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The Unfortunate Role of Farm Subsidies as a Stimulus for Inequality and Obesity

M. Neil Browne*, Facundo Bouzat**, Justin Rex***, Joseph Seipel****

Abstract

Governmental expenditures are directed at a particular objective, but their effects have consequences far beyond the named target of the expenditures. Specific farm subsidies, for example, encourage consumption of particular foods by reducing the costs of producing these foods. To what extent do these subsidies affect the American obesity epidemic? How do the subsidies create disparate negative effects on those in poverty? Exploring these questions stimulates us to take greater care when designing legislation to take a broader look at the stakeholders affected by any particular governmental expenditure.

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Keywords : Increasing Inequality, Obesity, Farm Subsidies, Poverty, Legislation

I. Introduction

Governmental expenditures are often internally inconsistent. For example, tax cuts are a standard avenue for attracting business to a particular community. The same governmental unit initiating the tax cuts has programs that retrain workers who are displaced by business moving out of their community. But the very act of those tax cuts reduces revenue that the governmental unit has available for the retraining programs it desires.

In a diverse society with conflicting preferences for what government should subsidize and regulate, we can yearn for but never achieve consistency. Consequently, we can expect that the U.S. government will champion policies that both exacerbate and reduce inequality.¹ As

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¹ See Federal Reserve Bank of New York Report *Credit Supply and the Rise in College Tuition: Evidence from the Expansion in Federal Student Aid Programs* (2016),

common as such contradictory expenditures are, particular ones are especially odious in terms of their effect on social welfare. Legislative support for particular farm subsidies and their effects on the poorest citizens are one such instance.

One of the more egregious effects of these subsidies on the poor is their effect on obesity rates. Obesity is among the most pressing problems Americans face. Approximately 36% of Americans over the age of fifteen are obese.² If we add individuals who are overweight to this statistic, the Organization for Economic Cooperation and Development (OECD) reports that about 70% of Americans are overweight or obese.³

In comparison, the obesity rate is 10% in Norway and Italy.⁴ Japan and Korea have the lowest obesity rate at 4%.⁵ If these statistics do not alarm, then consider the fact the U.S. spends a greater percent of its GDP on health care, 17.7%, than any other OECD country, nearly twice the OECD average of 9.4%. Of the money that the U.S. spends on health, 70% goes toward funding services related to obesity.⁶

This introductory picture of how the U.S. fares in terms of the worldwide obesity epidemic⁷ challenges us to focus on two questions:

1. How have the effects of obesity been distributed among different income classes?
2. What legislative and administrative factors are responsible for the obesity problem among particular members of society?

To answer these questions, this article is organized as follows. Section II presents a summary of statistics revealing how those living in poverty have disproportionately suffered from rising obesity rates and the implications of these findings on the quality of life of impoverished populations.

https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr733.pdf. The authors present evidence showing that as the federal government spends more money on student financial aid loans, universities increase their tuition costs. In other words, a government spending program intended to fight inequality by making college education available to more people may actually worsen inequality in the long run by putting students into larger, harder-to-escape amounts of debt.

² See OECD, *OECD Factbook 2014: Economic, Environmental and Social Statistics*, OECD Publishing (2014), available: http://www.oecd-ilibrary.org/economics/oecd-factbook-2014/overweight-and-obesity_factbook-2014-102-en.

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ See James A. Levine, *Poverty and Obesity in the US*, 60 *Diabetes* 2667 (2011), available at: <http://diabetes.diabetesjournals.org/content/60/11/2667.full.pdf+html>.

⁷ See Lauren Kaplin, *A National Strategy to Combat the Childhood Obesity Epidemic*, 15 *UC Davis J. Juv. L. & Pol'y* 347 (2011).

The next section provides a summary of the social science evidence indicating the dramatic increase in U.S. inequality. This data provides necessary background for assessing the distributional effects of the link between obesity and poverty. Section IV analyzes how diet affects obesity, setting the stage for the link between food policies and inequality discussed later in the argument.

The final section explains how the United States Agricultural Department has affected the nutritional landscape. To accomplish this task, Section V provides a brief summary of the history of farm subsidies in the U.S., and argues that one of the unintended consequences of this history has been the proliferation of highly processed, low-cost foods that are particularly conducive to obesity, both for their high caloric qualities and their low prices. This analysis of the role of the USDA's intervention in the agricultural industry leads to the conclusion that the detrimental effects of increasing inequality on the obesity and poverty problem are compounded by questionable allocative decisions that the government has pursued through its fiscal policy choices.

II. How Obesity Affects the Poor

Because our lives are interconnected, the impact of obesity extends far beyond the social and health costs experienced by the obese. Scarce health care resources used to treat the negative health effects of obesity consume resources are no longer available to treat the health needs of others. In addition, the negative impact on national productivity reduces the income available in our entire community⁸.

However, the burdens of obesity are not distributed equally across all income groupings. The negative effects of obesity seem to fall disproportionately on the poor. There is a strong correlation between income and obesity: "Thirty-three percent of adults who earn less than \$15,000 per year were obese, compared with 25.4 percent of those who earned at least \$50,000 per year."⁹ This trend is also evident from studying the regions of the U.S. where obesity rates tend to be the highest. Unsurprisingly, obesity rates are significantly higher in the South, home of 8 of the ten most impoverished states, than in any other region of the country. In fact, 8 of the ten most impoverished states in the entire U.S. are among the top 15 states with the highest obesity rates.¹⁰

⁸ See Ross A. Hammond & Ruth Levine, *The economic impact of obesity in the United States*, 3 *Diabetes, Metab. Syndr. Obes.* 1 (2010), <http://bit.ly/2cRaO2U>.

⁹ See Trust for America's Health Issue Report, *The State of Obesity: Better Policies for a Healthier America* 16 (2014), <http://healthyamericans.org/report/115/>.

¹⁰ See Trust for America's Health Issue Report, *F as in Fat: How Obesity Policies are Failing America* 15 (2007), <http://healthyamericans.org/reports/obesity2007/Obesity2007Report.pdf>.

One salient case highlighting the link between obesity and poverty is that of Mississippi. Mississippi is the state with the highest poverty rate in the country.¹¹ Similarly, Mississippi has the highest rate of obesity at nearly 1 in every 3 adults, the highest rate of hypertension, and the second highest rate of adult diabetes.¹²

One study surveying obesity and poverty rates at the county level found that Americans who live in the most poverty-dense counties are also most prone to obesity.¹³ Specifically, counties with poverty rates of 35% have obesity rates that are 145% greater than wealthy counties.¹⁴ In short, holding all else constant, low income individuals are more likely to be at risk for obesity than their higher income counterparts.¹⁵

Obesity also affects minorities disproportionately.¹⁶ The obesity rate for whites is 32.6%, 42.5 for Latinos, and 47.8% for blacks.¹⁷ Another study similarly revealed higher rates of obesity among minorities — obesity rates were 30.6% for non-Hispanic adults, 45% for non-Hispanic African Americans, and 36.8% for Mexican Americans.¹⁸

A. Why the Poor Have Been Disproportionately Affected by Obesity

Several important factors combine to explain why obesity has burdened the poor so

¹¹ *Id.* at 5.

