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HAS THE GOVERNMENT FAILED TO PROTECT US? A DISCUSSION OF HFCS & OTHER ADDED SUGARS

Kevin A. Robinson*

“Much of our food system depends on our not knowing much about it, beyond the price disclosed by the checkout scanner; cheapness and ignorance are mutually reinforcing.”¹

An astonishing 36.5% of adults in the United States (“US”) are obese.² Unforeseen levels of High Fructose Corn Syrup (“HFCS”) and other added sugars have been explicitly recognized as safe by the US government, despite this startling increased level of obese and overweight citizens.³ Though there are several potential causes of obesity, many researchers have drawn a correlation between the percentage of obese individuals doubling in the US since 1970, and the introduction of High Fructose Corn

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¹ Michael Pollan, *No Bar Code*, MOTHERJONES (May 1, 2006), <https://www.motherjones.com/environment/2006/05/no-bar-code/>. While this quote from author and activist Michael Pollan speaks more broadly to our system of cheap food from unknown origins, it is an equally applicable and compelling take on the use of HFCS and other added sugars in our food products.

² *Adult Obesity Facts*, CENTERS FOR DISEASE CONTROL & PREVENTION (“CDC”), <https://www.cdc.gov/obesity/data/adult.html> (last updated Mar. 5, 2018). According to a recent CDC data brief, 36.5% of US adults have obesity. *Id.* The National Institute of Diabetes and Digestive and Kidney Diseases has released that 68.8% of adults are overweight. *Id.*

³ Listing of Specific Substances Affirmed as GRAS, 21 C.F.R. Sec. 184.1866 (2017) (stating that HFCS is Generally Recognized as Safe (“GRAS”)). An adult with a body mass index (“BMI”) of 30 or higher is considered obese, while an adult with a BMI between 25 and 29.9 is considered overweight. *Disability and Obesity*, CDC, <https://www.cdc.gov/ncbddd/disabilityandhealth/obesity.html#ref> (last updated Aug. 1, 2017). BMI is used because it generally correlates with the amount of body fat a person has. *Id.*

Syrup (HFCS) to foods around the same time.⁴ Obesity rose dramatically while consumption of HFCS in American diets increased over 1,000% between 1970 and 1990.⁵ On average, Americans consume between 18 and 23 teaspoons of HFCS and other added sugars per day.⁶ Notably, the dialogue is still ongoing as to the true extent of HFCS and other added sugar dangers.⁷ Despite evidence that the current use of HFCS causes side effects with insulin resistance, diabetes, high blood pressure, metabolic syndrome, high triglyceride levels, and risk of heart disease in its current use, the Food and Drug Administration (FDA) classifies HFCS as Generally Recognized As Safe (GRAS).⁸ Even

⁴ See *infra* footnotes 62-64 (discussing correlation between HFCS and health-related effects). HFCS is derived from corn starch, and broken down into glucose molecules, resulting in 100% pure glucose- known here as corn syrup. *Id.* HFCS contains either 42% or 55% fructose. *Id.* See generally MICHAEL POLLAN, IN DEFENSE OF FOOD: AN EATER'S MANIFESTO (2008) (offering an easily digestible explanation for how different types of sugars are processed by humans); Michael R. Ladisch, *Biotechnology* (Van Nostrand's Encyclopedia of Chemistry 2005) (writing that by 1967, the Clinton Corn Processing Company began manufacturing HFCS in its current form).

⁵ Bray et al., *Consumption of High-Fructose Corn Syrup in Beverages May Play a Role in the Epidemic of Obesity*, 79 AM. J. CLIN. NUTR. 537 (2004). Overall consumption of all added sugars has increased more than 30% for adults and 20% for children, or "228 calories per day in 1977 to 300 calories in 2009-2010 . . . [and] 227 to 329 calories per day." Mollie Turner, *U.S. Adult Consumption of Added Sugars Increased by More Than 30% Over Three Decades*, OBESITY.ORG (Nov. 3, 2014), <http://www.obesity.org/news/press-releases/us-adult>. Alarming, the top 20% of adults consume an average of 721 calories per day from added sugars, with children in the same percentile consuming 673 calories. *Id.* Only five percent of our caloric intake should be in the form of sugar. Emily Main, *New Guideline: Only 5% Of Your Daily Calories Should Come From Sugar*, PREVENTION (Mar. 6, 2014), <https://www.prevention.com/food/healthy-eating-tips/who-recommends-5-calories-come-sugar>.

⁶ *FDA Urged to Determine Safe Limits on High Fructose Corn Syrup and Other Sugars in Soft Drinks*, CSPINET (Feb. 13, 2013), <https://cspinet.org/new/201302131.html>.

⁷ See Hilary Parker, *A Sweet Problem: Princeton Researchers Find That High-Fructose Corn Syrup Prompts Considerably More Weight Gain*, PRINCETON U. (Mar. 22, 2010), <http://www.princeton.edu/main/news/archive/S26/91/22K07/index.xml?section=topstories>. *But see* John S. White, *Straight Talk About High-Fructose Corn Syrup: What It Is and What It Ain't*, 88, NO. 6 AM. J. CLIN. NUTR. 1716-21 (2008), <https://academic.oup.com/ajcn/article/88/6/1716S/4617107> (arguing that HFCS is not unhealthy for human consumption).

⁸ See Katherine Zeratsky, *What Is High Fructose Corn Syrup? What Are the Health Concerns?*, MAYO CLINIC, <http://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/expert-answers/high-fructose-corn-syrup/faq-20058201> (last visited May 15, 2018); *see also* Mark Hyman, *Avoid the Hidden Dangers of High Fructose Corn Syrup*, CLEVELAND CLINIC, <https://health.clevelandclinic.org/2015/04/avoid-the-hidden-dangers-of-high-fructose-corn-syrup-video/> (last visited May 15, 2018); *FDA Urged to Determine Safe Limits on High Fructose Corn Syrup and Other Sugars in Soft Drinks*, *supra* note 6. To be considered GRAS, a substance that is an

if HFCS does not cause more health-risks than other added sugars, companies' unchecked use of sugar levels in drinks and food should be cause for concern.⁹

This cause for concern spurred several attempts towards solutions, none of which have yet been wholly successful.¹⁰ This note will analyze several of those attempts to lessen consumption of HFCS and added sugars thus far.¹¹ Part I of this paper will explore the history of food regulation in the United States, and how many public health laws created a lasting impression on the health law landscape.¹² Part II will discuss the issues of HFCS, the current standards for food safety in the US, and the less than efficacious results of private and governmental actions thus far.¹³ It will also examine other countries' regulation of HFCS and other added sugars through taxes.¹⁴ Part III will address the societal and logistical difficulties of limiting HFCS and other added sugars and propose taxation as a logical initial step to reduce overconsumption of added sugars.¹⁵

additive must be approved by the FDA as being shown to be safe under the conditions of its intended use. *See Generally Recognized as Safe ("GRAS")*, FOOD & DRUG ADMIN. ("FDA"), <http://www.fda.gov/Food/IngredientsPackagingLabeling/GRAS/> (last visited May 15, 2018); *see also infra* Part II (discussing current standards of food regulation in the US).

⁹ *See* Hope Warsaw, *High-Fructose Corn Syrup vs. Sugar*, WASHINGTON POST (June 18, 2013), https://www.washingtonpost.com/lifestyle/wellness/high-fructose-corn-syrup-vs-sugar/2013/06/18/fdbedb90-c488-11e2-914f-a7aba60512a7_story.html?utm_term=.6d9f8d6ef269 (illuminating that from all sources of sugar, Americans consume far too much per day). Approximately 45% of added sugars seen in average American diets are in soda, sport and fruit drinks, an additional 15% come from grain-type desserts, and a mix of other foods present another 15%. *See id.* Sadly, added sugars are present not only in sodas, desserts, and other such expected foods, but added sugar is within 74% of packaged foods. *Hidden in Plain Sight*, U.C. SAN FRANCISCO, <http://sugarscience.ucsf.edu/hidden-in-plain-sight/#.Wql8E-jwbIU> (last visited May 15, 2018) (*citing* Ng, et al., *Use of Caloric and Noncaloric Sweeteners in US Consumer Packaged Foods, 2005-2009*, 112 J. ACAD. NUTR. & DIETETICS 1828, 1828-34 (2012)).

¹⁰ *See infra*, Part II, C. Resorting to Private Action, D. Governmental Action (discussing efficacy of attempted regulatory methods).

¹¹ *See infra* Part II (discussing private and governmental action taken towards lessening added sugar intake).

¹² *See infra* Part I (discussing steps taken throughout history by states and the federal government to regulate foods).

¹³ *See infra* Part II (detailing previous attempts to regulate HFCS).

¹⁴ *See id.* (discussing success of regulatory taxation in other nations).

¹⁵ *See infra* Part III (arguing taxation is insufficient regulation).

In the US, food law is mainly centered upon proper labeling, while allowing people to make their own decisions as to healthy eating.¹⁶ Other nations, as well as municipalities at the local level in the US, are entering into a period in which their respective governments are taking a much more hands-on approach with banning unhealthy ingredients.¹⁷ Short of banning poisonous substances, the US rarely extends regulatory measures past the realm of mislabeling and misbranding.¹⁸ Because HFCS and other added sugars present more of a health concern than other ingredients, their low cost, widespread use, and grossly significant amounts added to foods should at the very least be regulated differently from other products.

I. HISTORY OF FOOD REGULATION IN THE U.S.

A. The Role of the States in Early American Food Regulation

Although the majority of modern-day public health regulation is controlled by the federal government, states were generally the paternalistic hand that guided the populace throughout early American history.¹⁹ State governments have maintained their interest in the health of its citizens through the legal concepts of *parens patriae* and “police power”.²⁰ Under these two concepts, states came to oversee health-related matters that

¹⁶ See *infra*, note 49 and accompanying text (noting why a hands-off approach has been preferable in the US).

¹⁷ See *infra*, Part II (discussing labeling and efforts at taxation to limit levels of added sugar intake).

¹⁸ See *infra*, Part I.

¹⁹ Gostin & Hodge, *The Impact of the Nutrition Labeling and Education Act of 1990 on the Food Industry*, 47 ADMIN. L. REV. 605, 77, 95 (1995).

²⁰ JEFFREY LEHMAN & SHIRELLE PHELPS, WEST'S ENCYCLOPEDIA OF AMERICAN LAW (2nd ed. 2005). A doctrine granting an inherent power and authority to states, states often invoke *parens patriae* to protect the health and welfare of its people. *Id.*; see generally George B. Curtis, *The Checkered Career of Parens Patriae: The State as Parent or Tyrant*, 25 DEPAUL L. REV. 894 (1976) (providing an extensive discussion of *parens patriae* from its earliest days, and its modern implications). The doctrine of *parens patriae* continues to make regular appearances within different branches of the law. George B. Curtis, *The Checkered Career of Parens Patriae: The State as Parent or Tyrant*, 25 DEPAUL L. REV. 894, 895 (1976). In more recent times, the Supreme Court has attempted to establish modern-day parameters upon the *parens* doctrine. Jack Ratliff, *Class Actions In The Gulf South Symposium: Parens Patriae: An Overview*, 74 TUL. L. REV. 1847, 1851 (2000). The modern *parens patriae* version began with *Louisiana v. Texas*. *Id.*; *Louisiana v. Texas*, 176

affected the general populace.²¹ Governmental regulations have primarily existed to combat the issue of ‘adulteration’- the cheapening of food products through the addition of substandard ingredients.²² Such measures are generally upheld in industries where producers are more privy to the product quality than consumers are, due to a possibility of both economic and health risks.²³

Massachusetts largely led the way in food law and regulations during colonial times.²⁴ Though the first food adulteration law in the United States was enacted by Massachusetts in 1784, it appears that the colony legally upheld health standards for its

U.S. 1 (1900) (establishing “quasi-sovereignty” as a means to act on behalf of citizens). According to Ratliff, subsequent cases have expanded the doctrine of *parens patriae* to many different areas of law, but have not clarified the parameters of the “quasi-sovereignty”. Jack Ratliff, *Class Actions In The Gulf South Symposium: Parens Patriae: An Overview*, 74 TUL. L. REV. 1847, 1851 (2000); *see, e.g.*, *Georgia ex rel. Hart v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (finding that the state of Georgia has a quasi-sovereign interest in its air quality); *Pennsylvania v. West Virginia*, 262 U.S. 553, 591-92 (1923) (allowing states to protect their citizens from an interruption in supply of natural gas); *Georgia v. Pennsylvania R.R.*, 324 U.S. 439 (1945) (finding Georgia could sue railroad companies to protect its economy under *parens patriae*). *But see* J.L. Pomeranz, *Litigation to Address Misleading Food Label Claims and the Role of the Attorneys General*, REGENT U. L. REV. (2014) (highlighting the debate as to the appropriateness of *parens patriae* in the realm of food). Police Powers allow for a wide range of state-decreed regulations to ensure the safety and well-being of citizens. James G. Hodge, Jr., *The Role of New Federalism and Public Health Law*, 12 J.L. & HEALTH 309, 318-20 (1998). *See also* JENNIFER L. POMERANZ, FOOD LAW FOR PUBLIC HEALTH 1, 27 (2015).

²¹ *See* Hodge, *supra* note 20. If a certain regulation does not limit constitutional rights, the government’s interest in promoting public health is upheld. *Id.* Gostin and Hodge contend that the Tenth Amendment of the federal Constitution, granting the state any powers not enumerated to the federal government, means that police powers allow for “the inherent authority of the state (and, through delegation, local government) to enact laws and promulgate regulations to protect, preserve and promote the health, safety, morals, and general welfare of the people.” Gostin & Hodge, *The Public Health Improvement Process in Alaska: Toward A Model Public Health Law*, 17 ALASKA L. REV. 77, 95-96 (2000); Gostin & Hodge, *Reforming Alaska Public Health Law, A Report for the Alaska Public Health Improvement Process* 3 (1999).

²² *See* Marc T. Law, *History of Food and Drug Regulation in the United States*, <http://eh.net/encyclopedia/history-of-food-and-drug-regulation-in-the-united-states/> (last visited May 15, 2018). Food and drink products have been altered with inferior products since ancient times for economic purposes- water has been added to wine, chalk has been added to bread, and cream skimmed from milk. *Id.*

²³ *See id.* The generally accepted public interest motivation for regulation has been to protect consumers from unsafe food and drug products. *Id.*

²⁴ *See* GUIDE TO US FOOD LAWS AND REGULATIONS (Patricia A. Curtis ed., 2nd ed. 2013). Food “laws,” which developed quite slowly in the United States, began in colonial times as quality standards self-regulated by trade guilds. *Id.*

citizens as early as 1630.²⁵ It was not until the late 1800s that the federal government began to assume some of the duties of food law and regulation.²⁶ In fact, the 19th century began to see a drastic expansion of regulatory measures in both states and the federal government, due largely to technological advances in food manufacturing.²⁷

B. The Role of the Federal Government in US Food Regulation

Though the need for food regulation quickly became more prevalent, the development of food law in the US continued to come to fruition at a slightly slower

²⁵ See JOHN TROLLER, *SANITATION IN FOOD PROCESSING* 1, 388 (Steve Taylor eds., 2nd ed. 1993) (stating that unwholesome food contrary to the buyer's knowledge was punishable). See also *GUIDE TO US FOOD LAWS AND REGULATIONS*, *supra* note 24. In 1630, Nicholas Knopf was sentenced to "pay a fine or be whipped" for selling "a water of no worth nor value" as a cure to scurvy. *Id.* The first actual law passed by Massachusetts was a food adulteration law to establish the inspection of beef, pork, and fish in 1641. *Id.*

²⁶ See Law, *supra* note 22. Even as late as 1877, laws against food adulteration were created at local levels by State Boards of Health. See *GUIDE TO US FOOD LAWS AND REGULATIONS*, *supra* note 24. In an excerpt from a speech given by a member of the Forty-Ninth Congress, the speaker realized the need to protect consumers from adulterations of food:

In ordinary cases the consumer may be left to his own intelligence to protect himself against impositions. By the exercise of a reasonable degree of caution, he can protect himself from frauds in under-weight and in under-measure. If he cannot detect a paper-soled shoe on inspection, he detects it in the wearing of it, and in one way or another he can impose a penalty upon the fraudulent vendor. As a general rule the doctrine of *laissez faire* can be applied. Not so with many of the adulterations of food. Scientific inspection is needed to detect the fraud, and scientific inspection is beyond the reach of the ordinary consumer. In such cases the Government should intervene.

