LOCAL GOVERNMENT ACTIONS, *supra* note 169, at 9.

171. *Id.* at 8.

172. *Id.* at 58.

173. *Id.* at 9; INST. OF MED. OF THE NAT’L ACADS., LEGAL STRATEGIES IN CHILDHOOD OBESITY PREVENTION—WORKSHOP SUMMARY 33–40, 61–70 (2011) [hereinafter LEGAL STRATEGIES]. Note this article does not represent the views of the IOM but rather the views of the experts invited by the IOM Committee on Childhood Obesity Prevention.

174. LOCAL GOVERNMENT ACTIONS, *supra* note 169, at 9; LEGAL STRATEGIES, *supra* note 173, at 33–40, 61–70.

Adopt child-care, school wellness, and nutrition policy recommendations. ¹⁷⁵	Enact restrictions on the sale of competitive food. ¹⁷⁶ Restrict marketing in public schools, on campuses, and on buses. ¹⁷⁷
Enact laws for government buildings and government-run facilities, and create programs to promote healthy food access and consumption. ¹⁷⁸	“Mandate and implement strong nutrition standards for foods and beverages available in government buildings, government-run or regulated after-school programs, recreation centers, parks, and child care facilities.” ¹⁷⁹ Restrict marketing and advertising in these venues. ¹⁸⁰
“Increase access to free safe drinking water.” ¹⁸¹	“Adopt building codes to require access to and maintenance of fresh drinking water fountains (e.g., public restroom codes).” ¹⁸²
Encourage breast-feeding. ¹⁸³	Enact policies for all government buildings; create spaces for breast-feeding. ¹⁸⁴
Encourage communities to organize for change. ¹⁸⁵	Support social marketing campaigns. ¹⁸⁶ Encourage local government participation in a coalition or partnership. ¹⁸⁷
Work across sectors to ensure health is considered in all policies by other government entities, thereby positively influencing transportation, housing, environment, education, and fiscal policies. ¹⁸⁸	Example: Increase public transportation to provide low-income communities and senior citizens with access to food markets, employment opportunities, and open spaces. This will address environmental pollutants due to automobiles and encourage walking to/from public transportation. ¹⁸⁹

C. Future of the Plan

The goal of the proposed manufacturers’ excise tax is to raise revenue to support specific public health efforts nationally. At some

175. See *Recommendations, Best Practices, and Guidelines*, CNTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/chronicdisease/resources/guidelines.htm> (last visited Apr. 28, 2012); see, e.g., *Nutrition Policy Resources*, CNTRS. FOR DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/nccdphp/DNPAO/policy/nutrition.html> (last visited Apr. 28, 2012).

176. 7 C.F.R. § 210.11(b).

177. LOCAL GOVERNMENT ACTIONS, *supra* note 169, at 9.

178. Khan et al., *supra* note 169, at 11–13.

179. LOCAL GOVERNMENT ACTIONS, *supra* note 169, at 7.

180. *Id.* at 9.

181. *Id.* at 8.

182. *Id.*

183. *Id.*

184. Khan et al., *supra* note 169, at 5.

185. *Id.* at 21.

186. LOCAL GOVERNMENT ACTIONS, *supra* note 169, at 9.

187. Khan et al., *supra* note 169, at 21.

188. Timo Stahl & Eero Lahtinen, *Towards Closer Intersectoral Cooperation: The Preparation of the Finnish National Health Report*, in HEALTH IN ALL POLICIES: PROSPECTS AND POTENTIALS 169, 169 (2006), available at www.euro.who.int/document/e89260.pdf; see also Jennifer Pomeranz, *The Unique Authority of State and Local Health Departments to Address Obesity*, 101 AM. J. PUB. HEALTH 1192, 1193 (2011).

189. See Khan et al., *supra* note 169, at 19; see also NAT’L REACH COAL., CREATING MORE EQUITY IN HEALTH: A COMPREHENSIVE APPROACH TO HEALTH REFORM 11 (2008), available at <http://www.nationalhealthequitycoalition.org/FileStorage%5C102091ed-2dc6-4d47-96b8-c82396fee617.pdf>; see generally Robert J. Stokes et al., *Estimating the Effects of Light Rail Transit On Health Care Costs*, 14 HEALTH & PLACE 45 (2008).

point, if the U.S. adequately addresses food access and health disparities, a tax on highly processed food designed to deter consumption may be warranted. Taxing highly processed foods associated with poor health outcomes would capture the problematic products and ingredients addressed in the more promising tax strategies reviewed above to discourage their consumption and simultaneously encourage the consumption of whole foods. More studies would be necessary to examine the potential outcomes of this kind of tax in the United States.¹⁹⁰

CONCLUSION

States and communities have developed creative solutions to public health problems throughout history¹⁹¹ and have worked to address obesity, food disparities, and nutrition related public health issues. Funding for public health efforts, however, is seriously lacking at present. There is a real role for the federal government to generate revenue, encourage and strengthen these efforts, and support public health in general. Against this background, Congressional use of its tax and spend powers to assist states in addressing obesity, food disparities, and nutrition related issues is necessary and warranted. The federal and state governments can and should utilize evidence-based price altering strategies to address these pressing public health issues.

190. Khan et al., *supra* note 129, at 3 (finding that a 10 percent increase in the price of fast food is associated with 5.7 percent lower frequency of weekly fast food consumption).

191. Howard Koh, U.S. Assistant Sec. for Health & Hum. Servs., Remarks at Weight of the Nation: CDC's Inaugural Conference on Obesity Prevention and Control 2-3 (July 28, 2009), <http://www.adph.org/ALPHTN/assets/WONHowardKoh.pdf>. (“[A]ll public health is local. It’s got to start and be sustained at the local level.”).