¹² *Id.*

¹³ See Levine, *supra* note 5.

¹⁴ *Id.*

¹⁵ Cynthia L. Ogden, Molly M. Lamb, Margaret D. Carroll & Katherine M. Flegal, *Obesity and socioeconomic status in children: United States 1988-1994 and 2005-2008*, NCHS data brief no 51 (2010), <http://www.cdc.gov/nchs/data/databriefs/db51.htm>. See also, Wilkinson R.G., and Pickett, K.E. *The Spirit Level*, Penguin (2009), showing that countries with higher income inequality have higher obesity rates.

¹⁶ See Erika B. Navarro, *No Such Thing As Free Lunch: Supplementing Federal Nutrition Laws to Effectively Combat Obesity in Minority and Low-Income Children*, 9 Rutgers Race & Law Rev. 365 (2008). Navarro considers the socioeconomic factors that affect diet, and argues that ethnic minorities and children from low-income families are significantly higher risk of suffering from obesity than non-minorities or high-income families. Her argument supports the contention that those living in poverty are more likely to suffer from obesity than those above the poverty line.

¹⁷ See Trust for America's Health, *supra* note 7. These disparities exist across gender lines as well. For example, "While obesity rates are high for poor Americans generally, minority women are hit particularly hard: while approximately 30% of white American women are obese, 40% of Mexican-American women and 50% of black American women are obese." See Kaplin, *supra* note 6. These disparities appear to begin in childhood.; See Ashley B. Antler, *The Role of Litigation in Combating Obesity Among Poor Urban Minority Youth: A Critical Analysis of Pelman v. McDonald's Corp.*, 15 Cardozo J.L. & Gender 275, 279 (2009). ("While the obesity epidemic affects all U.S. children and adolescents, obesity rates among children in several racial/ethnic minority populations are disturbingly high or are increasing faster than average. Obesity rates among African-American and Hispanic children and adolescents illustrate this point: in the early 1990s, among girls aged six to eleven, 23% of white girls were overweight, compared to 29% of Mexican-American girls, and 31% of African-American girls").

¹⁸ See Cynthia L. Ogden, Margaret D. Carroll, Lester R. Curtin, Margaret A. McDowell, Carolyn J. Tabak and Katherine M. Flegal, *Prevalence of Overweight and Obesity in the United States, 1999-2004*, 295 JAMA 1549, 1553 (2006).

greatly.¹⁹ One factor influencing the prevalence of obesity among poor populations is a lack of food security. Food security is defined by the USDA as the condition of having “access at all times to enough food for an active, healthy life.”²⁰ Food insecurity is a function of poverty — that is, of having limited food choices within a neighborhood, lack of access to transportation to other neighborhoods, and most importantly financial constraints.²¹ Not surprisingly, of the 49 million people living in food-insecure households, 40.9% of those individuals are below the poverty line, while only 6.8% had incomes above 185% of the poverty line.²² This problem is compounded by the fact that food insecurity leads to obesity.

For example, a recent study using data from the National Health and Nutrition Examination Survey found that children who are food insecure have a greater tendency to become obese or overweight than those who are food secure.²³ Another study found that food insufficiency leads to lower reading and math performance in school children, and greater increase in Body Mass Index (BMI) compared to children from food secure households.²⁴ The logic behind these findings is that, due to a lack of resources, underprivileged populations lack access to healthy foods, and consequently, are forced to choose among unhealthy, cheap food options. Though the research has only established correlations thus far, a substantial amount of research points to the fact that food insecurity is an important contributing factor to obesity.²⁵

¹⁹ Lainie Rutkow, Jon S. Vernick, James G. Hodge, Jr., and Stephen P. Teret, *Preemption and the Obesity Epidemic: State and Local Menu Labeling Laws and the Nutrition Labeling and Education Act*, 36 J.L. Med. & Ethics 772 (2008). The authors recognize several social factors that contribute to problems of obesity. In doing so, they highlight the major value conflict underlying the issue of obesity — that of collective responsibility vs. personal responsibility. The authors tend to lean toward a collective approach to the problem of obesity, positing that individual choices are bound by circumstances beyond control, and require remedies that do not simply blame the individual. Similarly, in this section we will highlight how obesity is a phenomenon much more complex than the result of an individual choice. While scholars should acknowledge that humans do have the ability to choose, those choices are always shaped and influenced to a degree by the circumstances in which the choices are made.

²⁰ Alisha Coleman-Jensen, Mark Nord & Anita Singh, *Household Food Security in the United States in 2012*, USDA Economic Research Report no.155 U.S., Economic Research Service, p.2 (2013).

²¹ See Antler, *supra* note 14, at 283 (“Researchers hypothesize that more convenient access to fast food may result in higher consumption of these products, and hence higher obesity rates. Higher consumption of unhealthy foods in low-income minority communities may be fueled by the combination of several factors: limited food choices within the neighborhoods and limited transportation to other neighborhoods, as well as financial constraints, which drive people to seek out the highest number of calories for the smallest price tag”).

²² See Alisha Coleman-Jensen, Mark Nord & Anita Singh, *supra* note 17, at 10.

²³ See K. Alaimo, C.M. Olson, E.A. Frongillo & R.R. Briefel, *Food insufficiency, family income, and health in US preschool and school-aged children*, 91 Am J Public Health 781 (2001).

²⁴ J. Zhang, J. Hebert & M. Muldoon, *Dietary fat intake is associated with psychosocial and cognitive functioning of school-aged children in the United States*, 135 J Nutr 1967 (2005).

²⁵ L.J. Brown, *The consequences of hunger and food insecurity for children: evidence from recent scientific studies*, Center on Hunger and Poverty (2002). See also R.E. Kleinman, S. Hall, H. Green, D. Korzec-Ramirez, K. Patton, *Diet, breakfast, and academic performance in children*, 46 Ann Nutr Metab 24 (2002).

Another reason for the high prevalence of obesity among poor populations is a lack of education about what foods are particularly conducive to a healthy lifestyle. This reason is supported by findings that children and adolescents who live in households where the household head has a college degree are less likely to be obese compared with those living in households where the household head has less education.²⁶ Thus, the education of parents,²⁷ a common poverty indicator, has significant implications for the likelihood of obesity.