KIMBERLEY S. JOHNSON, *GOVERNING THE AMERICAN STATE: CONGRESS AND THE NEW FEDERALISM 1877-1929*, 93-94 (Princeton University Press, 2006) (citing Congressional Record 1885, pp. 5040-41).

²⁷ See Law, *supra* note 22. Law contributes growth in regulatory legislation mainly to the following factors: large, impersonal markets with uncertain food quality due to specialization and urbanization; technological changes in food manufacturing caused product complexity, leading to concerns of food safety and adulteration; a rise in analytic chemistry allowed for adulteration that was difficult for consumers to detect on their own; and the rise in sophisticated food adulteration gave rise to the belief that expert regulation was necessary. *Id.* Though industrialization and urbanization did create a rise of adulteration, they in turn facilitated a "social, political, and economic climate amenable to pure food and drug reform . . ." Jillian London, *Tragedy, Transformation, and Triumph: Comparing the Factors and Forces that Led to the Adoption of the 1860 Adulteration Act in England and the 1906 Pure Food and Drug Act in the United States*, 69 *FOOD DRUG L.J.* 315, 338 (illuminating the beginnings of food law reform in both England and the United States).

pace.²⁸ President Abraham Lincoln established the United States Department of Agriculture (“USDA”) in 1862, and the Division of Chemistry began its investigation of food adulterants five years later.²⁹ By 1880, the then Chief Chemist at the USDA, Peter Collier, started to publicly call for a federal body of law to regulate food and drugs.³⁰ Three years later, Dr. Harvey W. Wiley succeeded Collier, and greatly expanded the Bureau’s studies of food adulteration.³¹ While most adulteration was previously classified as economic in nature, the increasing use of possibly harmful additives began to raise questions.³²

In 1902, Wiley began to test additives on willing volunteers that he felt may have been harmful for human consumption; the group was dubbed “The Poison Squad.”³³

²⁸ See GUIDE TO US FOOD LAWS AND REGULATIONS, *supra* note 24.

²⁹ *Id.* (outlining early stages of the USDA and Division of Chemistry from their 1860’s inception).

³⁰ *Id.* The path to nation-wide laws was difficult, as a large portion of the public at this time still felt that food regulation was better left to the states to handle, and the USDA could do nothing to regulate the food industry until Congress authorized the agency to do so. *Id.* See generally *History*, FOOD AND DRUG ADMINISTRATION, <https://www.fda.gov/AboutFDA/WhatWeDo/History/> (last visited May 15, 2018) (chronicling the life of the FDA since its inception). Though Collier’s recommended bill was not adopted, the following 25 years saw over 100 potential food and drug bills before Congress. *Id.* See also *About FDA: Significant Dates in U.S. Food and Drug Law History*, FOOD AND DRUG ADMINISTRATION,

<http://www.fda.gov/AboutFDA/WhatWeDo/History/Milestones/ucm128305.htm> (last visited May 15, 2018). While a handful of those legislative pieces were successful, they lacked serious enforcement. See *supra* note 13.

³¹ See Harvey Washington Wiley, *Chemical Heritage Foundation*, SCIENCE HISTORY INSTITUTE (Oct. 26, 2015), <https://www.sciencehistory.org/historical-profile/harvey-washington-wiley> (providing a concise biographical piece on Wiley’s battle against adulterated foods and drugs). See also *About FDA: Significant Dates in U.S. Food and Drug Law History*, *supra* note 30.

³² See GUIDE TO US FOOD LAWS AND REGULATIONS, *supra* note 24 (insinuating that expanded use of new, harmful additives spurred the growth of U.S. regulatory bodies).

³³ Bruce Watson, *The Poison Squad: An Incredible History*, ESQUIRE (June 27, 2013), <http://www.esquire.com/food-drink/food/a23169/poison-squad/>. While Dr. Wiley referred to the experiment as the “hygienic table trials,” the more marketable name of “The Poison Squad” was soon concocted by Washington Post Reporter George Rothwell Brown. *Id.* See also GUIDE TO US FOOD LAWS AND REGULATIONS, *supra* note 24. The 12 volunteers ate meals with additives including “formaldehyde, boric acid and borax, salicylic acid and salicylates, sulfurous acid and sulfites, benzoic acid and benzoates.” *Id.* Perhaps unsurprisingly, all 12 subjects suffered adverse effects. Laurie J. Beyranevand, *Milking It: Reconsidering the FDA’s Refusal To Require Labeling of Dairy Products Produced from RBST Treated Cows in Light of International Dairy Foods Association v. Boggs*, 23 FORDHAM ENV’T L. REV. 102, 105 (2012).

Thanks to the countless sensationalist articles about the group that ensued, Wiley's experiments were thrust into the attention of the American public, notably alongside the issue of food additives.³⁴ After years of exposing the public to scientific evidence, and as demands for food quality regulation from progressive groups grew, the political atmosphere for change was ripe when the time of Upton Sinclair's *The Jungle* publication came.³⁵ Public outrage over the conditions of the meatpacking industry as detailed in *The Jungle*, coupled with two recent antitoxin tragedies, gave the last needed push to pass the nation-wide food regulations that the nation had been clamoring for.³⁶

³⁴ See London, *supra* note 27, at 331-32. This period of increased visibility of food adulteration issues correlated with the journalistic muckraking movement, resulting in a mainstay of "exposing fraudulent and corrupt adulteration practices." *Id.* In addition to assembling evidence of adulteration through reports and articles, Wiley allowed for the exaggerations of his experiment, as he well knew that the free publicity would strengthen his movement. *Id.* at 323-24. See also London, *supra* note 27 at 323 (noting that when it could be demonstrated that "adulteration went beyond cheating to palpable hazard, then both the public and their representatives in Congress became more interested in the campaign for a national law") (citing JAMES HARVEY YOUNG, *PURE FOOD: SECURING THE FEDERAL FOOD AND DRUGS ACT OF 1906*, at 157 (Princeton Univ. Press, 1989)). The experiments with the "Poison Squad" also further strengthened Wiley's resolve that there was a need for "strict regulation" of both chemical additives and preservatives within food products. *Id.* at 322-23.

³⁵ Marc T. Law & Gary D. Libecap, *The Determinants of Progressive Era Reform: The Pure Food and Drugs Act of 1906*, in *CORRUPTION AND REFORM: LESSONS FROM AMERICA'S ECONOMIC HISTORY* (Glaeser and Goldin, 2006). More notable consumer advocacy groups included the General Federation of Women's Clubs, the Women's Christian Temperance Union, and other leaders of the "home economics movement." *Id.* See also Upton Sinclair, *The Jungle*, *APPEAL TO REASON* (Feb. 25, 1905), available at http://sites.dlib.nyu.edu/undercover/sites/dlib.nyu.edu.undercover/files/documents/uploads/editors/AtR_02_25_05.pdf. *The Jungle* revealed unconscionable working conditions and appalling unsanitary meat-packing industry practices. *Id.* This revelation spurred the creation of the Federal Meat Inspection Act. *Celebrating 100 Years of FMIA*, USDA, https://www.fsis.usda.gov/wps/wcm/connect/fsis-content/fsis-questionable-content/celebrating-100-years-of-fmia/overview/ct_index (last updated Feb. 21, 2014).

³⁶ See London, *supra* note 27, at 327-29. London attributes the rapid enactment of the 1906 Pure Food and Drug Act in large part to the public outcry following three major instances. *Id.* Swift enactment, according to London, can be traced to a 1901 diphtheria antitoxin with traces of tetanus that killed 13 children, a 1901 tetanus outbreak within a smallpox vaccination that killed nine, and the conditions illuminated within *The Jungle*. *Id.*

The culmination of aforementioned factors resulted in Congress signing the Pure Food and Drug Act (“Wiley’s Act”) into effect on June 30, 1906.³⁷ Wiley’s Act prohibited the manufacture and shipment of “adulterated and misbranded” food products and drugs, but it lacked explicit requirements to ensure compliance.³⁸ When the government would bring a case against an alleged swindler, the defendant simply had to show that they subjectively believed in their claim.³⁹ While the Act’s purpose of combating misleading

³⁷ See Pure Food and Drug Act, Pub. L. No. 59-384, 34 Stat. 768 (repealed 1938) (preventing the manufacture, sale, and transportation of adulterated, misbranded, and poisonous foods and medicines). The Act states that its purpose was “to prevent the adulteration, misbranding and false advertising of food . . . for the purposes of safeguarding the public health [and] preventing deceit upon the purchasing public.” *Id.* *About FDA: Significant Dates in U.S. Food and Drug Law History*, *supra* note 30. The same day the Pure Food and Drugs Act was repealed, the Federal Meat Inspection Act was passed to fill the void. *Id.* See generally, H.W. Schultz, *Federal Meat Inspection Act*, FOOD LAW HANDBOOK, at 343-58 (Springer, Dordrecht 1981) (discussing significance and background of Federal Meat Inspection Act).

³⁸ See *The 1906 Food and Drugs Act and its Enforcement*, FOOD AND DRUG ADMINISTRATION, <https://www.fda.gov/aboutfda/whatwedo/history/origin/ucm054819.htm> (last visited May 15, 2018). “Misbranding” was not accepted until 1912, after the Bureau of Chemistry specifically proposed it. *Id.*

See also Wallace F. Janssen, *The Story of the Laws Behind the Labels*, FDA CONSUMER (1981), <http://www.fda.gov/AboutFDA/WhatWeDo/History/Overviews/ucm056044.htm> (telling the history of US food labeling laws). The initial act was so lacking, it did not even require labels to indicate the weight and measurement of the product. *Id.* If there was a statement of contents, it was supposed to be truthful. *Id.* Due to its shortcomings, the Act was amended no less than six times. Vincent A. Kleinfeld, *Legislative History of the Federal Food, Drug, and Cosmetic Act*, 50 FOOD & DRUG L.J. 65, 66 (1995) (detailing the six amendments). The six amendments consisted of: (1) the “Sherley Amendment”, 37 Stat. 416 (denoting a drug as misbranded if its package or label made a false curative statement); (2) the “Gould” or Net Weight” Amendment, 37 Stat. 732 (requiring contents of a food package to be marked with weight, measure, or numerical count); (3) the “Kenyon Amendment”, 41 Stat. 234, (expanding the Net Weight Amendment to apply to wrapped meats); (4) 42 Stat. 1500 (defining and standardizing butter); (5) the “McNary-Mapes Amendment”, 46 Stat. 1019 (authorizing the dept of agriculture to establish standards for canned foods); and (6) the “Sea Food Amendment”, 48 Stat. 1204 (authorizing the dept of agriculture to examine and inspect sea food production, packing, and labeling). See *id.* See generally Thomas W. Christopher, *Food and Drug Legislation in the United States: Introductory Comment on its History*, 24 SW L.J. 403, 404 (1970); David F. Cavers, *The Food, Drug, and Cosmetic Act of 1938: Its Legislative History and Its Substantive Provisions*, 6 L. & CONTEMP. PROBS. 2, 3 (1938); 1 Food and Drug Admin. § 3:4 (2016) (claiming that while the Wiley Act instigated legislative discussion, it never caused much public condemnation).

³⁹ See Janssen, *supra* note 38 (discussing the insufficiencies of Wiley’s Act).

and deceptive statements was clear, it lacked the regulatory foundation necessary to enforce much else.⁴⁰

The subsequent 1938 Federal Food, Drug, and Cosmetic (FDC) Act⁴¹ came at the end of a lengthy five-year legislative battle.⁴² The FDC contained much needed provisions that the Wiley Act had been saliently missing.⁴³ Whereas the Wiley Act identified “Adulterations” in food as “any substance [that] has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength,”⁴⁴ the FDC eventually expanded adulteration to include potentially “poisonous and deleterious substances.”⁴⁵ While making necessary strides towards protecting public health, the Act

⁴⁰ *United States v. Ninety-Five Barrels (More or Less) Alleged Apple Cider Vinegar*, 265 U.S. 438, 442-43 (1924) (making it clear that FFDCA protection was limiting false labeling, as opposed to health consequences).

⁴¹ 52 Stat. 1046 (1938), 21 U.S.C. Like the previous act, the passage of this regulation was promulgated by a tragic event. *See* *Cavers*, *supra* note 38, at 20, 40 (detailing the story of the deadly “Elixir Sulfanilamide” that killed at least 73 people). As tragic as this event was, the only legal basis available to the FDA intervention was misbranding, because “elixir” could only be applied to an alcoholic solution. *Id.*

⁴² *See Milestones in U.S. Food and Drug Law History*, FOOD AND DRUG ADMINISTRATION, <https://www.fda.gov/AboutFDA/WhatWeDo/History/FOrgsHistory/EvolvingPowers/ucm2007256.htm> (last updated Feb. 1, 2018) (presenting a comprehensive timeline of regulations controlled by the FDA and its predecessors).

⁴³ O’Reilly & Tassel, *The Food, Drug, and Cosmetic Act of 1938*, 1 Food and Drug Admin. § 3:4 (2016). Improvements included standards of identity for many foods, the ability to obtain an injunction for seizure by criminal authorities, non-standardized foods with two or more ingredients were required to list them, drugs had to undergo prior screening by the FDA, and cosmetics and devices came under regulation. *Id.* It should also be noted that the 1938 Act rejected a previous requirement that proving misbranding required fraudulent intent to be shown, which had made convictions rather hard to achieve. *See Developments in the Law - The Federal Food, Drug, and Cosmetic Act*, 67 HARV. L. REV. 632, 653 (1954). *See also* *American School of Magnetic Healing v. McAnnulty* 187 U.S. 94 (1902) (opining that a claim could not be banned if medical opinions existed finding different conclusions); *Janssen*, *supra* note 38 (discussing the history and changes between the Wiley Act and implementation of the FDC).

⁴⁴ 34 Stat. 768 § 7 (1906) (repealed 1938).

⁴⁵ 52 Stat. 1046 (1938), 21 U.S.C. §§ 342(a)(1), (2) (1946). Section 402(a) states that food is adulterated if it: (1) contains in its natural state any poisonous substance which would prove injurious to health or (2) contains any such substance with a propensity to injure, unless it is enumerated as an exception under 406(a). Section 406(a), 52 Stat. 1049 (1938), 21 U.S.C. § 346(a) (1946). Courts have emphasized that the administration had the power to determine tolerances of poison, and the application of such is not limited to instances in which the market product is dangerous. *See Developments in the Law*, *supra* note 43, at 654 (discussing labeling requirements for ingredients). *See also* *United States v. Commonwealth Brewing Corp.*, 1

maintained the age-old crusade against economic adulteration.⁴⁶ The 1938 Act was arguably most effective, however, in its handling of misbranding.⁴⁷

After the 1940s, changes in the public health and regulation realm began to shift towards consumer health protection.⁴⁸ The most noticeable initial change towards a more protective nature occurred in 1946, with the passing of the National Food Lunch Program.⁴⁹ By 1970, the FDA began expanding this focus on nutrition to adults by providing more dietary information aimed at helping consumers form educated food choices.⁵⁰ Growing concerns from consumers and advocacy groups ultimately resulted in a national labeling law by the FDA and Congress.⁵¹ Congress passed the Nutrition

Kleinfeld & Dunn 310 (D. Mass. 1945) (finding the applicable question was whether fluorine was added to beer, not if it was unhealthy).