Yet another factor contributing to the high incidence of obesity among impoverished populations is the influence of what has been called the “built environment”²⁸ on physical activity. The “built environment” refers to all of the man-made features of a neighborhood—including the design and location of buildings, public spaces, and transportation systems.²⁹ A growing body of research documents an association between the built environment and behaviors related to obesity.³⁰ Studies have shown that there are fewer recreational facilities and parks in low-income communities than in more affluent ones. Children living in low-income neighborhoods may be prevented from engaging in physical activity due, at least in part, to the fact that lower-income neighborhoods have fewer parks, gyms, sports fields and trails compared to neighborhoods with higher median incomes. Furthermore, poor neighborhoods often lack clean, outdoor spaces for physical activity. Fear of crime also deters residents from walking and spending time outdoors.³¹ The built environment,

²⁶ See Ogden, et al., *supra* note 12

²⁷ Cheryl George, *Parents Super-Sizing Their Children: Criminalizing and Prosecuting the Rising Incidence of Childhood Obesity as Child Abuse*, 13 DePaul J. Health Care L. 33, 50 (2010) (“Parents have a critical role in prevention because childhood obesity starts at home”). For another article on the importance of parenting in the obesity problem, see also Alaina Anderson, *The Family That Eats Together, Stays Together: Setting Table Standards for Childhood Obesity, Neglect, and the Family Unit*, 47 New Eng. L. Rev. 189 (2012), arguing that obesity is primarily a parenting problem: “Studies show that parental role modeling around food choices and lifestyle habits have the greatest influence on childhood obesity.” The insight in this article about the role of parents reveals that, holding all else constant, children in impoverished families are likely to develop many of the same lifestyle habits, including diet, that are present in the parents.

²⁸ See Wendy C. Perdue, *Obesity, Poverty, and the Built Environment: Challenges and Opportunities*, 15 Geo. J. Poverty Law & Pol’y 821, 822 (2008). Perdue asserts a collectivist approach to the current obesity epidemic. While the author recognizes that food consumption is an individual decision, the author more importantly highlights that those individual choices cannot be understood without reference to the physical context in which those choices are made. The author argues that the strong societal influence on our choices must be recognized and adjusted to promote healthier lifestyles among community members. A strong focus of the author’s argument is the recognition of consistently lower access to healthy foods and public spaces among poorer communities. Importantly, the author recognizes that empirical research can, at best, provide only limited insight as to the causes of obesity.

²⁹ *Id.* (“[T]he primary features of people’s physical environment are man-made, and encompass everything from land use patterns and urban planning, to the design, location, uses and interrelations among buildings, to transportation systems. All of these man-made physical features are known collectively as the ‘built environment’”).

³⁰ *Id.*

³¹ Antler, *supra* note 14.

thus, plays an important role³² in limiting the choices for exercise and physical activity of low-income families in a way that makes the likelihood of becoming overweight or obese increase significantly.³³

B. The Health and Social Implications of Obesity

The factors contributing to obesity have drastic implications for the lives of impoverished populations.³⁴ For example, among the numerous byproducts of obesity, diabetes is probably the most severe, and definitely the most documented.³⁵ Diabetes is the seventh leading cause of death in the United States.³⁶ However, like obesity itself, diabetes seems to disproportionately affect particular demographic groups. Compared to non-Hispanic white adults, the risk of being diagnosed diabetes was 18% higher among Asian Americans, 66% higher among Hispanics (87% higher among Mexican Americans), and 77% higher among non-Hispanic blacks.³⁷

In addition to diabetes, being overweight or obese increases the risk of morbidity from hypertension, dyslipidemia, coronary heart disease, ischemic heart disease,³⁸ stroke, liver and gallbladder disease, osteoarthritis,³⁹ sleep apnea, depression, respiratory problems

³² Regina Austin, *Super-Size Me and the Conundrum of Race/Ethnicity, Gender, and Class for the Contemporary Law-Genre Documentary Filmmaker*, 40 Loy. L.A. L. Rev. 687, 711 (2007) (“There is some evidence showing that children and adolescents who reside in lower socioeconomic and/or predominantly minority communities have more limited access to recreational facilities and higher rates of overweight and obesity than others”).

³³ Antler, *supra* note 14, at 281-282. (“In addition to neighborhood layout, the built environment also includes the multiple facets of the “nutrition environment:” nutrition sources in homes, schools, [*282] and the community that influence food consumption”).

³⁴ Another important factor contributing to obesity is an American culture that promotes a sedentary lifestyle versus an active one. See Robert Frank, Op-Ed., *What Sweden Can Tell Us About Obesity*, NY Times, BU6, Jan. 16, 2013, <http://www.nytimes.com/2013/06/16/business/what-sweden-can-tell-us-about-obamacare.html?hp> (revealing for example that in Sweden, workers are more likely to “commute by bicycle than by car ... and obesity is far less common. Absolute poverty and income inequality — both associated with adverse health outcomes — are also lower”).

³⁵ Tara Parker-Pope, *Diabetes: Underrated, Insidious and Deadly*, NY Times, July 1, 2008 (for a summary of diabetes and many of its deadly effects).

³⁶ Center for Disease Control and Prevention, *Diagnosed and undiagnosed diabetes in the United States, all ages, 2010*, 2011 National Diabetes Fact Sheet, <http://www.cdc.gov/diabetes/pubs/estimates11.htm#4>.

³⁷ *Id.*

³⁸ See National Research Council, *U.S. Health in International Perspective: Shorter Lives, Poorer Health*, 26 (2013), citing a recent study by the National Research Council and Institute of Medicine, finding that non-communicable diseases, such as cardiovascular disease, which is associated with obesity, are affecting Americans’ longevity in comparison to other developed countries. The report also found that ischemic heart disease, the reduction of the blood supply often due to coronary artery disease, diabetes, and hypertension — all obesity risk factors — was more prevalent among Americans than all countries except for Finland. In short, what these studies reveal is that the American obesity epidemic has led not only to more disease, but also to more deaths.

³⁹ *Obesity Increases Risk of Osteoarthritis*, Women’s Health Weekly, April 8, 2004, at 126.

and several types of cancer.⁴⁰ Several of these diseases have affected Americans' longevity.⁴¹ Among 17 comparable high-income countries, the U.S. had higher death rates from non-communicable diseases — many of which are associated with obesity — than all but one country.⁴² One estimate suggests that obesity kills 300,000 Americans per year⁴³ while another study estimates that approximately 400,000 deaths were associated with obesity in 2000.⁴⁴ Though all Americans have some chance of being touched by these medical effects,⁴⁵ because of circumstances beyond their control, impoverished populations appear to be on the receiving end of these diseases more frequently than more privileged members of society.

Obesity also seems to contribute to the cycle of poverty, i.e., obesity contributes to the poor's inability to move up the income ladder.⁴⁶ The cycle catches people at a young age. For example, malnutrition causes a child to perform worse in school and may lower school attendance because the child is more likely to experience frequent colds, stomachaches, headaches, and general health problems.⁴⁷ Other studies have found links between obesity and a full range of social maladies: low salary, fewer rental opportunities, employment discrimination, reduced college acceptance, less financial support from parents in paying for college, and even reduced opportunities for marriage.⁴⁸ More generally, higher rates of obesity have been shown to have pronounced negative effects on educational achievement and success in labor markets.⁴⁹ These links can be explained by a variety of factors, including low self-esteem among,⁵⁰ and prejudice against, individuals who are

⁴⁰ National Institute of Health, *Executive Summary of the Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*, Arch Intern Med 12 (Sept. 28, 1998). This NIH report provides an in-depth analysis of the numerous correlations that have been found between obesity and disease. The cancers to which obesity has been linked include endometrial, breast, prostate, and colon cancers. For a more general look at the many health consequences related to being overweight or obese, see Center for Disease Control, *Overweight and Obesity: Health Consequences*, Centers for Disease Control and Prevention, <http://www.cdc.gov/obesity/causes/health.html>.