⁴⁶ See *Developments in the Law*, *supra* note 43, at 646. A food was considered adulterated for economic purposes if any valuable ingredients are left out, if any inferior ingredient is used in its place, or if it is revealed that the valuable ingredients are missing. 31 U.S.C. §§ 402(b)(1), (2), (3); 52 Stat. 1046 (1938); 31 U.S.C. §§ 342(b)(1), (2), (3) (1946). It should be noted that when a set standard for comparison does not exist, the court may be hesitant to rule against a product. See *Developments in the Law*, *supra* note 43, at 648 (discussing the standards to be set for consumer protection); *United States v. 88 Cases of Bireley's Orange Beverage*, 187 F.2d 967 (3d Cir.), *cert. denied*, 342 U.S. 861 (1951) (finding no economic adulteration where standard of comparison was supposedly set by the product's appearance).

⁴⁷ See *Developments in the Law*, *supra* note 43, at 649. Misbranding included regulations on labeling, advertising, misleading labels, and misleading containers. § 403, 52 Stat. 1047 (1938), 21 U.S.C. § 343 (1946) (providing the regulations for misbranding in relation to food products).

⁴⁸ See generally *About FDA: Significant Dates in U.S. Food and Drug Law History*, *supra* note 30.

⁴⁹ National School Lunch Act of 1946, ch. 281, Pub. L. No. 79-396, 60 Stat. 230 (codified as amended at 42 U.S.C. §§ 1751-1769 (2000) (requiring children's school lunches to meet nationwide nutritional guidelines). See also, 42 U.S.C. § 1758(a)(1)(A).

⁵⁰ Emily J. Schaffer, *Is the Fox Guarding the Henhouse? Who Makes the Rules in American Nutrition Policy?*, 57 FOOD & DRUG L.J. 371, 404 (2002). Health-related advice from the government has grown exponentially in the post-World War II era, with various reports published to recommend dietary improvements. Fred R. Shank, *The Nutrition Labeling and Education Act of 1990*, 47 FOOD & DRUG L.J. 247, 248 (1992). Shank credits two primary ideas for this change: on one hand, the American government has generally carried out the role of protector, "rather than boss," of its people, and the other hand, the explosively expanding field of medicine was quickly uncovering the health-related causes to many major diseases ailing the American public. *Id.*

⁵¹ Claudia L. Andre, Comment, *What's in that Guacamole? How Bates and the Power of Preemption Will Affect Litigation Against the Food Industry*, 15 GEO. MASON L.REV. 227, 232 (2007) (stating in addition that "[i]f a state recognizes and allows for a viable cause of action that may change the way food industry advertises the health effects of their food, consumers should be able to proceed under state law to stimulate that change . . .").

Labeling and Education Act (“the NLEA”) in 1990.⁵² Congress created the NLEA with the purpose of creating uniform national standards for food labeling, and to ensure that customers could readily access “scientifically valid, truthful, reliable, understandable, and non-misleading [information] in order to foster more healthy choices.”⁵³ The NLEA introduced several new measures, including that the FDA: oversee food nutrition labeling, establish definitions for nutrient-content descriptors, review labels that claim disease prevention, establish requirements for labels on packaged foods, allow for cooperative enforcement with state governments, and that the FDCA “expressly preempts some state law pertaining to certain labels.”⁵⁴

II. THE STATE OF HFCS AND ADDED SUGARS IN THE CURRENT LEGAL LANDSCAPE

A. Current Standards for Food Safety

Currently, substances within food are either identified by FDA as either ‘additives’ or ‘generally recognized as safe’ (GRAS).⁵⁵ New food additives are required to comply with premarket approval standards.⁵⁶ If a food ingredient is GRAS on the other

⁵² Pub. L. No. 101–535, 104 Stat. 2353 (1990) (codified at 21 U.S.C. § 343 et seq.) (effectuating its purpose as “amend[ing] the Federal Food, Drug, and Cosmetic Act to prescribe nutritional labels for foods, and for other purposes.”).

⁵³ Gail H. Javitt, *Supersizing the Pint-Sized: The Need for FDA-Mandated Child-Oriented Food Labeling*, 39 LOY. L.A. L. REV. 311, 311 (2006) (citing NLEA § 2(b)(1), 104 Stat. at 2356-57; 136 Cong. Rec. 35,093, 35,096-97 (1990) (statement of Rep. Madigan)) (elucidating the reasons Congress enacted NLEA in order to protect consumers); see also Sylvia Zarski, *Can You Judge Your Food By Looking At Its Cover? How Courts’ Application of Federal Preemption Allows Misleading Food Labeling to Slip Through the Regulatory Cracks*, 64 DEPAUL L. REV. 1119, 1121 (2015) (describing the national standards set by the Food, Drug, and Cosmetic Act).

⁵⁴ Tamara Schulman, *Menu Labeling: Knowledge for a Healthier America*, 47 HARV. J. ON LEGIS. 587, 592 (2010) (citing NLEA § 3(b)(1)(A)(iii), 104 Stat. at 2361 (codified at note following 21 U.S.C. § 343)) (describing the 6 major components that make up the NLEA); Zarski, *supra* note 53, at 1122 (explaining the six major changes made in order to protect consumers).

⁵⁵ Paulette Gaynor, *How U.S. FDA’s GRAS Notification Program Works*, FOOD AND DRUG ADMINISTRATION (Dec. 2005), <http://www.fda.gov/Food/IngredientsPackagingLabeling/GRAS/ucm083022.htm#f2> (defining the history of the GRAS program and how it is administered).

⁵⁶ See *Is it Really FDA Approved*, FOOD AND DRUG ADMINISTRATION, <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm047470.htm> (last updated Jan. 17, 2017). See also

hand, it is not subject to approval by the FDA via premarket review.⁵⁷ Instead, it must be recognized as safe by scientific procedures, or through experience based upon common use prior to 1958.⁵⁸ The FDA relies upon scientific procedures that generally arise from

Determining the Regulatory Status of a Food Ingredient, FOOD AND DRUG ADMINISTRATION, <http://www.fda.gov/Food/IngredientsPackagingLabeling/FoodAdditivesIngredients/ucm228269.htm> (last updated Feb. 8, 2018) (describing that an unsafe food additive is adulterated under the FFDCa). In determining the regulatory status of foods, each ingredient must meet compliance by identifying the substance, the specifications of its physical properties and level of purity, and the limitations on the conditions of use. *Id.* Unless the substance is GRAS or meets another exclusion within the definition of food additives, a “food additive that is intended to have a technical effect in the food is deemed unsafe unless it either conforms to the terms of a regulation prescribing its use or to an exemption for investigational use.” *See generally Substances Generally Recognized as Safe*, FEDERAL REGISTER, <https://www.federalregister.gov/documents/2016/08/17/2016-19164/substances-generally-recognized-as-safe> (last updated Aug. 17, 2016) (describing the criteria in the regulations clarified in the Food, Drug, and Cosmetic Act). The Food Additives Amendment of 1958 (defining the terms of ‘food additive’ and ‘unsafe food additive’ arose out of public concern over an increase of chemicals in foods and during food processing. *Id.*

⁵⁷ *Generally Recognized as Safe (GRAS)*, FOOD AND DRUG ADMINISTRATION, <http://www.fda.gov/Food/IngredientsPackagingLabeling/GRAS/> (last updated Jan. 4, 2018) (detailing how a food substance is determined by qualified experts to be safe under GRAS).

⁵⁸ *Id.* *See* 21 C.F.R. § 170.30(b) (requiring the same scientific evidence for GRAS as required for approval of food additives); 21 C.F.R. §§ 170.30(c), 170.30(f) (stating safety through experience requires substantial history of consumption by many consumers). Today, foods rarely qualify as GRAS based solely upon history of consumption by a significant number of consumers. *See How U.S. FDA’s GRAS Notification Program Works*, *supra* note 55. The scientific data used must be widely known and agreed upon by qualified experts, and such data must demonstrate that the ingredient is safe for its intended use. *Id.* An ingredient is found to be GRAS upon a consensus from qualified experts not employed by the government. *Id.* In comparison, food additives are approved for market use by the FDA, but only after “privately held data and information” about the substance are sent to the FDA from the additive sponsor. *Id.*

scientists employed by the food industry.⁵⁹ Amongst the many food substances currently defined as GRAS, is HFCS.⁶⁰

B. HFCS and its Potential Health Implications

HFCS was created as a direct response to the tumultuous supply chain of sugar.⁶¹ Soon after the newly created HFCS 42 and HFCS 55 were used in the marketplace, criticism concerning its nutritional properties began to appear.⁶² On the whole, scientific

⁵⁹ See Flynn, *FDA Continues to Trust Industry Under GRAS Substance Rule*, FOOD SAFETY NEWS (Aug. 16, 2016), http://www.foodsafetynews.com/2016/08/fda-continues-to-trust-industry-under-gras-substance-rule/#.WCh3m_nx7IV. In the recently released FDA Final Rule on GRAS, experts who determine whether a substance is safe for its intended use are chosen by the food manufacturers, thereby creating opportunities for conflicts of interest. *Id.* According to the director of nutrition policy at the Center for Science in Public Interest, the current rule allows companies to decide which substances qualify as GRAS and can add substances to food without notifying the FDA pre-market review. *Id.* The Final rule on Substances Generally Recognized as Safe replaces:

[T]he voluntary administrative procedure for petitioning us to affirm the GRAS status of a use of a substance in human food or animal food with a voluntary administrative procedure for notifying us about a conclusion that a substance is GRAS under the conditions of its intended use in human food or animal food.

Substances Generally Recognized as Safe, FDA, FEDERAL REGISTER <https://www.federalregister.gov/documents/2016/08/17/2016-19164/substances-generally-recognized-as-safe>. While the previous procedure required the sponsor to petition the FDA, they are now simply *encouraged* to notify FDA about their own conclusion. See Flynn, *supra*.

⁶⁰ 21 C.F.R. § 184.1866 (listing specific substances that are generally recognized as safe, with HFCS being among them).

⁶¹ See JOHN S. WHITE, NUTRITION & HEALTH 1, 13-33 (James M. Rippe, ed., 2014) (providing an informative overview of HFCS beginnings and current use). Political turmoil and weather events often drastically increased prices for food and beverage companies using sugar. *Id.* Drastic sugar price increases during the 1970s allowed for the opportunity to improve the methods used for corn syrup, and HFCS 42 and HFCS 55 were created. *Id.* at 17. By 1984, HFCS replaced 100% of the sugar used within Coca-Cola and Pepsi. *Id.*

⁶² *Id.* at 18. White cites papers by Gerald Reavan and Sheldon Reiser describing the components of HFCS and its implications for heart disease and metabolic syndrome. *Id.* *But see* Allan Forbes & Barbara Brown, *1993 Fructose Monograph*, in AM. J. CLIN. NUTR. 1, 18 (1993) (arguing that with the currently available data, there was not enough to make recommendations). Perhaps the most influential publications against HFCS were authored by Bray. WHITE, *supra* note 61 (citing Bray et al., *Consumption of High-Fructose Corn Syrup in Beverages May Play a Role in the Epidemic of Obesity*, 79 AM. J. CLIN. NUTR. 4 (2004)) (investigating the correlation between HFCS consumption and obesity). The Bray study took into consideration food consumption patterns in the United States between 1967 and 2000, during a period when the consumption of HFCS was “far exceeding the changes in intake of any other food or food group.” Bray et al., *supra*. At the time of Bray’s study, HFCS accounted for over 40% of caloric sweeteners in foods and was the only caloric added sweetener within soda drinks. *Id.* *But see* White, *supra* note 7, at 31 (arguing HFCS is

findings as to the potential side effects of HFCS appear to be unsettled.⁶³ Despite growing scientific concern over the effects of HFCS use in drinks and other food products, the

similar in its composition and properties as sugar, and HFCS consumption is declining). HFCS consumption has decreased since 2002, while rates of obesity have been on the rise, this led to White's conclusion that there is no longer a relationship between HFCS consumption and obesity. *See id.* at 29 (showing a chart indicating per capita availability of caloric sweeteners since 2000). One argument against the current levels of HFCS in food and drink products is that "cheapness and versatility have encouraged manufacturers to insinuate a tasty but unhealthful load of empty calories . . ." Rebekah Denn & Kristin Dizon, *Amid Debate, Grocery Chain Bans High-Fructose Corn Syrup*, SEATTLE PI (Nov. 30, 2007), <http://www.seattlepi.com/lifestyle/food/article/Amid-debate-grocery-chain-bans-high-fructose-1257473.php>. The other, more controversial, argument is that the effects that HFCS has on the body are different than other sugars. *Id.*

⁶³ *See* Bocarsly et al., *High Fructose Corn Syrup Causes Characteristics of Obesity in Rats: Increased Body Weight, Body Fat and Triglyceride Levels*, 97 PHARMACOL. BIOCHEM. BEHAV. 1, 4-7 (2010) (acknowledging mixed findings of short-term access to HFCS). Bocarsly's study determined that rats with six-month and seven-month periods of access to HFCS had increased weight, abdominal fat, and triglycerides. *Id.* at 3-4. These factors in humans are known to cause "high blood pressure, coronary artery disease, cancer and diabetes." Hilary Parker, *A Sweet Problem: Princeton Researchers Find that High-Fructose Corn Syrup Prompts Considerably More Weight Gain*, PRINCETON UNIV. (March 22, 2010, 10:00 AM), <http://www.princeton.edu/main/news/archive/S26/91/22K07/index.xml?section=topstories>. *See also* Katilin Mock et al., *High-Fructose Corn Syrup-55 Consumption Alters Hepatic Lipid Metabolism and Promotes Triglyceride Accumulation*, 39 J. NUTR. BIOCHEM. 32 (2017), <http://www.sciencedirect.com/science/article/pii/S0955286316301036> (recommending people limit their intake of sugary drinks). While not every study has reached the same finding, evidence over the past ten years indicates that certain concentrations of fructose impact cognitive functions and appetite control. Katrien Lowette et al., *Effects of High-Fructose Diets on Central Appetite Signaling and Cognitive Function*, 2 FRONT. NUTR. 1, 4 (2015), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4429636/pdf/fnut-02-00005.pdf>. It is important to note that much of the scientific writing that argues unequivocally on behalf of HFCS and other added sugars is written by James M. Rippe and John S. White, whom the Corn Refiner's Association have allegedly paid to advocate on their behalf. *Corn Processors Pay Advocates, Claiming They Are Science Experts, According to New Legal Filing From The Sugar Association*, CNBC (Oct. 16, 2013, 3:31PM), <https://www.cnbc.com/2013/10/16/globe-newswire-corn-processors-pay-advocates-claiming-they-are-science-experts-according-to-new-legal-filing-from-the-sugar-association.html>. For better or for worse, corporate support for research is commonplace; the Corn Refiners Association funded Dr. Rippe's support for corn processors on at least two occasions. Eric Lipton, *Rival Industries Sweet-Talk the Public*, N.Y. Times (Feb. 11, 2014), <https://www.nytimes.com/2014/02/12/business/rival-industries-sweet-talk-the-public.html>. First, the association spent ten million dollars to fund Dr. Rippe's work stating that corn-based sweeteners lack any special health consequences. *Id.* In addition, the association provided Dr. Rippe with a \$41,000 per month retainer for him to serve as an expert to newspapers. *Id.* Likewise, the sugar industry has spent millions of dollars in swaying the public's receptiveness of sugars in food. *Id.*; Camila Domonoske, *50 Years Ago, Sugar Industry Quietly Paid Scientists To Point Blame At Fat*, NPR (Sept. 13, 2016, 9:59AM), <https://www.npr.org/sections/thetwo-way/2016/09/13/493739074/50-years-ago-sugar-industry-quietly-paid-scientists-to-point-blame-at-fat> (revealing "sugar industry funded research [downplaying] the risks of sugar and highlighted the hazards of fat . . ."); Cristin E. Kearns et al., *Sugar Industry and Coronary Heart Disease Research: A Historical Analysis of Internal Industry Documents*, 11 JAMA INTERN. MED. 176 (2016) (finding the

FDA states that there is no evidence to suggest that HFCS 42 or 55 is different in safety from foods containing comparable amounts of other sweeteners with equal glucose and fructose content.⁶⁴ Nonetheless, overconsumption of any added sugars presents serious health complications.⁶⁵

C. Resorting to Private Action

Because the FDA has not taken what some construe to be palpable action in regulating HFCS amounts in foods, some individuals have resorted to taking action themselves. On June 17, 2013, a mother (“S.F.”) filed a complaint on behalf of her

Sugar Research Foundation downplayed sucrose consumption as risk factor of coronary heart disease).

⁶⁴ *High Fructose Corn Syrup: Questions and Answers*, FOOD AND DRUG ADMINISTRATION, <http://www.fda.gov/Food/IngredientsPackagingLabeling/FoodAdditivesIngredients/ucm324856.htm> (last visited May 15, 2018). The hole in this reasoning is that even if there is no actual difference between the effects of HFCS and other comparable added sugars, Americans still consume between 18 and 23 teaspoons of added sugars per day. *FDA Urged to Determine Safe Limits on High-Fructose Corn Syrup and Other Sugars in Soft Drinks, Sugar Drinks’ Role in Obesity, Diabetes, and Heart Disease Warrants FDA Intervention*, CSPINET, <https://cspinet.org/new/201302131.html> (last visited May 15, 2018). See also U.S. DEP’T HEALTH & HUMAN SERVS., CDC, NO. CS106114, National Health and Nutrition Examination Survey 2007-2008, 1 (Jan. 2007), available at https://www.cdc.gov/nchs/data/nhanes/nhanes_07_08/overviewbrochure_0708.pdf (providing a comprehensive overview of the health and nutritional status of American adults and children). Fourteen million people are consuming over one third of their caloric intake from added sugars. *Id.* While the FDA has not taken a stance on limiting HFCS and other added sugars, it has recommended that individuals attempt to limit their intake of such products. U.S. DEP’T HEALTH & HUMAN SERVS. & U.S. DEP’T AGRICULTURE, 2015-2020 *Dietary Guidelines for Americans* 28, (8th ed. 2015) (recommending that added sugars account for less than 10% of daily calories). Similar recommendations have not been made to manufacturers, as the current C.F.R. states in relation to HFCS that “[i]n accordance with §184.1(b)(1), the ingredient is *used in food with no limitation other than current good manufacturing practice.*” Direct Food Substances Affirmed as Generally Recognized as Safe, 21 E-C.F.R. 184.1866 (2018) (emphasis added).

⁶⁵ See Julie Corliss, *Eating Too Much Added Sugar Increases the Risk of Dying With Heart Diseases*, HARVARD.EDU, <https://www.health.harvard.edu/blog/eating-too-much-added-sugar-increases-the-risk-of-dying-with-heart-disease-201402067021> (last updated Nov. 30, 2016) (describing the correlation between heart disease and increased sugar consumption). Individuals who took part in the study who consumed 25% or more of daily calories from sugars were over two times more “likely to die from heart disease as those whose diets included less than 10% added sugar.” *Id.* Added sugar also has well-documented connections to cavities and weight gain, raising blood pressure, and stimulating “the liver to dump more harmful fats into the bloodstream.” *Id.*

daughter (“S.E.F.”) against producers of HFCS.⁶⁶ In *S.F. v. Archer-Daniels-Midland*, S.F. brought the action against the producers, arguing that HFCS was a “substantial factor” in causing S.E.F.’s Type 2 Diabetes.⁶⁷ The District Court dismissed the case under Rule 12(b)(6).⁶⁸ The court found that market-share liability did not apply, she did not plead that HFCS is unreasonably dangerous, and no safer alternative was recommended.⁶⁹ If other courts adopt the reasoning of the Third Circuit Court, it is unlikely that other plaintiffs will prevail on theories of negligence, design defect, and failure to warn.⁷⁰

⁶⁶ *S.F. v. Archer-Daniels-Midland*, 2014 WL 1600414, at *2 (2014) (naming HFCS producers “Archer-Daniels-Midland Co., Cargill, Inc., Ingredion Inc., Penford Products Co., Tate & Lyle Ingredients Americas, LLS, and Roquette America, Inc.” as defendants).

⁶⁷ *Id.* at *1. The Plaintiff also claimed that fructose is metabolized mostly in the liver (leading to insulin resistance), and that HFCS stimulates over-eating by avoiding the “insulin-driven satiety system.” *Id.* at *2. While the court did not take it upon itself to rule upon the “hotly debated” potential effects of HFCS, it did realize that Type 2 diabetes can be caused by a combination of factors, including, genetics, poor eating habits, and not enough exercise. *Id.* at *2, *4. Her cause of action was for negligence, design defect, and failure to warn. *Id.* at *9.

⁶⁸ *Id.* Rule 12(b)(6) can apply if the statement does not “possess enough heft to show that the pleader is entitled to relief.” *Archer-Daniels-Midland*, 2014 WL 1600414, at *3 (*citing* *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007)).

⁶⁹ *Archer-Daniels-Midland*, 2014 WL 1600414, at *6. Though the Plaintiff was unable to identify which of the defendant’s manufactured the HFCS that she ate, being unable to “locate evidence does not justify the extraordinary step of applying market share liability.” *Id.* at *6 (*citing* *Hamilton v. Beretta U.S.A. Corp.*, 96 N.Y.2d 222, 241 (2001)). The court compared the present case to the facts in *Brenner v. Am. Cyanamid Co.*, 263 A.D.2d 165, 171 (1999) (holding market-share liability for lead paint manufacturers inappropriate where no “signature injury” definitively linking product); *compare with* *Hymowitz v. Eli Lilly & Co.*, 73 N.Y.2d 487, (2d Cir. 2013) (holding manufacturers of DES responsible for injury based on their respective share of the market). The court in *Archer-Daniels-Midland* cited several nutritional studies in concluding that *excess consumption* of HFCS could cause health and obesity issues, as opposed to HFCS itself being unreasonably dangerous. *Archer-Daniels-Midland*, 2014 WL 1600414, at *7. According to the Court, the Plaintiff did not meet the elements for defective design under New York Law, in which the “plaintiff must allege: (1) the product as designed posed a substantial likelihood of harm; (2) it was feasible to design the product in a safer manner; and (3) the defective design was a substantial factor in causing plaintiff’s injury.” *Id.* at *8 (*citing* *DiBartolo v. Abbott Labs*, 914 F.Supp.2d 601, 621 (2012)). S.F. failed to allege a safer way in which HFCS could be made, and the Court was unwilling to ban HFCS outright. *Id.* The case was once again dismissed at the Court of Appeals. *S.F. v. Archer Daniels Midland Co.*, 594 Fed.Appx. 11 (2014) (agreeing that market-share liability did not apply, and no safer design alleged for HFCS).

⁷⁰ See Bocarsly et al., *supra* note 63 (discussing current unsettled nature of HFCS debate). *But see* Linda Bonvie, *Obesity Expert Dr. Robert Lustig: HFCS is ‘a Significant Factor’ in Child’s Type 2 Diabetes*, FOOD IDENTITY THEFT (Oct. 1, 2013), <http://foodidentitytheft.com/obesity-expert-dr-robert-lustig-hfcs-a-significant-factor-in-childs-type-2-diabetes/>. Attorney John Michael Hayes, for the Plaintiff, stated that since the “government has been ‘compromised,’ and industry is making too

Over the past several years however, the courts have heard numerous cases against food and beverage manufacturers that use HFCS while labeling products as “natural” or “all-natural”.⁷¹ The flagship case for this theory was *Holk v. Snapple Beverage Corp.*⁷² *Holk* contended that Snapple had been deceptive in labeling their product as “all-natural”.⁷³ In return, Snapple argued that *Holk*’s claim should be dismissed because it was preempted by federal law.⁷⁴ After originally being dismissed at the District Court level, the Third Circuit Court of Appeals held that neither Congress or the FDA showed a clear intention to preempt state laws regarding product warranty and protection of consumers.⁷⁵ This case also amplified the issue that FDA did not have an official definition for the terms “natural” and “all-natural”, as they pertain to HFCS.⁷⁶ Lack of

much money to change any HFCS labeling regarding the addition of ‘warning labels,’” this novel litigation action is the first, but likely not last, of its kind. *Id.*

⁷¹ Michael D. Leffel & Nathan A. Beaver, *Trends in ‘All Natural’ Class Actions*, LAW360 (2011), available at <https://www.foley.com/files/Publication/597ebc84-37f2-44c4-8dd8-065b5fde985c/Presentation/PublicationAttachment/cca0864f-d29d-46c7-b238-08d27bb59b73/P%26CPL36011-10-2011.pdf> (last visited May 15, 2018).

⁷² *Holk v. Snapple Beverage Corp.*, 575 F.3d 329 (3d Cir. 2009).

⁷³ *Id.* at 332.

⁷⁴ *Id.* at 331.

⁷⁵ See Leffel & Nathan, *supra* note 71; *Holk*, 575 F.3d at 335-42. The *Holk* court examined whether express preemption, field preemption, or implied conflict preemption were at play. *Holk*, 575 F.3d at 335-42. Notwithstanding the fact that Snapple waived its argument for express preemption with HFCS, NLEA *only* expressly preempts conflicting state laws that are laid forth in 21 U.S.C. §343-1- particularly, “(1) the name and location of the manufacturer, as well as the weight or quantity of food contained in a package; and (2) the percentage of fruit or vegetable juice contained in a beverage.” *Id.* at 336, 338. Regarding field preemption, the court found that FDA and Congress did not act in such a way to leave no room for state regulation. *Id.* at 336. See also *infra* note 76 (discussing FDA’s lack of designation for term ‘natural’). Implied conflict preemption occurs when it is “[i]mpossible for a private party to comply with both state and federal requirements.” *Holk*, 575 F.3d at 340 (citing *English v. Gen. Elec. Co.*, 496 U.S. 72, 78-79 (1990)). In *Holk*, the court held that FDA’s current policy on the word ‘natural’ had no preemptive effect. *Holk*, 575 F.3d at 340.

⁷⁶ *Holk*, 575 F.3d at 340. The *Holk* court felt uncomfortable with using FDA’s informal policy for using the definition of ‘natural’ as having any preemptive weight. *Id.* In a 1993 preamble, an informal definition for ‘natural’ was denoted as “nothing artificial or synthetic [that] has been included in, or has been added to, a food that would not normally be expected to be in the food.” Leffel & Nathan, *supra* note 71 (citing C.F.R. §§ 2302, 2407 (Jan. 6, 1993)). Later, in a 2008 letter, the FDA noted that in some manufacturing instances HFCS may be considered ‘natural’, and in others it may not be. *Id.*; see Geraldine June, FDA, Opinion Letter on the Use of the Word ‘Natural’ in Describing HFCS (July 3, 2008). Official FDA policy continues to lack

federal action towards HFCS and other added sugars has also spurred private action in the form of recommendatory petitions.⁷⁷ Recently, such petitions have met success, albeit limited, in initiating action from FDA.⁷⁸

clarity as to use of the term. *The FDA Requests Comments on Use of the Term "Natural" on Food Labeling*, FOOD AND DRUG ADMINISTRATION, <http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm456090.htm> (last visited May 15, 2018). Due to the "changing landscape of food ingredients and production," and three Citizen Petitions seeking clarification from the agency on a definition of 'natural', the FDA requested that the public provide comments in helping to define the term. *Id.* The period for submitting comments closed on May 10, 2016, and at the time of this piece's writing, had not yet been ruled upon by the agency. *Id.*

⁷⁷ See *Petition to Ensure the Safe Use of "Added Sugars"*, CTR. FOR SCI. IN THE PUB. INT. (Feb. 13, 2013), <https://cspinet.org/resource/cspi-petition-fda-re-added-sugars> (proposing safe level of "added sugars" that is consistent with health recommendations). Initiated as a response to the "[u]nsafe levels of high-fructose corn syrup or sugar in soda and other sugar drinks cause[ing] obesity, diabetes, heart disease, and other health problems", the Center for Science in the Public Interest (CSPI) has requested that the FDA determine an appropriate amount of added sugars for drinks to aid in reducing dangerously high levels of sugar consumption in the United States. *FDA Urged to Determine Safe Limits on High-Fructose Corn Syrup and Other Sugars in Soft Drinks*, CTR. FOR SCI. IN THE PUB. INT. (Feb. 13, 2013), <https://cspinet.org/new/201302131.html> (finding high levels of sugar in food products leads to various ailments). The regulatory petition disclosed extensive evidence that HFCS and other added sugars are causal of obesity, diabetes, heart disease, and gout, as displayed by clinical trials using sugary beverages. *Id.* The petition has support from The National Association of County and City Health Officials, American Society of Bariatric Physicians, Consumer Federation of America, National Consumers League, Prevention Institute, Shape Up America!, as well as public health departments in Baltimore, Boston, Los Angeles, Philadelphia, Seattle, and Portland. *Id.*

⁷⁸ E-mail from Deane Edelman, Project Assistant, Nutrition Action Healthletter, to Kevin A. Robinson, Suffolk University Law School (Oct. 6, 2016, 9:06 AM EST) (on file with author). In an electronic correspondence from CSPI, Deane Edelman revealed that because of CSPI's work in making the public aware of how much sugar they are consuming, the FDA has announced major changes to the Nutrition Facts label. *Id.* As of July 26, 2018 (2019 for manufacturers with less than \$10 million in annual sales), manufacturers will be required to use a new label that includes: updated information concerning nutrition science, added sugars, and updated serving sizes and labeling requirements, in an effort to allow consumers to make informed food choices. See *Changes to the Nutrition Facts Label*, FOOD AND DRUG ADMINISTRATION, <http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm385663.htm#highlights> (last visited May 15, 2018) (explaining changes made to food labels that correctly depict amount of sugar consumed). Though the FDA did not adopt any further measures outlined in the aforementioned petition, it was hoped that the FDA would also determine what levels of added sugars in beverages would be safe, and in the meantime to encourage the industry to voluntarily reduce added sugars. CTR. FOR SCI. IN THE PUB. INT., *supra* note 77.