⁴¹ See National Research Council, *supra* note 33, at 71.

⁴² *Id.* at 26.

⁴³ George, *supra* note 24, at 35 (“It is estimated that “obesity kills 300,000 people a year.”)

⁴⁴ Ali H. Mokdad, James S. Marks, Donna F. Stroup & Julie L. Gerberding, *Actual Causes of Death in the United States, 2000*, 291 J. of Am. Med. Ass'n. 1238, 1240 (2004).

⁴⁵ Grace Rubenstein, *New Health Rankings: Of 17 Nations, U.S. Is Dead Last*, The Atlantic, Jan. 10, 2013, <http://www.theatlantic.com/health/archive/2013/01/new-international-health-rankings-us-is-dead-last/267045/>.

⁴⁶ Lawrence O. Gostin, *Meeting Basic Survival Needs of the World's Least Healthy People: Toward a Framework Convention on Global Health*, 96 Geo. L.J. 331, 339 (2008). (“Diseases of poverty facilitate the cycle of poverty in that they decrease earning ability and economic productivity.”)

⁴⁷ See Katherine Alaimo et al., *Food insufficiency, family income, and health in US preschool and school-aged children*, 91 Am. J. Pub. Health 781, 784-85 (2001) (highlighting the many detrimental effects on student performance that result from the confluence of poverty and food insufficiency).

⁴⁸ See Kaplin, *supra* note 6.

⁴⁹ See National Research Council, *supra* note 33, at 71.

⁵⁰ See Kaplin, *supra* note 6.

overweight.⁵¹

What are we to make of all of these statistics? In short, the evidence available seems to suggest that currently, obesity is an epidemic affecting all facets of society. However, those who feel the effects of obesity the most are impoverished populations that lack the economic and health opportunities to overcome their circumstances.⁵² It's already often difficult for the poor to achieve economic success; being obese further exacerbates the issues that come with being economically disadvantaged in the U.S.

III. Increasing Inequality in the United States

As explained in Section II, problems associated with obesity are particularly pervasive among impoverished populations. This disparity is magnified by growing income inequality.⁵³

In 2013 the average income of the richest 10% of Americans was approximately 19 times greater than that of the poorest 10%.⁵⁴ Additionally, during the period between the 1980s and the late 2000s, the top 10% saw their incomes increase approximately 15 times as fast as it did for the bottom 10%.⁵⁵ The top 1% claimed 60 percent of all income growth in the United States during the period between 1979 and 2007; the bottom 90% claimed only 8 percent of all income growth during the same period.⁵⁶ Consequently, in 2007, the top

⁵¹ See C.S. Crandall, *Prejudice against fat people: ideology and self-interest*. 66 *Journal of Personality and Social Psychology*, 882 (1994).

⁵² Americans living in poverty are significantly more likely to suffer the consequences of obesity — including asthma, diabetes, high blood pressure, and heart attacks — than those living above the poverty line. Alyssa Brown, *With Poverty Comes Depression, More Than Other Illnesses*, Gallup Wellbeing, Oct. 30, 2012, http://www.gallup.com/poll/158417/poverty-comes-depression-illness.aspx?utm_source=alert&utm_medium=email&utm_campaign=syndication&utm_content=morelink&utm_term=All%20Gallup%20Headlines. See also Mona Chalabi and John Burn-Murdoch, *Public health minister links obesity to poverty: what does the data show?*, *The Guardian*, Jan. 23, 2013, <http://www.guardian.co.uk/news/datablog/2013/jan/23/fact-checking-obesity-poverty-link#data>, for an article describing the how the likelihood of obesity decreases as one moves upward on the income ladder.

⁵³ Joseph E. Stiglitz, *The Price of Inequality: How Today's Divided Society Endangers Our Future*, 7 (2013), for an in-depth overview of the current state of inequality in the United States. Stiglitz writes: “The simple story of America is this: the rich are getting richer, the richest of the rich are getting still richer, the poor are becoming poorer and more numerous, and the middle class is being hollowed out. The incomes of the middle class are stagnating or falling, and the difference between them and the truly rich is increasing.”

⁵⁴ Organization for Economic Cooperation and Development, *In It Together: Why Less Inequality Benefits Us All in the United States*, (2015), <http://www.oecd.org/unitedstates/OECD2015-In-It-Together-Highlights-UnitedStates-Embargo-21May11amPArisTime.pdf>.

⁵⁵ Organization for Economic Cooperation and Development, *An Overview of Growing Income Inequalities in OECD Countries: Main Findings*, (2011), <http://www.oecd.org/els/soc/49499779.pdf>.

⁵⁶ Josh Biven, *Three-Fifths of All Income Growth from 1979-2007 Went to the Top 1%*, Economic Policy Institute, October, 2011, <http://www.epi.org/publication/fifths-income-growth-1979-2007-top-1/>. For more information regarding the disparities between the rich and the poor in terms of wage growth experienced, see also Stiglitz, *supra*

0.1 % of “America’s households had an income that was 220 times larger than the *average* of the bottom 90 percent.”⁵⁷ To put these numbers in more down-to-earth terms, the top 1% typically make in one week 40% more than what the bottom fifth receive in a year.⁵⁸ Finally, the top 0.1% makes in a day-and-a-half approximately what the bottom 90% receive in a whole year.⁵⁹

In terms of wealth, disparities between the wealthy and the poor are even more extreme. Wealth refers to the sum of a family’s (or individual’s) assets minus its debts.⁶⁰ Measures of wealth are particularly informative of the existence of inequality because, unlike income, wealth is not as volatile from year to year, and, consequently, it provides a better picture of the differences in access to resources by particular groups.⁶¹ Currently, the top 10% of Americans hold about 76 percent of this country’s wealth.⁶²

Compared to the 34 member states of the OECD, the United States has higher income inequality (as measured by the gap between the top 10% and bottom 10%) than all but two countries and inequality is increasing in the United States at a faster rate than in the average OECD country.⁶³

In addition to having a larger degree of inequality, the U.S. also devotes fewer resources to helping the poor and unemployed through the redistribution of income compared to OECD countries. Specifically, the level of U.S. spending on social benefits, like unemployment and family benefits, are equivalent to just 9% of household incomes, while the OECD average is 22%.⁶⁴ In short, inequality in the U.S. is not only increasing but there

note 46, at 8: “[O]ver the last three decades those with low wages (in the bottom 90 percent) have seen a growth of only around 15% in their wages, while those in the top 1 percent have seen an increase of almost 150 percent and the top 0.1 percent of more than 300 percent.”

⁵⁷ Stiglitz, *supra* note 52, at 2.

⁵⁸ *Id.* at 4.