D. Governmental Action

In an effort to lower consumer intake of HFCS and other added sugars, several local governments have begun to take action.⁷⁹ Of the several municipalities that currently have some form of tax on SSB, Berkeley, CA was the first in the nation.⁸⁰ The Berkeley taxation pilot program has so far resulted in a twenty-one percent decrease in consumption of SSB, and an increase of water consumption by 63%.⁸¹ Similar to Berkeley, the cities of San Francisco, Oakland, and Albany plan to instill a one cent per

⁷⁹ Bruce Y. Lee, *5 More Locations Pass Soda Taxes: What's Next For Big Soda?*, FORBES (Nov. 14, 2016, 10:08 AM), <http://www.forbes.com/sites/brucelee/2016/11/14/5-more-locations-pass-soda-taxes-whats-next-for-big-soda/#3ebb8e6f193f> (finding local governments to take action by taxing soda). As of November, 2016, Boulder, CO, San Francisco, CA, Oakland, CA, Albany, CA, and Cook County, IL, have joined Berkeley, CA and Philadelphia, PA in approving taxes for sugar-sweetened beverages. *Id.* See also Hinton & Svachula, *Soda Taxes Popping Up Around the U.S.*, CHICAGO SUN TIMES (July 23, 2017), <https://chicago.suntimes.com/news/soda-taxes-popping-up-around-the-u-s/> (displaying the tax revenue achieved thus far by municipalities with soda tax). At the time of writing this piece, the “Yes for Healthy Kids and Education” coalition in Portland, Oregon is working to have Multnomah County voters consider a soda tax of 1.5 cents on (“SSB”) in May of 2018. Press Release, *Parents, Public Health Experts, Early Education Advocates, Business and Community Leaders Call for Soda Tax, YES! FOR HEALTHY KIDS & EDUC.* (Sep. 16, 2017), <https://www.healthykidsmultnomah.com/2017/09/16/parents-public-health-experts-early-education-advocates-business-community-leaders-call-soda-tax/> (taxing soda to deter young people and adults to purchase it). Though Seattle, Washington recently imposed a SSB tax on January 1, 2018, of \$.0175 per ounce, it is too soon to discern whether positive changes in added sugar consumption has been effectuated. See *Sweetened Beverage Tax*, SEATTLE.GOV, <https://www.seattle.gov/business-license-tax/other-seattle-taxes/sweetened-beverage-tax> (last visited May 15, 2018) (imposing tax to improve health of Seattle citizens).

⁸⁰ Dan Charles, *Berkeley's Soda Tax Appears to Cut Consumption of Sugary Drinks*, NPR (Aug. 23, 2016, 7:49 PM), <http://www.npr.org/sections/thesalt/2016/08/23/491104093/berkeleys-soda-tax-appears-to-cut-consumption-of-sugary-drinks> (finding Berkeley, CA to be at the forefront in SSB tax). See also *City of Berkeley Sugary Beverages and Soda Tax Question Measure D (November 2014)*, BALLOTPEDIA, [https://ballotpedia.org/City_of_Berkeley_Sugary_Beverages_and_Soda_Tax_Question_Measure_D_\(November_2014\)](https://ballotpedia.org/City_of_Berkeley_Sugary_Beverages_and_Soda_Tax_Question_Measure_D_(November_2014)) (last visited May 15, 2018) (voting to approve the first SSB tax in the US). The ballot question was approved by voters on November 4, 2014, and was created to impose a tax upon all beverages sweetened with sugar at \$.12 per twelve ounces of soda and sugary beverages. *Id.*

⁸¹ Jennifer Falbe et al., *Impact of the Berkeley Excise Tax on Sugar-Sweetened Beverage Consumption*, 106 AM. J. PUB. HEALTH, 1865, 1865 (2016) (finding SSB tax to have improved drink choices of Berkeley residents). Proponents of these taxes cite public health benefits, while opponents to the tax argue there is a disproportionate impact on low-income families. *The Short and Sweet on Taxing Soda*, INSTITUTE ON TAXATION AND ECONOMIC POLICY, http://itep.org/itep_reports/2016/10/the-short-and-sweet-on-taxing-soda.php#.WHwMnfnafIU (last updated Nov. 16, 2016) (finding SSB tax not long-term solution as it impacts low-income families consuming soda).

ounce tax on beverages containing added-calorie sweeteners and over 25 calories per 12 ounces of liquid, while Boulder plans to tax two cents per ounce upon beverages with five grams of added-calorie sweetener in 12 fluid ounces.⁸² In a recent report commissioned by the American Heart Association, it was recommended that policymakers should consider taxing SSB by the amount of sugar the drinks contain as opposed to taxing by volume, if the end goal is to lessen the consumption of sugar.⁸³ Despite the relative ease of taxing manufacturers, state and local governments will likely have trouble enforcing such taxes outside their respective jurisdictions.⁸⁴ Irrespective as to whom the tax is applied to, it is likely to meet constitutional approval if it is even-handedly applied to the amount of sugars within the beverages as opposed to creating separate classes dependent

⁸² Rachel Becker, *Four Cities Just Approved New Taxes on Sugary Drinks, Striking Blows Against Big Soda*, THE VERGE (Nov. 9, 2016), <http://www.theverge.com/2016/11/9/13571614/soda-tax-election-voting-san-francisco-oakland-boulder-obesity>.

⁸³ See Norton Francis et al., *The Pros and Cons of Taxing Sweetened Beverages Based on Sugar Content*, URBAN INST. (Dec. 2016), available at http://www.taxpolicycenter.org/sites/default/files/publication/136861/pros_and_cons_of_taxing_sweetened_beverages_based_on_sugar_content.pdf. Often, sweetened drink taxes are applied in relation to the beverage volume, regardless of sugar content in potentially drastically different drinks. *Id.* In regard to public health, taxes based upon volume do not help to discourage high-sugar consumption. *Id.* Sugar content-based taxes would also likely provide incentive for manufacturers, distributors, and retailers to recreate products with lower sugar levels. *Id.* After calibrating the tax model developed for purposes of this study to simulate effects of several tax designs, it was discovered that focusing taxes on relatively high-sugar drinks is the best approach to reduce sugar consumption while simultaneously achieving as little economic burden on consumers as possible. *Id.* at 5. While initially the tax would need to apply to total sugars within the beverages, the federally mandated 2018/2019 improvements to nutrition labels will allow for the option of basing drink taxes on added sugars. URBAN INST., *supra*, at 3.

⁸⁴ See Norton Francis et al., *supra* note 83. In the Urban Institute report on SSB taxes, several administrative and practical issues are mentioned. *Id.* at 8. Because manufacturers are generally located outside of taxing jurisdictions, distributors would be more easily identified and taxable by local governments unless the distributor is not within the city borders. *Id.* If local governments were to instead impose taxes at the retail level, it would result in considerable administrative and compliance encumbrances. *Id.* at 9. Ultimately, the optimal form of taxation in the context of SSB would be to follow the lead of Berkeley and Philadelphia, where carefully crafted statutory language ensures retailers must show proof of the tax having been paid, or collect the tax themselves. *Id.*

upon types of sugars or tiered taxation levels, each of which could trigger a states' uniformity clause.⁸⁵

There are several well-documented similarities between the movement to use taxes in reducing consumption of HFCS and other added sugars, and the movement that occurred decades earlier to decrease tobacco use.⁸⁶ The first tax on tobacco came as early as 1864, when the federal government was in need of revenue to fund the Civil War.⁸⁷ Recently, the federal government has raised the tax on tobacco to \$1.01 per twenty-pack of cigarettes in an effort not only to raise revenue, but to improve public health as well.⁸⁸

⁸⁵ See *id.* at 10 (explaining that tax on sugar content may be legally stronger than on other grounds). While many state constitutions have language requiring tax uniformity, it is worth noting that Pennsylvania courts appear to interpret such language the strictest. See Vito A. Cosmo, Jr. et al., *The Power Behind Pennsylvania Uniformity Clause*, PICPA (Sept. 3, 2015), <https://www.picpa.org/articles/picpa-news/2015/09/03/the-power-behind-pennsylvania-s-uniformity-clause>) (attributing Pennsylvania's strictness to courts needing to interpret DOR valuation methods of corporations). But see *Lebanon Valley Farmers Bank v. Commonwealth of Pa.*, 623 Pa. 455 (2013) (citing *Clifton v. Allegheny County*, 600 Pa. 662 (2009)) (realizing limited inequalities in taxation are inevitable, and are permitted if not substantially unequal). Other states seem to more closely identify with the Supreme Court's seminal interpretation of tax uniformity in the Head Money Cases. See Nelson Lund, *The Uniformity Clause*, 51 U. Chi. L. Rev. 1193 (1984) (understanding that "perfect" uniformity cannot be attained, and the Constitution prohibits "geographically nonuniform taxation.") (citing *Head Money Cases*, 112 U.S. 580 (1884)).

⁸⁶ See Richard A. Watts et al., *Tobacco Taxes vs Soda Taxes: A Case Study of a Framing Debate in Vermont*, HEALTH BEHAVIOR AND POLICY REV. (May 2014), https://www.researchgate.net/publication/262680208_Tobacco_Taxes_vs_Soda_Taxes_A_Case_Study_of_a_Framing_Debate_in_Vermont. In both instances, detrimental health impacts to the public have spurred public health advocates to turn to excise taxes in an attempt to reduce consumption, and like the tobacco industry before it, the American Beverage Association has spent millions of dollars to compete against the initiatives that took hold in California, Pennsylvania, Illinois, and New York. *Id.*

⁸⁷ *Cigarette and Tobacco Taxes*, TAX FOUNDATION, <http://taxfoundation.org/tax-topics/cigarette-taxes> (last visited May 16, 2018). Conversely, the first excise tax for a state did not occur until 1921, in Iowa. *Id.* All 50 U.S. states had a tax on tobacco by 1969. *Id.*

⁸⁸ Children's Health Insurance Program Reauthorization Act of 2009, H.R.2, 111th Cong. (1st Sess. 2009). This was a sixty-two-cent increase from the previous tax. *State Tobacco Taxes*, TOBACCO FREE KIDS, http://www.tobaccofreekids.org/what_we_do/state_local/taxes/ (last updated Nov. 14, 2017). Though not adopted, as recently as February 2016, President Obama proposed another tax increase for tobacco products. See *General Explanations of the Administration's Fiscal Year 2017 Revenue Proposals*, DEPARTMENT OF THE TREASURY (Feb. 2016), available at <https://www.treasury.gov/resource-center/tax-policy/Documents/General-Explanations-FY2016.pdf>. The Department of the Treasury cited the fact that approximately 480,000 tobacco-related deaths and sixteen million tobacco-related illnesses occur per year in its reasoning for establishing a uniform tax to all types of tobacco, along with the increase to cigarette tax. *Id.*

Though the federal government initiated tobacco tax, states have been the most active in exercising the right to levy the tobacco excise tax.⁸⁹ In 1988 and 1992, California and Massachusetts, respectively, increased cigarette tax by 25 cents, and allotted portions of the revenue to programs of tobacco control and prevention.⁹⁰ As of 2016, California had once again led the states in combatting tobacco consumption when voters passed a proposition to raise the cigarette tax by two dollars per pack.⁹¹

Unlike tobacco, the US Federal government does not currently have a tax in place directly targeting HFCS or other added sugars, but several other governments throughout the world do.⁹² This has followed a recommendation from the World Health Organization (“WHO”) that governments throughout the world adopt tax measures to lessen HFCS and added sugar consumption.⁹³ Recognizing that consumption of HFCS and other sugars equates to a major factor of the global increase of diseases like obesity

⁸⁹ See Frank J. Chaloupka & Patricia A. Davidson, *Applying Tobacco Control Lessons to Obesity: Taxes and Other Pricing Strategies to Reduce Consumption*, TOBACCO CONTROL LEGAL CONSORTIUM (2010), available at <http://www.publichealthlawcenter.org/sites/default/files/resources/tclc-syn-obesity-2010.pdf> (giving examples as to the frequency of tax increases throughout the states). Between 2002 and 2009, 46 states imposed tax increases on tobacco, with 14 of them being in 2009 alone. *Id.* at 3; see also *Broken Promises to Our Children: The 1998 State Tobacco Settlement 14 Years Later*, TOBACCO FREE KIDS (2012), available at https://www.tobaccofreekids.org/assets/content/what_we_do/state_local_issues/settlement/FY2013/1.%202012%20State%20Report%20-%20Full.pdf.

⁹⁰ See Chaloupka & Davidson, *supra* note 89, at 3.

⁹¹ Stanton Glantz, *California Undermines Big Tobacco*, SALON (Nov. 14, 2016, 6:05 AM), <http://www.salon.com/2016/11/14/california-undermines-big-tobacco-raising-the-cigarette-tax-by-2-in-the-state/>. This proposition is likely to have a substantial effect, considering that for every 10% increase in taxes per pack of cigarettes then results in a five to 15% decrease in smoking amongst youths, and a three to seven percent decrease amongst adults. *Id.*; Chuck Marr & Chye-Ching Huang, *Higher Tobacco Taxes Can Improve Health and Raise Revenue*, CENTER ON BUDGET & POLICY PRIORITIES (Mar. 19, 2014), <http://www.cbpp.org/research/higher-tobacco-taxes-can-improve-health-and-raise-revenue>. Currently, tax rates on tobacco range state-by-state from as low as 17 cents (Missouri) to as high as \$4.35 (New York), with a median tax rate of approximately \$1.60 per pack. *Id.*; see *Map of Excise Tax Rates on Cigarettes*, CDC, <https://www.cdc.gov/statesystem/excisetax.html> (last visited May 15, 2018).

⁹² See *Tax on Sugary Foods and Drinks Backed by World Health Organisation*, BBC (Oct. 11, 2016), <http://www.bbc.com/news/health-37620087> (listing Mexico, Hungary, and South Africa as primary examples of added sugar taxes).

⁹³ *Fiscal Policies For Diet and the Prevention Of Noncommunicable Diseases*, WHO (2016), <http://www.who.int/dietphysicalactivity/publications/fiscal-policies-diet-prevention/en/>.

and diabetes, taxing certain products can “reduce suffering and save lives . . . [and] cut healthcare costs and increase revenues to invest in health services.”⁹⁴ Countries that have imposed SSB and HFCS related taxes have largely seen improvements in both revenue and public health.⁹⁵ Mexico is one country that has been particularly successful with taxing SSB.⁹⁶ There, the recent 12% drop in SSB consumption is expected to result in around 200,000 fewer cases of type two diabetes, 20,000 less strokes and heart attacks, 19,000 less deaths, and up to one billion dollars in medical related savings.⁹⁷ Other than taxation, countries have generally stopped short of regulating HFCS and other added sugars.⁹⁸ In the U.S., New York City is the lone municipality as of yet to attempt regulating

⁹⁴ WHO Urges Global Action to Curtail Consumption and Health Impacts of Sugary Drinks, WHO (Oct. 11, 2016), <http://www.who.int/mediacentre/news/releases/2016/curtail-sugary-drinks/en/>. WHO found that worldwide, 39% of adults were overweight, 11% of men and 15% of women were obese, which had doubled since 1980, and the number of people with diabetes increased from 108 million in 1980 to 422 million in 2014. *Id.* Children have fared even worse, with 42 million children under the age of five being overweight or obese. *Id.*

⁹⁵ See *Taxes on Sugar-Sweetened Beverages as a Public Health Strategy: The Experience of Mexico* (“Experience of Mexico”), PAN AM. HEALTH ORG. (2015), <http://iris.paho.org/xmlui/handle/123456789/18391>. Norway’s tax on SSB has resulted in SSB decline from 4.8 to 2.5 times per week between 2001 and 2008, in contrast with increased levels of consumption in other European countries at the same time. *Id.* at 29. Similar taxes have been adopted in Samoa, Australia, French Polynesia, Fiji, and the Republic of Nauru. *Id.* In Europe, countries including Finland, Denmark, Hungary, and France have had some success with SSB tax. *Id.* at 29-30.

⁹⁶ See generally *id.* According to the American Heart Association, Mexico has the highest number of deaths related to SSB (amongst 35 countries analyzed), and the most frequent causes of hospitalization there are “non-surgical treatment of heart attacks, symptoms of hypertension, and diabetes.” *Id.* at 27.

⁹⁷ See Jacqueline Howard, *Do Soda Taxes Work? Experts Look to Mexico for Answers*, CNN (Nov. 1, 2016, 3:40 PM), <http://www.cnn.com/2016/11/01/health/soda-tax-benefits-mexico/> (indicating that US locations with SSB tax could have similar results to Mexico).

⁹⁸ See Roisin O’Connor, *France Moves to Ban Free-Refill Culture of Sugary Drinks in Bid to Combat Obesity*, INDEPENDENT (Apr. 2, 2015, 12:50 PM), <http://www.independent.co.uk/news/world/europe/france-moves-to-ban-free-refill-culture-of-sugary-drinks-in-bid-to-combat-obesity-10152093.html>. In an attempt to enforce healthier eating habits in a country where 40% of adults are overweight and one in eight are obese, French lawmakers in coalition with The National Health and Nutrition Programme in France have approved a ban on free refills of SSB in restaurant locations. *Id.* Representatives of the program stated, “[i]t is the role of the law to establish a framework to protect the population against a trade-upmanship that tends to make the ‘free’ surplus of food supply . . . an argument to attract consumers and encourage them to excessive consumption which can be harmful to health.” *Id.*

beverages with HFCS and other sugars, and the ban there was struck down by New York's highest Court.⁹⁹

III. A MULTIFACETED APPROACH INCLUDING SSB TAXES, HEALTH CAMPAIGNS, AND FDA LIMITATIONS ON ADDED SUGARS IS NECESSARY TO ACHIEVE A HEALTHIER POPULACE

A. While SSB Taxation Is A Good Start, It Is Merely The Beginning

i. Defending the SSB Tax

While this paper ultimately advocates for federal regulation, it is important to realize that taxation of HFCS and other added sugars is an important start to regulating consumption.¹⁰⁰ Several arguments have been brought forth against the use of taxes for

⁹⁹ In the Matter of New York Statewide Coalition of Hispanic Chambers of Commerce, et al., v. New York City Department of Health and Mental Hygiene, 23 N.Y.3d 681 (2014) (ruling Board of Health failed Boreali standard in prohibiting sugary drinks over 16 ounces). The NYC regulation, known as the "Portion Cap Rule", stated that a

food service establishment may not sell, offer, or provide a sugary drink in a cup or container that is able to contain more than 16 fluid ounces . . . [and] . . . may not sell, offer or provide to any customer a self-service cup or container that is able to contain more than 16 fluid ounces.

N.Y. City Health Code [24 RCNY] § 81.53 [b], [c]. For purposes of this regulation, a "sugary drink" was defined as a beverage that is "sweetened by the manufacturer or establishment with sugar or another calorie sweetener; . . . has greater than 25 calories per 8 fluid ounces of beverage; . . . [and] does not contain more than 50 percent of milk or milk substitute by volume as an ingredient." N.Y. City Health Code [24 RCNY] § 81.53[a][1]. Under the Boreali standard, the court found the New York Board of Health to have "engaged in law-making beyond its regulatory authority," written the law without guidance from legislation, and attempted to implement a rule targeting SSB that had previously been rejected by legislature (because the first three factors were present, it was deemed unnecessary to confront the fourth issue of whether "special expertise or technical competence was involved in the development of the rule"). *New York City Dep't of Health and Mental Hygiene*, 23 N.Y.3d at 682.

¹⁰⁰ See *supra* text accompanying notes 79-85 (discussing taxation as a source of regulation at the municipal level). A wonderful current example lies in Berkeley, where the recent SSB tax has seemed to result in a twenty percent decrease in SSB consumption. *Id.* If such a decrease in consumption were to be sustained, it could have positive enough consequences to reduce rates of obesity and Type II Diabetes. *Id.*

the purposes of curbing the health effects of HFCS and SSB.¹⁰¹ Insiders of the beverage industry claim that “the successful pro-soda tax campaign in 2014, rather than the tax itself, may have led people to report that they were drinking less soda.”¹⁰² Even if the drop in sales and consumption is actually a result of the campaign as opposed to taxation, the taxation coupled with their requisite health campaigns would likely have the desired effect.¹⁰³

¹⁰¹ See Norton Francis et al., *supra* note 83, at 8. For example, Hungary’s one-tier levy of high sugar levels may have spurred stockpiling of SSB before the tax was enacted. *Id.*

¹⁰² See sources cited *supra* note 80 (quoting Brad Williams, a consultant for the beverage industry). Brad Williams’ stance may be reinforced by statements made by John Cawley, Cornell University professor of public policy and economics. *Id.* Cawley noted that big soda companies “absorbed between 30 and 50 percent” of the tax as opposed to passing the full cost of the tax on to consumers. *Id.*

¹⁰³ See Goldman & Glantz, *Evaluation of Antismoking Advertising Campaigns*, 279 JAMA 772 (1998). The decline of sales and use of cigarettes is precisely what occurred in the US when Anti-smoking campaigns were used in tandem with higher taxes. *Id.* at 729. This study revealed that:

Paid media is most effective when used as part of a multifaceted approach to reduce smoking, including community programs, higher taxes, and school-based programs. Because the various program elements are designed to work together, it is difficult to separate the effects of paid media from other contemporaneous tobacco control interventions. Nonetheless, there is considerable evidence that paid antismoking advertisements are effective in reducing cigarette consumption.

Id. The study utilizes California’s decreased tobacco consumption levels of 13.7% and 12.2%, which correlated with the two anti-smoking media campaign to demonstrate the effect of health campaigns in addition to higher taxes. *Id.* When applied to the issue of added sugars, it logically follows that taxation would be one piece of the multifaceted puzzle in effectuating dietary change. See generally Charles, *supra* note 80. Before voting on SSB tax in San Francisco and Berkeley, where it did not pass in San Francisco, but did in the latter, individuals responding to a survey in both cities consumed 1.25 SSB per day. *Id.* After the bill was put into effect in Berkeley, SSB consumption went down by 20%, and water consumption increased a great deal. *Id.* Similar results were not found in San Francisco. *Id.* As posited by detractors of the SSB tax, this may have had more to do with the campaign. *Id.* In regard to the oft-cited argument that revenue levels from SSB tax has been or will be disappointing, it is important to note that the ultimate goal of a nationwide SSB tax would not be revenue, but the more laudable goal of improved public health. See John Hendrickson, *Soda Tax Doesn’t Guarantee More Revenue*, DES MOINES REGISTER (Sept. 21, 2017), <https://www.desmoinesregister.com/story/opinion/columnists/iowa-view/2017/09/21/soda-tax-doesnt-guarantee-more-revenue-less-obesity/689554001/> (urging Iowa to not adopt SSB tax as it does not always generate much revenue). In fact, decreasing rates of revenue throughout the years will be indicative that the overall health initiative is working, as less added sugar products will be purchased.

Groups dedicated to blocking or repealing existing SSB taxation purport that one of the primary issues with these taxes is that their effect is really rather minimal.¹⁰⁴ With varying rates of one to two percent for the current taxes on SSB throughout the U.S. municipalities, it is understandable that opponents of the tax would attempt to argue that such rates would be ineffective in curtailing sales and subsequently limiting negative health effects.¹⁰⁵ This theory, it seems, can be displayed by the fact that 33 states already have a sales tax on SSB with an average tax rate of slightly above five percent, yet “consumers still pony up at the register for a Big Gulp or a Pepsi.”¹⁰⁶ This has been directly controverted by the recent rise in prices of SSB in Seattle; though the city’s tax is merely 1.75 cents per ounce, many beverages have increased in price by at least 65%.¹⁰⁷ Where stores do not absorb the price increase on behalf of consumers, it is speculated that

¹⁰⁴ See *supra* note 81 and accompanying text; see also *Sugar Sweetened Beverage Taxes*, COUNTRY HEALTH RANKINGS & ROADMAPS, <http://www.countyhealthrankings.org/policies/sugar-sweetened-beverage-taxes> (last updated Feb. 23, 2017) (citing John Cawley, *An Economy of Scales: A Selective Review Of Obesity’s Economic Causes, Consequences, and Solutions*, 43 J. OF HEALTH ECONOMICS 244 (Sept. 2015)). SSB taxation “in small geographic areas may also have minimal effects on consumption, since consumers can easily purchase SSBs in neighboring areas without such taxes.” *Id.*

¹⁰⁵ See Lee, *supra* note 79 (questioning the future of the soda industry, considering the expansion of SSB tax support).

¹⁰⁶ Kelly Phillips Erb, *Lawsuit Filed Against Philadelphia In Effort To Stop Soda Tax*, FORBES (Sept. 14, 2016, 11:33 PM), <https://www.forbes.com/sites/kellyphillipserb/2016/09/14/lawsuit-filed-against-philadelphia-in-effort-to-stop-soda-tax/#3ae164a7b192> (explaining the opposition to beverage tax laws by interest groups and businesses). Kelly Erb argues that if the purpose of taxation is to reduce consumption, then the rate of taxation should be high enough to actually curb consumption. *Id.* The example of Philadelphia is given, which currently has a 1.5% excise tax on SSB- potentially too low to make a substantial difference in customer purchases. *Id.* Where that analysis fails, however, is that the 1.5% tax is per ounce- effectively causing “[a] gallon [of SSB] that cost \$1.77 now goes for \$3.69 because of an added \$1.92 in tax.” Anna Orson & Mark Dent, *Philly Soda Tax: The Big List Of Drinks That Are and Aren’t Taxed*, BILLYPENN (Jan. 3, 2017, 5:00 PM), <https://billypenn.com/2017/01/03/philly-soda-tax-the-big-list-of-drinks-that-are-and-arent-taxed/> (distinguishing the list of drinks that are taxed against the drinks that are left untouched).

¹⁰⁷ Jeffrey Bartash, *After Seattle Soda Tax, Costco Says Case Of Gatorade Costs \$26.33 Instead of \$15.99*, MARKETWATCH (Jan. 11, 2018, 11:42 AM), <https://www.marketwatch.com/story/2633-instead-of-1599-a-case-costco-shows-seattle-customers-just-how-much-soda-tax-costs-them-2018-01-10>. Cases of Gatorade once costing \$15.99 have risen to \$26.33, and Dr. Pepper rose from \$9.99 to \$17.55. *Id.*

shoppers can simply purchase SSB from other towns and cities.¹⁰⁸ This point may be true for a large number of consumers, which directly illustrates why an SSB tax at the state and/or federal level could be beneficial.

Many critics of SSB taxes have also classified the taxes as potentially being regressive.¹⁰⁹ It would be difficult, and perhaps futile, to contend that lower income families and individuals do not purchase SSB at higher rates than other segments of the population in the United States.¹¹⁰ Even if poorer members of society purchase more products with added sugar, the taxes will be earmarked, so that resulting revenue will be assigned to programs which benefit these same citizens.¹¹¹ ‘Progressive’ uses of the

¹⁰⁸ See Norton Francis et al., *supra* note 83; Bollinger & Sexton, *Do Soda Taxes Work? Not Unless Retailers Raise Prices*, HARV. BUS. REV. (Jan. 10, 2018), <https://hbr.org/2018/01/do-soda-taxes-work-not-unless-retailers-raise-prices> (identifying that SSB taxes can be easily avoided by shopping outside a city with SSB tax).

¹⁰⁹ See Norton Francis et al., *supra* note 83, at 7 (describing the mixed results for passing sweetened drink taxes). In discussing distributional considerations, the study states that lower-income adults drink around 40% more SSBs per day than adults of less meager economic means, and children of lower-income homes drink more than twice as much as wealthier children. *Id.* See also Falbe et al., *supra* note 81 (offering discussion of disproportionate impact of SSB tax).

¹¹⁰ See Norton Francis et al., *supra* note 83 (explaining the difficulties lower income families contend with higher purchasing rates). Conversely, because the health consequences of HFCS consumption more negatively affect lower income individuals, it would be appropriate to instill a tax model that maximizes consumption amongst that demographic, given that the purpose is to protect the health of citizens. *Id.* Compare with, Experience of Mexico, *supra* note 95 (showing income levels affected pre and post-taxation were rather uniform). As with the applicability of many taxes, “perfect” uniformity can often not be attained. See Lund, *supra* note 85, at 1193 (discussing the Uniformity Clause).

¹¹¹ See Chaloupka & Davidson, *supra* note 89, at 2 (describing the effects of distributing revenue for health programs). Similar to tobacco consumption, higher levels of consumption among poorer segments of the population naturally results in the tax affecting that portion of the population much greater; but the “burden of illness and death caused by tobacco is borne to a greater extent by the poor.” Barbara S. Lynch & Richard J. Bonnie, *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths*, NATIONAL ACADEMY PRESS 1, 19-20 (1994), available at https://www.ncbi.nlm.nih.gov/books/NBK236763/pdf/Bookshelf_NBK236763.pdf (describing the policies put forward to combat nicotine addiction). Any hardship caused by tobacco price increase is surely outweighed by a decline in death and illness. *Id.* People of more modest means are “more responsive to price increases” than others, and this will ensure that unhealthy consumption habits are reduced. Chuck Marr & Chye-Ching Huang, *Higher Tobacco Taxes Can Improve Health and Raise Revenue*, CENTER ON BUDGET AND POLICY PRIORITIES, https://www.cbpp.org/research/higher-tobacco-taxes-can-improve-health-and-raise-revenue#_ftn15 (last updated Mar. 19, 2014) (citing CBO, *Raising the Excise Tax on Cigarettes: Effects on Health and the Federal Budget*, CBO 1, 39-40 (June 2012)), available at

revenue would ensure that the use of revenue directly benefits populations primarily purchasing the SSB, and directly offsets any uneven effect of the taxes.¹¹²

ii. What Can We Learn From Other Countries With SSB Tax?

Countries that have enacted these taxes for several years indicate that lessening consumption of added sugars correlates with both the tax and public health messages.¹¹³ Reduced consumption is plainly shown by the numerous countries that have had success

http://www.cbo.gov/sites/default/files/cbofiles/attachments/06-13-Smoking_Reduction.pdf (describing the effects on raising the excise tax on health and the federal budget). SSB consumption “is higher among boys, adolescents, non-Hispanic blacks, or youth living in low-income famil[ies],” as well as with similar demographics of low-income adults. *Get the Facts: Sugar-Sweetened Beverages and Consumption*, CDC, <https://www.cdc.gov/nutrition/data-statistics/sugar-sweetened-beverages-intake.html> (last updated Apr. 7, 2017) (explaining the widening gap between the diets of the rich and poor). The disparity between healthy eating habits of low-income and high-income individuals has increased, meaning that low-income families are consuming more added sugars. See also Lisa Rapaport, *The Way Americans Eat Is Becoming More Divided*, SCIENTIFIC AMERICAN, <https://www.scientificamerican.com/article/the-way-americans-eat-is-becoming-more-divided/> (last visited May 16, 2018); Max Ehrenfreund, *The Difference Between What Rich and Poor Americans Eat Is Getting Bigger*, THE WASH. POST (June 23, 2016), https://www.washingtonpost.com/news/wonk/wp/2016/06/23/the-difference-between-what-rich-and-poor-americans-eat-is-getting-bigger/?utm_term=.c0c70c738cc6 (describing the correlation between Americans’ income levels and changes in diets). In Berkeley’s low-income neighborhoods, the tax passage led to a 21% decrease in SSB consumption and a 63% increase in water consumption. See generally Howard, *supra* note 97 (detailing ballot initiatives to tax the sale of sodas and other sugar-sweetened beverages).