⁵⁹ *Id.*

⁶⁰ See Dollars & Sense, *The Wealth Inequality Reader 3* (Daniel Fireside et al. eds., 3rd ed., 2009). Although researchers may use slightly different definitions, assets may include savings, bonds, and stocks, as well as nonfinancial assets, like real estate, vehicles, and other property; debts are all liabilities that are owed—including mortgages, credit cards, and other loans. Because wealth accounts for financial resources that are not a part of year-to-year income, wealth is able to provide a more fulsome picture of financial stability.

⁶¹ *Id.* at 2 (“[T]his is precisely why the data on wealth inequality are so troubling—wealth inequality goes beyond the variations seen in year-to-year income. Moreover, wealth gives a better picture of differences in access to resources”).

⁶² See OECD, *supra* note 47.

⁶³ See OECD, *supra* note 47. See also, Organization for Economic Cooperation and Development, *An Overview of Growing Income Inequalities in OECD Countries: Main Findings*, 45 (2011), <http://www.oecd.org/els/soc/49499779.pdf>. The Gini coefficient for the United States, a common indicator of inequality, where 0 signifies perfect equality and 1 perfect inequality, is .378. This is not only above the OECD average Gini coefficient, but the coefficient has also been increasing at a faster rate than the OECD average. Both of these pieces of evidence provide a rough idea of the inequality in the U.S. and the direction in which it is headed as compared to countries that we tend to usually compare ourselves with.

doesn't appear to be a strong movement on behalf of the government to reduce it.⁶⁵

Often, the argument is made that despite the top 10%'s having a larger piece of the income pie at any given moment, the top 10% is constantly changing based on low-income individuals' ability to progress, through hard work, to higher income brackets. However, social mobility statistics suggest otherwise. First, poor students who succeed academically in high school are less likely to graduate college (29%) than richer kids who do worse in school (30% graduate college).⁶⁶ In other words, students who come from affluent backgrounds have a better chance at graduating college, even when they do worse academically than less affluent students. Second, even if poor students do graduate from college, they are still worse-off than low-achieving children of the rich.⁶⁷ These statistics reflect how the systemic problem of unequal opportunity in daily living inhibits social mobility. For example, "[p]arents can benefit their children by giving them money, better schools, better home environments, tutoring, camp, and other advantages."⁶⁸ But these resources require a financial cushion—including wealth—that is more likely to elude the poor. Lastly, in one study, the level of social mobility in the U.S. ranked 13th out of 17 OECD countries studied. ⁶⁹ The study found that sons in the U.S. are more than three times as likely to have similar earnings as their fathers than father-son pairs in Denmark, one of the leading countries in social mobility.⁷⁰ What do these observations reveal? They show that hard work and mere access to education may not provide an antidote, in the short-run, for deeply rooted social and economic inequities.

Finally, more people are living in poverty in the United States today than in previous history. From 2007 to 2010, poverty shot up from 12.5% to 15.1%.⁷¹ In summary, all of the aforementioned inequality indicators have an underlying theme: inequality is increasing in the U.S. Consequently, as opposed to lower income families becoming more financially stable so as to afford a healthy living, lower income families are becoming poorer. Access to healthy foods is becoming even more remote for a larger number of people.

⁶⁴ See Organization for Economic Cooperation and Development, *Growing Unequal?: Income Distribution and Poverty in OECD Countries*, (2008), <http://www.oecd.org/els/soc/41528678.pdf>.

⁶⁵ On the contrary, much of the increase in income inequality in the U.S. over the past few decades is a result of successful interest group pressure to pass policies that increase income inequality. See Jacob Hacker and Paul Pierson, *Winner Take All Politics: How Washington Made the Rich Richer—and Turned its Back on the Middle Class* (2011).

⁶⁶ Stiglitz, *supra* note 46, at 19.

⁶⁷ *Id.*

⁶⁸ Jonathan Chait, *The Ideological Fantasies of Inequality Deniers*, NY Mag (October 26, 2011), http://nymag.com/daily/intelligencer/2011/10/the_ideological_fantasies_of_i.html.

⁶⁹ See Lawrence Mishel, Josh Bivens, Elise Gould & Heidi Shierholz, *The State of Working America*, 12th Edition, (2012), <http://www.stateofworkingamerica.org/subjects/overview/?reader>.

⁷⁰ *Id.*

⁷¹ *Id.* at 16.

IV. The Link Between Obesity and Diet

Until this point, we have discussed the link between obesity and poverty, and how this relationship is affected by increasing inequality. In this discussion, we have been implicitly assuming a high degree of correlation between diet and obesity. In other words, in line with much scientific evidence, we have assumed that an overconsumption of calories leads to greater chances of becoming overweight or obese.⁷² However, given the debate over this assumption among many in the scientific community, we now analyze whether it is reasonable to assume that one's diet influences one's becoming overweight and obese.

Arguments asserting that diet has no influence on obesity are few to none.⁷³ But several arguments do address alternative causes of obesity, suggesting that diet is hardly determinative. For example, research into the causes of obesity has suggested that past a certain age, obesity and being overweight are correlated less with calorie intake, and more with the extent to which one engages in physical activity.⁷⁴ Though there may be strands of truth in this research, this argument is vulnerable to the error of mistaking cause for effect; that is, it could be the case that, past a certain age, individuals are less likely to engage in physical activity because of their being overweight or obese, as opposed to individuals' being overweight or obese due to lack of physical activity.⁷⁵ Thus, while physical inactivity is certainly an important factor contributing to obesity, it doesn't not negate the notion that one's diet contributes to obesity.

Another alternative explanation for obesity lies in our genes.⁷⁶ Research has suggested that obesity is 77% heritable.⁷⁷ However, as Lindsay Wiley points out in a recent law review

⁷² Julian M. Alston, Daniel A. Sumner & Stephen A. Vosti, *Are Agricultural Policies Making Us Fat? Likely Links between Agricultural Policies and Human Nutrition and Obesity, and their Policy Implications*, 28 *Review of Agricultural Economics* 313 (2006), <http://aic.ucdavis.edu/research1/AgPoliciesMakingUsFat.pdf>.

⁷³ *Id.* at 314 ("The primary proximal cause of obesity is simple and not disputed: people consume more food energy than they use").

⁷⁴ Lindsay F. Wiley, "No Body Left Behind": *Re-Orienting School-Based Childhood Obesity Interventions*, 5 *Duke Forum for L. & Soc. Change* 97 (2012-2013).

⁷⁵ *Id.* at 103 ("Researchers suggest ... that past a certain age (the "crossover" age at which overweight and obesity are associated with lower, rather than higher daily calorie intake), physical activity is playing a more important role than diet in determining a child's weight. Other studies indicate that being overweight and obesity in this age range is associated with reduced physical activity, but it may be difficult to distinguish cause from effect. It may be that kids who are already obese or overweight when they reach the crossover age are more reluctant to engage in physical activity because of their weight, rather than that their reluctance to engage in physical activity is the cause of their obesity").

⁷⁶ Patrícia L. Farnese, *Remembering the Farmer in the Agriculture Policy and Obesity Debate*, 65 *Food Drug L.J.* 391, 392 (2010).