¹¹² See Chaloupka & Davidson, *supra* note 89; *supra* note 111 and accompanying text; *Cigarette & Tobacco Taxes*, AM. LUNG ASS’N, <http://www.lung.org/our-initiatives/tobacco/taxes/> (last visited May 16, 2018) (establishing that federal tobacco tax revenue provides health insurance to over eight million uninsured children). In the past for example, tobacco tax revenue has been applied to funding the Children’s Health Insurance Program (“CHIP”). *Id.* See also *Tobacco Prevention Program Funding*, AM. LUNG ASS’N, <http://www.lung.org/our-initiatives/tobacco/cessation-and-prevention/tobacco-prevention-program-funding.html> (last visited May 15, 2018) (discussing that while many states could more appropriately apply the revenue to such programs, the states that do have had success). Some states apply the revenue to smoking prevention and cessation projects. *Id.* See also H.R.2, *supra* note 88 (regarding the renewal of CHIP discussing the intricacies of Obama’s proposal). If Obama’s tobacco tax increase proposal had passed, the resulting revenue would have been applied to public pre-school programs. *Id.* Hinton & Svachula, *supra* note 79 (describing California’s successful soda-taxes). Likewise, California’s thus-far successful soda taxes have largely been applied to health and nutrition programs, with Berkeley collecting approximately two and a half million dollars for such efforts by January 2017. *Id.*

¹¹³ See *supra* note 95 and accompanying text (discussing countries with SSB taxes, and the success they have shared).

with their taxes on HFCS and SSB.¹¹⁴ Mexico in particular has enjoyed success with SSB taxes.¹¹⁵ Unsurprisingly, Mexico's initial approach of encouraging self-regulation by manufacturers was utterly ineffective; just as a lack of government involvement here has led to skyrocketing amounts of added sugars.¹¹⁶ In order for a state or federal SSB tax to enjoy similar benefits that Mexico has experienced, we must incorporate a mass media health campaign.¹¹⁷ American principles will align far better with this method of persuasion over force, as opposed to the previous experiments of all-out bans.¹¹⁸

iii. Why We Should Look to Tobacco Tax As A Guiding Precedent

There are similarities between the movement and necessities of taxing tobacco throughout the US, and those of taxing HFCS or SSB.¹¹⁹ The path that tobacco tax has

¹¹⁴ See *Tax on Sugary Foods and Drinks Backed by World Health Organisation*, *supra* note 92 (discussing outcomes primarily in Mexico, as well as European and South Pacific countries). See also *Sugar Sweetened Beverage Taxes*, *supra* note 104. Regarding examples within the United States, more time will be needed to ascertain whether the benefits of taxation will continue long term. *Id.*

¹¹⁵ See *supra* notes 96, 97 and accompanying text (discussing decrease in SSB consumption and associated health benefits in Mexico).

¹¹⁶ See *Experience of Mexico*, *supra* note 95 (describing sugar-taxes implemented worldwide and the resulting impacts). Similar approaches in European countries also failed to yield the expected results of lower added sugar use. *Id.*

¹¹⁷ *Id.* at 43. The Mexican health campaign was meticulously planned and contained "specific messages for every audience and communication medium, as well as [using] multiple communication channels rather than only traditional media." *Id.* at 43-44. The campaign strategy there was to simultaneously gain the support of decision-makers and the populace, while helping each to visualize the adverse health effects, what caused them, and specific proposals to cure them. *Id.* at 44. The FDA has had success in the past with educating the public about healthier eating and is more than capable of doing so again now. See generally sources cited *supra* notes 49, 50 (describing the FDA's expanded focus on providing dietary information for consumers by the 1970s). See *About FDA: Significant Dates*, *supra* note 30. The FDA has become better equipped for, and has been operating with the purpose of, consumer health protection. *Id.* See generally *supra* notes 49-50 and accompanying text (describing the FDA's expanded focus on providing dietary information for consumers by the 1970s). The FDA has had success in the past with educating the public about healthier eating and is more than capable of doing so again. *Id.*

¹¹⁸ See O'Connor, *supra* note 98 (reporting on France's ban on SSB free refills at restaurant locations); *supra* note 99 and accompanying text (discussing the "Portion Cap Rule" in New York and its downfall). See generally Shank, *supra* note 50 (relating the concepts of American Individualism as it relates to food regulation).

¹¹⁹ See Watts, *supra* note 86 (discussing similarities between tobacco and HFCS as they pertain to public policy); see also *General Explanations*, *supra* note 88, at 194 (citing 16 million tobacco-related illnesses and 480,000 deaths as reason for uniform tobacco tax); *WHO Urges Global Action to*

taken is similar to the likely path of SSB, as tobacco tax did not begin at such high rates as to immediately curtail tobacco sales in such a way that smoking ceased.¹²⁰ As with the beginnings of tobacco tax, taxes on HFCS and SSB are merely in their infancy.¹²¹ Just as tobacco taxes have increased immensely over the years, SSB taxes will likely mirror that trend, and help reduce sales and consumption.¹²² As a result, the US government will likely have a reassuring precedent in the models developed in several of the municipalities.¹²³ Assuming that uniformity in taxation is applied, the US government should be able to implement the basic principles of the tobacco tax as well as its anti-smoking campaign to combat the country's current health crisis.¹²⁴

Curtail Consumption and Health Impacts of Sugary Drinks, WHO (Oct. 11, 2016), <http://www.who.int/mediacentre/news/releases/2016/curtail-sugary-drinks/en/> (reporting worldwide effects of taxing sugar drinks). Though tobacco consumption is in no way required for human survival, it is important to note that sugar is different. *Id.* WHO's Department of Nutrition for Health and Development director, Dr. Francesco Branca, said:

Nutritionally, people don't need any sugar in their diet. WHO recommends that if people do consume free sugars, they keep their intake below 10% of their total energy needs, and reduce it to less than 5% for additional health benefits. This is equivalent to less than a single serving (at least 250 ml) of commonly consumed sugary drinks per day.

Id. The taxing of SSB also arises out of serious health complications presented by using excess added sugars. *Id.* See also *supra* note 65 and accompanying text (relating the health implications of excess added sugar and HFCS consumption).

¹²⁰ See Glantz, *supra* note 91 (discussing the path of tobacco tax for California). See also *Experience of Mexico*, *supra* note 95. While it seems that the SSB taxes in US municipalities are having a beneficial effect in most cities, it should be clear that they will become exponentially more effective if and when they increase to levels like the nationwide 10% SSB tax in Mexico. *Id.* at 49.

¹²¹ See Charles, *supra* note 80 (reporting Berkeley, California as the first location with a SSB tax as of November 2014).

¹²² *Id.* See Falbe et al., *supra* note 81 (discussing the effects of soda tax in Berkeley). After witnessing the continued success of flagship cities like Berkeley, or federal governments like Mexico, it is likely that states and the federal government here will incorporate SSB taxes, developing similarly to of the tobacco tax. *Id.* See also *supra* note 100 and accompanying text.

¹²³ See *id.* See also *supra* note 87 and accompanying text.

¹²⁴ See *supra* note 85 and accompanying text (discussing tax uniformity and noting that inequalities in taxation are inevitable); *supra* note 103 and accompanying text (finding decline in sales and use of cigarettes achieved with tax plan coupled with health campaign). See also *supra* note 83 and accompanying text (noting factors used in the study's tax model to discover an ideal SSB tax model).

B. The Federal Government Must React to the Added Sugar Health Epidemic

i. Why Enacting A Limit Makes Sense

It is interesting to see how the government has come full-circle with food regulation; once more, states and local governments have been the first to react to what can be described as a serious public health crisis, or even an epidemic.¹²⁵ Because of the low cost and subsequent widespread use of HFCS and other added sugars as a cheap alternative for food manufacturers, HFCS presents itself as being akin to the adulterous foods that spurred the development of governmental regulation.¹²⁶ Initially for economic reasons, the government was concerned about the cheapening of food products through the addition of substandard ingredients.¹²⁷ Here too, HFCS has been utilized to save money at the manufacturing level.¹²⁸

As technological advances progress the food manufacturing process, the need for government regulation similarly increases.¹²⁹ The US government has come a long way

¹²⁵ See discussion *supra* Part I, Section A (discussing role of states in early American food regulation). Colonies began to protect the health and economic interests of their populace through regulatory measures, and this continued to be handled by the state governments well into the 1800s. See GUIDE TO US FOOD LAWS AND REGULATIONS, *supra* note 24 (illuminating the beginnings of food regulation in the United States); Law, *supra* note 22 (stating that until the late 1800s, food adulteration laws were handled exclusively by states). Obesity and other consequences of high sugar intake meet the general definition of epidemic because “the prevalence of [such] is high and the increase over the past two decades has been rapid compared at least with the immediately preceding decades.” Katherine M. Flegal, *Commentary: The Epidemic of Obesity—What’s in a Name?*, 35 INT’L J. EPIDEMIOLOGY 72, 73 (2006) (discussing use of the term “epidemic” in describing the increase of obesity throughout the world).

¹²⁶ See sources cited *supra* note 25 (citing Massachusetts inspection law to prevent adulterated foods as first state law against food adulteration).

¹²⁷ See Law, *supra* note 22 (detailing the history of food adulteration as stemming from manufacturers seeking greater profits).

¹²⁸ See WHITE, *supra* note 61, at 16-18 (citing political turmoil in sugar-producing countries as the reason for HFCS’s creation). When food manufacturers realized how cheaply their products could be created with HFCS, many began to use HFCS instead of sugar. *Id.* The “cheapness and versatility [of HFCS and other added sugars] have encouraged manufacturers to insinuate a tasty but unhealthful load of empty calories” Denn & Dizon, *supra* note 62.

¹²⁹ See Law, *supra* note 22 (identifying urbanization and advances in chemistry as other factors contributing to increased food quality legislation). Just as regulatory legislation increased during

from the times of the “Poison Squad,” and is legally and administratively capable of understanding the risks of HFCS and other added sugars while simultaneously ensuring that our populace consume healthy food and drink.¹³⁰ An excerpt of a speech given by a member of the 1885 Congress is of particular relevance because it raised the point that inspection of food is a different issue than say, a “paper-soled shoe”; with food, the unwary consumer requires assistance from the government:

In ordinary cases the consumer may be left to his own intelligence to protect himself against impositions. By the exercise of a reasonable degree of caution, he can protect himself from frauds in under-weight and in under-measure. If he cannot detect a paper-soled shoe on inspection, he detects it in the wearing of it, and in one way or another he can impose a penalty upon the fraudulent vendor. As a general rule the doctrine of laissez faire can be applied. Not so with many of the adulterations of food. Scientific inspection is needed to detect the fraud, and scientific inspection is beyond the reach of the ordinary consumer. In such cases the Government should intervene.¹³¹

HFCS and other added sugars are the current “paper-soled shoes” of food regulation.¹³²

While the government can detect added sugars in their extreme amounts, it must go a step further by restricting the amount allotted by manufacturers within each serving size. Each

the development of large, impersonal markets with uncertain food quality, here too, an improvement of scientific methods renders further legislation necessary. *Id.*

¹³⁰ See Watson, *supra* note 33 (discussing the origins of the Poison Squad); discussion *supra* Part I, Part II (explaining current food safety laws and the foundation upon which they are built). Because the modern parameters of *parens patriae* and police powers are constantly evolving, they can be applied to ensuring the safety and well-being of citizens in the context of added sugar regulation. See sources cited, *supra* note 20 and accompanying text (providing diverse examples of *parens patriae* and police power used to protect citizens); see also POMERANZ, *supra* note 20, at 450-55 (arguing *parens patriae* allows for attorney generals to litigate against food and beverage manufacturers). Such a regulation will likely be upheld if constitutional rights are not unreasonably limited as a result of the regulation. See Hodge, *supra* note 21, at 350-52. *But see*, Gostin, *supra* note 21, at 94-96 (stating that such laws promoting health are delegated to the states through the Tenth Amendment). In the lone instance where a municipality attempted to enact a limit on HFCS and added sugars, it was found to have “engaged in law-making beyond its . . . authority.” *In the Matter of New York*, 23 N.Y.3d at 699; see sources cited *supra* note 99 (discussing the court’s interpretation of New York City’s “Portion Cap Rule”).

¹³¹ See Johnson, *supra* note 26, at 93-94 (describing “national action” reform as reaction to disappointment of state’s regulation of food).

¹³² See *id.*; sources cited *supra* note 27 (discussing link between technological advances and move toward more stringent regulation of food products).

day, the average American is consuming between 18 and 23 teaspoons of added sugars, many more times what is recommended, without realizing the harm that this added sugar is causing.¹³³

It is of the utmost importance that the government enact regulation to protect its citizens from the unsafe levels of HFCS and added sugars in food and drink, because citizen's attempts at protecting themselves thus far has failed.¹³⁴ The court in *Archer-Daniels-Midland* held that HFCS itself is not unreasonably dangerous, and that the only way in which it can present harm to consumers is if they consume it in excess quantities.¹³⁵ The reality is that Americans are consuming excess quantities of added sugars, due in part to the FDA's lack of mandated maximum levels of added sugars in beverages.¹³⁶ The issue is not that HFCS should simply be manufactured in a safer manner, but that HFCS should not comprise a vast amount of an individual's caloric intake.¹³⁷

C. FDA's Unwillingness to Respond

The purpose of the FDA's creation was to ensure healthy living for the American public.¹³⁸ Though the FDA's original purpose was a mixture of regulating economic

¹³³ See Center For Science in the Public Interest, *supra* note 77 (describing petition for FDA to determine safe level of added sugars for beverages); see also *FDA Urged to Determine Safe Limits on High Fructose Corn Syrup and Other Sugars in Soft Drinks*, *supra* note 6.

¹³⁴ See *Archer-Daniels-Midland*, *supra* notes 66-69 and accompanying text (dismissing plaintiff's HFCS complaint for reasons including failure to plead HFCS was unreasonably dangerous); *Holk*, *supra* notes 72-76 and accompanying text.

¹³⁵ See *Archer-Daniels-Midland*, *supra* notes 66-69 and accompanying text. The court's reason for not finding HFCS unreasonably dangerous was due to the plaintiff's failure to distinguish the reasons for the increased danger of HFCS compared to naturally occurring sugars. *Id.*

¹³⁶ See *Warshaw* *supra* note 9 (noting that calories in added sugars are devoid of nutritional value); *FDA Urged to Determine Safe Limits on High Fructose Corn Syrup and Other Sugars in Soft Drinks*, *supra* note 6 (explaining why FDA has obligation to determine "safe" levels of added sugars in beverages).

¹³⁷ See *Archer-Daniels-Midland*, 2014 WL 1600414, at *8. As previously noted, the increase in added sugar intake has resulted in increased deaths from heart disease, as well as a rise in cavities, weight gain, and high blood pressure, and adverse liver effects. See *Corliss*, *supra* note 65.

¹³⁸ See discussion *supra* Part I (enacting FDA and accompanying legislation was for purpose of ensuring safer food and drugs).

adulteration and protecting public health, there has been a significant amount of focus on the latter since the installment of the National Food Lunch Program.¹³⁹ Since the beginning of the FDA, and arguably even earlier than that, actual federal regulation seems to require a “public emergency” to justify action.¹⁴⁰ Such hesitancy on behalf of FDA is inappropriate in this given situation.¹⁴¹ The effects of HFCS and other added sugars at the levels permitted within food and drink are just as deadly as previous public health emergencies in US history, but seemingly less immediate and less attributable to one particular cause.¹⁴² While FDA is potentially hesitant to enforce a regulation stemming from ‘unconfirmed’ studies and data, it is worth noting that the American Beverage Association and Corn Refiners Association engage in stunningly similar behavior to that of the tobacco corporations several years ago.¹⁴³

¹³⁹ See *supra* note 49 and accompanying text. The National Food Lunch Program went beyond advisory advertisements and required school lunches to comply with nutritional standards. National School Lunch Act of 1946, ch. 281, Pub. L. No. 79-396, 60 Stat. 230 (codified as amended at 42 U.S.C. §§ 1751-1769 (2000)).