⁷⁷ See Wiley, *supra* note 65, at 101. Wiley's research reveals that many scientific studies have addressed the extent to which obesity is affected by genetic predispositions and environmental factors. Specifically, she makes the important point that a genetic predisposition is always subject to change based on environmental factors, and consequently, it would be flawed to assume that genetic factors are entirely determinative of the extent to which

article, “heritability does not equal determinism.”⁷⁸ In other words, the effects of genes are highly responsive to the environment in which they exist. This fact has led even evolutionary geneticists to argue that human behavior cannot be reduced to an explanation fully dependent on genes; the environment matters and is often capable of nullifying our genetic endowments.⁷⁹ Thus, even if genes do play a significant role in obesity, it does not follow that a high-calorie diet does not affect obesity.⁸⁰

A substantial amount of research, in fact, has been devoted to pointing out the links between diet and obesity. For example, the USDA has concluded that an increase in the consumption of calories, largely from highly processed foods high in carbohydrates, contributes to obesity.⁸¹ In 2002, the USDA stated that a significant factor behind rising

an individual becomes obese:

[S]cientific research strongly suggests that childhood obesity is largely attributable to genetic and environmental factors that are beyond the reach of individual choice or control. Childhood BMI is about 77% heritable, meaning that about 77% of variation in childhood BMI from person to person is explained by genetic factors. But heritability does not equal determinism; highly heritable traits can also be highly responsive to environmental changes.

Contrary to the idea that obesity’s being heritable nullifies environmental factors, Wiley provides a helpful way of thinking about heritability and environmental factors are not mutually exclusive. In other words, Wiley’s point is that while obesity may be heritable, in some cases this heritability is very strong, and in other cases, the heritability is weak, having little significance on the risk of obesity:

It is helpful to think of the relationship between obesity and genetic factors in terms of four categories of people. First, those with genetically determined obesity. A small percentage (up to around five percent) of people who are obese possess a single genetic mutation that leads to obesity regardless of the environment in which they live (short of extreme restraints on their access to nutrition). Second, those with a strong genetic predisposition toward obesity. These individuals are likely to be overweight if they live in a non-obesigenic environment (like the environment of thirty or forty years ago). But if they are exposed to our current environment, they are likely to be obese. Third, those with a slight genetic predisposition, which leads to normal weight in a non-obesigenic environment and overweight in an obesigenic environment. And finally, those who are genetically resistant to obesity. (*Id.* at 102)

⁷⁸ *Id.* 101.

⁷⁹ Richard C. Lewontin, *Biology as Ideology: The Doctrine of DNA* (1992).

⁸⁰ It is worth noting an important factor that often influences results of much scientific research on the causes and effects of obesity, i.e. sources of funding. See Nicole Scott, *Saving Us from Ourselves: The Government’s Role in Obesity and Personal Responsibility*, 17 *Drake J. Agric. L.* 211, 233, 234 (2012), highlighting how corporate funding appears to be having an influence on the scientific results yielded by research teams. The following quote reveals one of the surprising studies reviewed by Scott that highlights the considerable influence that wealth and financial support can have in biasing scientific results:

A study of 206 scientific articles on the health effects of [*234] milk, fruit juices, and soft drinks published over a five-year time period found that in the studies that were fully funded by the beverage industry, the likelihood of a conclusion favorable to the industry was four-fold to eight-fold higher. These kinds of figures are disturbing, and they undercut the idea that mere knowledge of the facts of calorie counts and health effects of foods will be enough to fight the obesity epidemic. It seems as though the quality of information that is being disseminated depends on whether or not the food industry has used its considerable wealth and influence to potentially bias the results.

⁸¹ *Id.* at 227. (“The USDA concluded that a decrease in fat was likely met with an increase in the consumption of carbohydrates, and thus an increase in the adverse health consequences that come from over-consumption of calories and carbohydrates”).

obesity rates was an increase of 300 calories in the diets of Americans from 1985 to 2000.⁸² In 2007, once again it was USDA data revealing that Americans were now consuming on average 400 calories more than in 1985.⁸³

The National Institutes of Health have also acknowledged that one reason for rising obesity rates may be the consumption of calorically-dense foods that are relatively cheap compared to their low calorie counterparts.⁸⁴ Multiple research studies have now confirmed that “energy-dense [i.e. calorically dense] foods and energy-dense diets” are, at least, partially to blame for the obesity epidemic.⁸⁵ Specifically, studies have now linked obesity with the consumption of “added fats, sugars, and refined grains and of the snacks, sweets, beverages, and fast foods in which they are prominent.”⁸⁶

The abundance of research linking obesity to a particular type of diet — one dependent on high caloric, processed, cheap foods — reveals that the disproportionately large number of obese individuals who are impoverished is often a result of the low-nutritive qualities of low-cost foods. In fact, due to limited resources available, scholars have even recognized that the poor’s consuming high-dense, cheap foods constitutes a “rational choice” given the fact that the alternative would be food deprivation.⁸⁷

Given the high caloric diets that have proliferated in the U.S., it is worth asking: is there anything being done to make low-caloric, healthy foods more accessible to those living in poverty? Many noble efforts have been observed. For example, proponents of changes in primary school lunches — often the main source of nutrition for children living in poverty — have pointed out that high caloric school lunches that are low in nutrition significantly influence a child’s propensity to become obese, and have sought reform in school lunch programs.⁸⁸ However, as we explain in the next section, many of these hopeful efforts

⁸² David Wallinga, *Agricultural Policy and Childhood Obesity: A Food Systems and Public Health Commentary*, 29 Health Affairs 405, 405 (2010).

⁸³ *Id.*

⁸⁴ Adam Drewnowski & Nicole Darmon, *Food Choices and Diet Costs: an Economic Analysis*, 135 J. Nutr. 900 (2005) (“The current structure of food prices is such that sweet and high-fat foods provide dietary energy at the lowest cost. The National Institutes of Health strategic plan for obesity research observed that one reason for rising obesity rates may lie in abundant choices of relatively inexpensive calorically-dense foods that are convenient and taste good”).

⁸⁵ Adam Drewnowski & Nicole Darmon, *The Economics of Obesity: Dietary Energy Density and Energy Cost*, 82 Am J Clin Nutr 265S (2005) (“Energy-dense foods and energy-dense diets have been blamed for the global obesity epidemic”).

⁸⁶ See Wallinga *supra* note 73, at 405 (“Research now links obesity promotion with the consumption of added fats, sugars, and refined grains and of the snacks, sweets, beverages, and fast foods in which they are prominent”). See also Drewnowski & Darmon, *supra* note 72, at 265S: “In a number of studies, fast foods, snacks, sweets, and desserts, sweetened soft drinks, and large portion sizes have all been linked to greater obesity risk.”

⁸⁷ See Drewnowski & Darmon, *supra* note 75, at 901, whose study concludes that “[i]n reality, their [those living in poverty] food choices are quite rational from an economic standpoint and are confirmed by computer modeling of diets, once food costs are taken into account.”

are being offset by specific allocative decisions of particular government sectors—in particular, decisions regarding agricultural subsidies.

V. Agricultural Subsidies and Obesity Rates

A. What is Getting Subsidized

A large number of scholars have highlighted the significant role of the U.S. Department of Agriculture in shaping Americans' food consumption decisions.⁸⁹ The source of USDA's power lies in its ability to subsidize particular agricultural crops, and subsequently, make certain foods more accessible to the American public than others.⁹⁰ Subsidized food

⁸⁸ Laura C. Leviton, *Overweight and Obesity in America's Children: Causes, Consequences, Solutions: Section One: Home, School and Community: Children's Healthy Weight and the School Environment*, 615 *Annals* 38 (2008). Leviton's argument states that the primary contributing arena to childhood obesity is that of the school environment; children spend a large portion of their days attending school, and thus, the available options for nutrition and physical activity in these schools provide a hefty contribution to the lives of children. Leviton suggests the need for stronger legal requirements implementing innovative and progressive health policies and programs in schools. Leviton summarizes that the current trend of action for childhood obesity is requiring healthy school programs at the community and state level, with federal implementations trailing behind. The author discusses two current federal attempts to mandate healthy options in schools: the Child Nutrition and WIC Reauthorization Act of 2004 mandating that "by fall of 2006, all schools participating in the USDA School Lunch and School Breakfast programs were required to establish and implement wellness policies," and the 2007 Farm Bill which is a "wide-ranging set of laws that touch every aspect of the food systems of this country." Leviton claims that federal implementations such as these are crucial to attacking childhood obesity in public schools. Leviton cites scholars Kaphingst and French (2006) who outline that the primary cause of obesity is school environments maintaining unhealthy practices. Consequently a main constituent in Leviton's argument is that implementation of legal policies is key, and simply discussing actions no longer suffices in aiding the obesity problem among children; community, state and federal action is a must in improving healthy options in school programs. Leviton acknowledges that children must learn to take control of eating and exercise habits; however if healthy options are scant, healthy choices are near impossible.

⁸⁹ Nicole Scott Spring, *Saving Us from Ourselves: The Government's Role in Obesity and Personal Responsibility*, 17 *Drake J. Agric. L.* 211 (2012). The idea that the USDA would have a role in nutrition was something that was assumed from its inception in 1862. Besides ensuring a reliable food supply, the USDA was also charged with providing "useful information" on subjects related to agriculture, which was interpreted to include nutritional advice. From the 1890s—when the USDA began to become seriously involved in nutritional studies—through the 1960s, nutritional advice centered on the goal of consuming more food in order to obtain all necessary nutrients. In 1923, the USDA released a pamphlet indicating an acceptance of all available foods, saying, "There is no one of all of these many foods that cannot be introduced into the diet in such a way as to contribute to its wholesomeness or its attractiveness" (224).

⁹⁰ Wallinga, *supra* note 82. "Farm subsidies: Agricultural policy helps determine not only what farmers grow, but what people eat, how easy it is to access that food, and what they pay for it. All too soon, the nation will confront the need for a new Farm Bill." (409) *See also* Wiley *supra* note 74. "Through agricultural subsidies, 'the USDA supports industries that produce foods [*108] contributing to obesity, heart disease, and cancer.'"

becomes more profitable food, and consequently attracts the special attention of producers.

As a country, we implicitly comply with the USDA having a high degree of power. Between 1995 and 2012, the U.S. allocated approximately 292.5 billion dollars to agricultural subsidies, of which 177.6 billion were directed to commodities, while the remaining was dispersed among crop insurance, conservation, and disaster subsidies.⁹¹ Corn, with its incredibly high yields in comparison to most other U.S. crops, and its versatility in terms of what it can be turned into, e.g. flour, animal feed, ethanol, and high fructose syrup, received the most subsidies, receiving approximately 84.4 billion dollars between 1995 and 2012.⁹² This amount far exceeds that of the second and third leading crops. During the same period, wheat received about 35.5 billion dollars in subsidies while cotton received 32.9 billion.⁹³ Taken all together, subsidies to agricultural businesses cost the taxpayers about 20 billion dollars per year.⁹⁴

B. A Brief History of Farm Subsidies

The USDA's subsidizing of particular agricultural commodities has a long history, with seemingly benign origins. From a historical perspective, U.S. farmers have often been victims of factors beyond their control, including unpredictable weather conditions, changing levels of demand in their markets, and the costs of machinery and supplies.⁹⁵ The last of the aleatory factors, the cost of inputs, particularly reveals the lack of leverage the agricultural industry has compared to other industries.

During the period prior to the Sherman Antitrust Act of 1890 and the subsequent period in which cases involving antitrust violations were only starting to garner momentum, farmers bought their equipment from industries that were often protected by trusts.⁹⁶ This market imbalance was particularly detrimental to farmers because a high degree of competition in the agricultural industry would often cause crop prices to drop.⁹⁷ But the

⁹¹ Environmental Working Group, *Farm Subsidy Database: The United States Summary Information 1995-2012*, <http://farm.ewg.org/region.php?fips=00000>.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ Guadalupe T. Luna, *The New Deal and Food Insecurity in the "Midst of Plenty"*, 9 Drake J. Agric. L. 213 (2004). "The economic girth and status of the nation's agricultural network, one of the largest sectors in the national economy, is sustained by over twenty billion dollars allocated in subsidies. The USDA is in charge of feeding the nation and assesses itself as: one of the nation's largest federal agencies, employing over 100,000 people and managing a budget of almost \$60 billion" (234).

⁹⁵ Thomas R. Poole, *Silly Rabbit, Farm Subsidies Don't Help America*, 31 Wm. & Mary Envtl. L. & Pol'y Rev. 183 (2006), <http://scholarship.law.wm.edu/wmelpr/vol31/iss1/7>.

⁹⁶ *Id.*

⁹⁷ *Id.*

large trusts supplying farm equipment could afford to charge high prices because they possessed the capital goods farmers required for production. Consequently, farmers were forced into accumulating large debts that outweighed their revenue flows. Attempts by the collective of farmers to unify and exert power over prices usually failed.⁹⁸

The inferior role of the farmer began to change in 1929 as Presidents Hoover and FDR tried to put farmers on an equal footing with industrial equipment interests and combat the declining food prices the Great Depression caused.⁹⁹ In this year, President Herbert Hoover sought to establish a source of stability for the farming industry. Specifically, Hoover established the Agricultural Marketing Act (AMA), whose purpose was to provide loans on need-based basis to farm cooperatives.¹⁰⁰ After being challenged as exceeding Congress's authority under the Constitution to regulate localized agricultural activity, the AMA eventually evolved into the Agricultural Adjustment Act (AAA) of 1938, which was deemed constitutional pursuant to the decision in *Wickard v. Filburn*.¹⁰¹ Like the previous price support programs (the AMA, and the AAA of 1933), the goal of the AAA was to help farmers raise the prices of their crops so that they would be able to stay in business without plummeting steeply into debt.¹⁰² To this end, farmers were encouraged to restrict their growing of crops, which would cause the prices of their commodities to go up, in exchange for a subsidy provided by the government.¹⁰³ The result of this policy would be that U.S. consumers would continue to have stable access to agriculturally based foods that were subsidized since farmers would not be forced out of business due to debt. At the time, the six crops that were primarily subsidized were cotton, corn, wheat, rice, peanuts, and tobacco; dairy products were eventually added to this group too.¹⁰⁴

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² Mary Jane Angelo, *Corn, Carbon, and Conservation: Rethinking U.S. Agricultural Policy in a Changing Global Environment* 17 *Geo. Mason L. Rev.* 593, (Spring 2010). Beginning with the Agricultural Adjustment Act of 1933, the United States has had a long history of subsidizing and regulating its agricultural sector. A product of the New Deal era, the 1933 legislation aimed to control crop prices by decreasing supply, a feat achieved by paying farmers to produce less. n31 The fifteen pieces of legislation that have followed in the subsequent seven decades — a series of Farm Bills — have evolved into the country's comprehensive agricultural policy, tackling a variety of goals from price support to conservation (597).