¹⁴⁰ See *supra* note 37. While the public expressed outrage and disgust at the revelations of The Jungle, the United States was experiencing tetanus contaminations within diphtheria and smallpox vaccines that killed nearly two dozen children. *About FDA: Significant Dates in U.S. Food and Drug Law History*, *supra* note 30; see also Sinclair, *supra* note 35 (explaining The Jungle and its implications for food safety regulation). Once again, the cheapening of products, using the substantially cheaper HFCS and other added sugars, has gone beyond an issue of adulteration and has created a legitimate “palpable hazard” to peoples’ health. See Young, *supra* note 34, at 157.

¹⁴¹ See *supra* note 35. The public health emergencies, occurring at the turn of the last century, created many rather visibly active consumer advocacy groups. Law & Libecap, *supra* note 35, at 324-25. The lack of government intervention with HFCS and other added sugars has produced a similar effect today. See *supra* notes 64, 77-78 (describing petitions and other actions taken by Center for Science in the Public Interest).

¹⁴² See *Petition to Ensure the Safe Use of “Added Sugars,” supra* note 77. Consumption of unsafe amounts of HFCS and other added sugars causes health issues such as obesity and heart disease. *Id.* When the revolutionary 1906 Pure Food and Drug Act was enacted, it followed on the heels of an ineffective diphtheria antitoxin and a tetanus outbreak within a smallpox vaccination, collectively killing 22, in addition to the public’s disgust and outrage resulting from Upton Sinclair’s journalistic revelations. See London, *supra* note 36, at 327-29.

¹⁴³ See *Sugar-Coating Science: How the Food Industry Misleads Consumers on Sugar*, UCSUSA (June 2014), <http://www.ucsus.org/center-for-science-and-democracy/sugar-coating-science.html#.WPQwEtL1C00> (“[D]espite the evidence that we need to eat less sugar, we continue to consume far too much of it—encouraged by the aggressive, and often deceptive, marketing strategies of the food and beverage industry.”). The food industry spends over one

i. Many Citizens Are Still Not Amenable To Limiting Or Banning HFCS And Other Added Sugars

Perhaps the strongest argument against federal regulation of HFCS, and the most deeply entrenched in United States History, is that of limiting the government from meddling in personal choices.¹⁴⁴ The United States has long promulgated an image of protector, “rather than boss.”¹⁴⁵ This was evidenced by the federal government’s behavior after the 1940s.¹⁴⁶ NLEA furthered this largely hands-off approach by creating uniform standards for food labeling that provides dietary information to allow healthy choices.¹⁴⁷ Comprehensive food labeling is certainly on the right path to fostering healthy consumption of food products, but it does not prevent manufacturers from creating products with astronomical levels of sugar.¹⁴⁸ As a result, many consumers are unable to make the healthy choice when products loaded with added sugars are the affordable option.

billion dollars per year in advertising while misleading consumers about sugar levels through using health-related words, targeting vulnerable segments of the population, and using seemingly science-based communication. *Id.* More specifically, the SSB industry in the US has spent approximately 70 million dollars lobbying against SSB taxes since 2009. *See Experience of Mexico, supra* note 95, at 30.

¹⁴⁴ *See* Schaffer, *supra* note 50. Even in light of improved knowledge of dietary medicine, the government generally affected Americans’ diets by simply giving health-related advice. *Id.* The growth of medical knowledge coupled with the government’s largely hands-off policy has made for a reluctance to act, which will only become more difficult as medical knowledge improves. *See generally* Shank *supra* note 50.

¹⁴⁵ *Id.*

¹⁴⁶ *See* National School Lunch Act of 1946, *supra* note 49.

¹⁴⁷ *See* Andre, *supra* notes 50-53. This legislation was based upon recommendations of consumption “in order to foster more healthy choices.” *See* Javitt, *supra* note 53 (making a compelling case for food labeling oriented towards children).

¹⁴⁸ *See* Warsaw, *supra* note 9 (illustrating the percentage of packaged foods with added sugar). In response to pressure from health advocacy groups, the FDA will begin requiring more nutritionally comprehensive food and drink labels but has chosen to not determine a limit on added sugars for manufacturers, nor to meaningfully encourage manufacturers to voluntarily reduce sugar use. *See* sources cited *supra* note 78 and accompanying text. The argument, presumably, is that improved labeling will cause consumers to exercise their purchasing power, and in turn manufacturers will respond by lessening added sugars. *Id.* In the face of a public health epidemic, a more immediate and beneficial change will come from FDA intervention. *Id.*

A primary argument against government action is that self-regulation by manufacturers and consumers is preferable to intervention.¹⁴⁹ Self-regulation is unattainable with a climate that involves the lack of government protection and aggressive advertising tactics from beverage and food industries.¹⁵⁰ While the FDA has tried unsuccessfully to instill merely a role of protector, this is compounded by the fact that HFCS and other added sugars are GRAS.¹⁵¹ As long as the FDA continues to view HFCS and other added sugars as safe for consumption at their current levels of use, the market will have little incentive to regulate the amount of added sugars products contain.

ii. The FDA's Current Classification System Is Not Conducive To Limitation of HFCS And Other Added Sugars

While the qualifying procedure for food additives and foods GRAS may be well-intentioned, it lacks the fundamental ability to ensure that the FDA is using unbiased findings.¹⁵² Food additives and ingredients are not approved by the FDA, but by “privately held data and information” from the industry that profits from the product sales.¹⁵³ As Dan Flynn aptly points out, it seems that a rule that merely *encourages*

¹⁴⁹ See Lisa L. Sharma et al., *The Food Industry and Self-Regulation: Standards to Promote Success and to Avoid Public Health Failures*, 100 AM. J. PUB. HEALTH (2010), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804645/>. Self-regulation has failed in the realm of tobacco but has shared more success in areas such as forestry and fishing. *Id.* Heightened health concerns held by policymakers and health professionals due to poor diets has spurred food and drink manufacturers to pledge self-regulation, which is “characteristic of threatened industries.” *Id.* Most self-regulation in the food and beverage industry lacks specific guidelines, and do not appear to have been overwhelmingly successful at improving public health. *Id.*

¹⁵⁰ See *id.* It becomes clear that neither manufacturers or consumers are engaging in meaningful self-regulation when considering the amount of added sugars people are consuming, in addition the amount of added sugars in food and drinks. See Turner, *supra* note 5; Warsaw, *supra* note 9.

¹⁵¹ See *supra* notes 55-57, 60 (describing that ingredients must be identified, and comply with specifications of properties, conditions of use).

¹⁵² See *supra* note 58. The scientific data employed by the government in determining whether the ingredient is safe for intended use derives from experts that are not employed by the government, but instead by the industry that submits the information, and stands to profit the most. *Id.*

¹⁵³ *Id.*

companies to notify the FDA about their scientific findings of fact creates a ripe atmosphere for conflicts of interest.¹⁵⁴ It is also worth noting that the majority of existing literature indicating that HFCS and other added sugars are no less healthy than other sugars, or of not being unhealthy at all, propagate from scientists employed by the HFCS industry.¹⁵⁵ Because self-regulation of added sugars has proven ineffective, it is time for the federal government to begin regulating the amount of HFCS and other added sugars within food and drink.¹⁵⁶

While the recently improved labeling of all added sugars presented a welcome and long overdue improvement to raising awareness of the unhealthy nature of food and beverages, allowing such unhealthy levels of added sugars to be consumed is irresponsible.¹⁵⁷ Where individuals are consuming many times more than the recommended amount of HFCS and added sugars, this should equate to an instance where regulation is permissible.¹⁵⁸ Individuals are recommended to limit their intake of HFCs and other added sugars, but an unchecked food and beverage industry that provides a widespread amount of food goods for relatively low prices has created a culture that is hard to shake. The FDA maintains that there is no evidence proving that HFCS and other added sugars are less healthy than natural sugar, but these studies compare the effect of

¹⁵⁴ See *supra* note 59.

¹⁵⁵ See White *supra* notes 7, 61. Both John S. White and James M. Rippe are paid experts for the Corn Refiners Association. Bonnie Eslinger, *Corn Syrup Industry Didn't Secretly Fund Ads, Jury Hears*, LAW360 (Nov. 5, 2015, 11:09 PM) <https://www.law360.com/articles/723746/corn-syrup-industry-didn-t-secretly-fund-ads-jury-hears>. See also *Corn Processors Pay Advocates, Claiming They Are Science Experts, According to New Legal Filing From The Sugar Association*, *supra* note 62; Lipton, *supra* note 62.

¹⁵⁶ Sharma, *supra* note 149 (discussing the sugar industry's attempts thus far at self-regulation).

¹⁵⁷ See *supra* note 54 and accompanying text (discussing the nature of the new labeling).

¹⁵⁸ See *supra* note 61 and accompanying text. As stated by Law, the public interest motivation for regulation of protecting consumers from unsafe food and drug products is widely accepted. See *supra* note 23 and accompanying text.

comparable amounts of different types of sugar.¹⁵⁹ Seeing as overconsumption of HFCS and other added sugars are a major factor in the leading causes of death in the US, regulation seems to be the next logical step.¹⁶⁰

iii. The FDA Should Enact A Limit On HFCS And Other Added Sugars

While the FDA and the federal government have authority to ensure the health and safety of the public, it is unlikely that municipalities will have the same ability.¹⁶¹ Unlike the fact that states may lead the way in imposing taxes on HFCS and SSB, the necessary regulation must occur at the federal level, and should fall squarely on the shoulders of the FDA.¹⁶² Whether it be by oversight, misapplication, or an unwillingness to respond, the FDA has been misclassifying HFCS and other added sugars as GRAS.¹⁶³ To qualify as GRAS, the substance must be safe for consumption under the conditions

¹⁵⁹ See *supra* note 64 and accompanying text.

¹⁶⁰ See sources cited *supra* note 64 and accompanying text. Fourteen million Americans are consuming over one third of their caloric intake in the form of added sugars, resulting in the average American consuming between eighteen and twenty-three teaspoons of sugar per day. *FDA Urged to Determine Safe Limits on High-Fructose Corn Syrup and Other Sugars in Soft Drinks, Sugar Drinks' Role in Obesity, Diabetes, and Heart Disease Warrants FDA Intervention*, CSPINET, <https://cspinet.org/new/201302131.html> (last visited May 16, 2018). It is recommended that less than ten percent of caloric intake be in the form of sugar. *Id.*

¹⁶¹ See *supra* note 20 (detailing the effects of *parens patriae*); *supra* note 99. The New York City Dep't of Health and Mental Hygiene case makes it abundantly clear that Boards of Health will likely need to refrain from addressing "policy goals [] without any legislative delegation." *New York City Dep't of Health and Mental Hygiene*, 23 N.Y.3d at 682. Gostin & Hodge posit that under the tenth amendment, and by extension of state delegation, local municipalities would allow for the enactment of laws and regulations to "protect, preserve and promote the health, safety, morals, and general welfare of the people." See Gostin & Hodge, *supra* note 21 at 95-96. Assuming there are no constitutional infringements, such an interest in promoting public health would be upheld (though realistically, setting limits on HFCS and other added sugars at the state level would be sure to spark litigation by citizens and manufacturers alike). *Id.* The effects of taxation and a public campaign will be slow to develop, if it does work, which is why this paper promotes the possibility of federal regulation. *Id.*

¹⁶² See discussion *supra* Part II. The legislative history of the FDA indicates that this burden should fall here; even the predecessor of the FDA, the Pure Food and Drug Act, was intended to safeguard public health. See sources cited *supra* note 36.

¹⁶³ See GRAS, *supra* note 8 (explaining the qualification requirements of GRAS).

of its intended use.¹⁶⁴ The current intended use of HFCS and other added sugars is to include dangerously high levels in food and drink.¹⁶⁵ Under this reasoning, subsequent removal of HFCS and other added sugars from the GRAS list due to the conditions of their intended use would result in manufacturers being encouraged to petition the FDA for approval.¹⁶⁶ To truly be effective, more resources must be devoted to the FDA so that the FDA can mandate, as opposed to encourage, notification.¹⁶⁷ With the intended use of HFCS and other added sugars flying flagrantly in the face of the FDA's purpose, the FDA should then enact a limit on the amounts of added sugars in foods.¹⁶⁸

¹⁶⁴ *Id.* The FDA's GRAS Notification Program functions under the same guideline; scientific data from industry-employed experts must demonstrate that HFCS and other added sugars are safe for their intended use. See *How U.S. FDA's GRAS Notification Program Works*, *supra* note 57.

¹⁶⁵ See sources cited *supra* note 5, 9 and accompanying text (discussing the amount of added sugar consumed by people in the US). The FDA currently states that HFCS is not substantially less safe than comparable amounts of other types of sugar. See *High Fructose Corn Syrup: Questions and Answers*, *supra* note 64. But see Pollan, *supra* note 4 (discussing how different types of sweeteners are processed by humans); *Archer-Daniels-Midland*, *supra* note 67 (choosing to not rule upon whether the metabolization process of HFCS carried any weight). Even if HFCS is no less healthy than other added sugars, the FDA has largely turned a blind eye to the amount of all types of sugars within food and beverages. *Archer-Daniels-Midland*, *supra* note 69. In fact, currently they may be used in food and drink "with no limitation other than current good manufacturing practice." See *Direct Food Substances Affirmed as Generally Recognized as Safe*, *supra* note 64.

¹⁶⁶ See *How U.S. FDA's GRAS Notification Program Works*, *supra* note 57; sources cited, *supra* note 58 and accompanying text.

¹⁶⁷ See Flynn, *supra* note 58 (stating that sponsors are simply encouraged to notify FDA about conclusions, as opposed to being required). The FDA concluded by 1997 that it was unable to continue devoting the requisite resources to the GRAS petition approval process. See *How U.S. FDA's GRAS Notification Program Works*, *supra* note 57.

¹⁶⁸ See *Developments in the Law*, *supra* note 45. Historically, the courts have held that the FDA has the power to determine limits of substances within food. *Id.* For this process to be successful with added sugars, the FDA must determine an appropriate limit to validate the copious medical research indicating that current levels of added sugar intake are unsustainable for public health. See generally *Petition to Ensure the Safe Use of "Added Sugars"*, *supra* note 77 (petitioning the FDA to declare a limit for HFCS and other added sugars).

IV. CONCLUSION

While the FDA's hands-off approach may have been deemed successful for quite some time, such a policy is no longer plausible.¹⁶⁹ Taxation is an important initial step, as was done with the tobacco industry. Ultimately, however, federal action must be taken regarding taxation of HFCS and SSB, as well as regulation from the FDA.¹⁷⁰ The high amounts of HFCS and other added sugars within food and drink have created a serious problem for the dietary health of Americans and need to be brought under control. Akin to the time of the founding of the FDA, the "social, political, and economic climate [is once again] amenable to pure food . . . reform."¹⁷¹

¹⁶⁹ See sources cited, *supra* note 78 and accompanying text. While the FDA has responded to public pressure by requiring changes to the Nutrition Facts labels, it has still not determined safe levels of added sugars in food and drink. *Id.*

¹⁷⁰ *But see* POMERANZ, *supra* note 20, at 451 (arguing that the food industry is too powerful for state or federal regulation).

¹⁷¹ See London, *supra* note 27.