¹⁰³ Luna *supra* note 94, at 232 (“President Roosevelt’s speech the Agricultural Adjustment Act illustrates the goals of New Deal legislation as: A plan for the adjustment of totals in our major crops, so that from year to year production and consumption would be kept in reasonable balance with each other, to the end that reasonable prices would be paid to farmers for their crops and unwieldy surpluses would not depress our markets and upset the balance”).

¹⁰⁴ *Id.* at 233 (“6 crops initially favored by USDA: “Specifically, agricultural historian Dan Paarlberg identified six crops that were “preferential to start with” and included “cotton, corn, wheat, rice, peanuts, and tobacco.” n135 Although dairy products soon joined the elite group, Paarlberg emphasized, “more [crops were] left out than were included”).

Despite the efforts that emerged during the New Deal to stabilize the agricultural industry, problems resurged when periodic recessions the business cycle would arise and cause prices to drop below cost levels. Farmers often would overproduce and sell in their markets, despite being encouraged to limit their output. The government could not stop prices from dropping.¹⁰⁵

Subsequent to the New Deal era, there were several attempts to overhaul the farm subsidy system. For example, the Eisenhower Administration in the 1950s sought to lower subsidies, but it was unable to meaningfully alter any of the New Deal's farm subsidy programs.¹⁰⁶ Similarly, the Kennedy administration's attempts at agricultural reform failed.¹⁰⁷

Following these attempts at reform, the Food and Agriculture Act of 1965 was passed, which provided price supports for farmers who voluntarily limited the supply of their commodities.¹⁰⁸ This voluntary approach to farm subsidies continued throughout the following decades.¹⁰⁹ Through this approach, the government linked commodity subsidies to production levels.¹¹⁰ This meant that the government would allocate subsidies based on how much a farmer was capable of growing.¹¹¹ As the agriculture industry became more dominated by fewer corporate players, as opposed to the old family farms envisioned by New Deal era policies, more government money flowed toward large producers.¹¹² At the same time, because the federal legislation did not mandate that all producers limit their supply, farmers who remained outside the voluntary programs were able to exploit higher commodity market prices by producing more.¹¹³ In other words, the more a farmer grew of a subsidized crop, the more money he or she received. Consequently, there was a drastic increase in the growth of agricultural commodities, such as corn.¹¹⁴ As a result, the U.S. became the largest producer of corn in the world, producing 42% of the world's total corn yield.¹¹⁵

Several pieces of legislation have attempted to end the federal regulation of agriculture. For example, the Federal Agriculture Improvement and Reform Act of 1996 set the goal ending such regulation.¹¹⁶ However, when agricultural prices fell toward to end of the 1990s, Congress

¹⁰⁵ Poole, *supra* note 95, at 190.

¹⁰⁶ See Nathan R.R. Watson, *Federal Farm Subsidies: A History of Governmental Control, Recent Attempts at a Free Market Approach, the Current Backlash, and Suggestions for Future Action*, 9 Drake J. Agric. L. 279, 287 (2004).

¹⁰⁷ *Id.* at 288-89.

¹⁰⁸ See Poole *supra* note 95.

¹⁰⁹ See Watson, *supra* note 105, at 289.

¹¹⁰ Angelo *supra* note 102.

¹¹¹ *Id.*

¹¹² See Watson, *supra* note 105, at 291 (noting that the farm subsidies program had developed into a "system that effectively subsidized large, corporate agricultural concerns (after all, the larger the farm, the greater the government payments), to the detriment of small family farms under the guise of 'helping the farmer'").

¹¹³ *Id.* at 292.

¹¹⁴ Angelo *supra* note 102.

¹¹⁵ *Id.*

¹¹⁶ Poole *supra* note 95.

as usual bailed out the agricultural industry.¹¹⁷ Though the 2014 Farm Bill eliminated subsidies by removing the direct and countercyclical crop payments, the overall amount of crop subsidies rose under new insurance programs, continuing a strong federal role in agricultural prices.¹¹⁸

C. The Unintended Consequences of Farm Subsidies

The previous brief summary of the history of farm subsidies spells out the extent of the USDA's control of what crops get produced, and subsequently the cost of food. Research in the field of clinical nutrition has observed that, at resulting retail prices, fats and oils, sugars¹¹⁹, refined grains, potatoes, and beans provide the highest number of calories at the lowest costs.¹²⁰ It is considerably more expensive for consumers to receive the same amount of calories from meats, fish, dairy products, and especially, vegetables, and fruits — staples of a low-calorie diet.¹²¹

Subsidized crops in the United States consequently result in accelerating the consumption of particular high-calorie food products.¹²² For example, since 1970, when agricultural subsidies resulted in food production skyrocketing, Americans average daily calorie intake has increased by 600 calories.¹²³ One of the primary factors behind this increase was corn

¹¹⁷ *Id.*

¹¹⁸ Anne Weir Schechinger, *Crop Subsidies Soar under 2014 Farm Bill "Reforms."* Economic Working Group Agricultural Magazine, March 13, 2015.

¹¹⁹ See also, Judy Putnam & Shirley Gerrior, *Trends in the U.S. Food Supply, 1970-97* in *America's Eating Habits*, 133, 151-53 (Elisabeth Frazao ed., 1999)

<http://www.ers.usda.gov/publications/aib750> (stating that "Americans have become conspicuous consumers of added sugars and sweet-tasting foods and beverages ... Sugar—including sucrose, corn sweeteners, honey, and molasses—is in a sense, the number one food additive"),

¹²⁰ Adam Drewnowski & Nicole Darmon, *The economics of obesity: dietary energy density and energy cost*, 82 *Am J Clin Nutr* (2005) 265S–73S. Fats and oils, sugar, refined grains, potatoes, and beans provided dietary energy at the lowest cost. At retail prices, energy cost of sugar or oil was in the order of 0.1 Euros/1000 kcal. In contrast, the cost per calorie of meats, fish and shellfish, dairy products, vegetables, and fruit was much higher (267S).

¹²¹ *Id.*

¹²² Andrew Rothman, *Between the Farm and the Dinner Table: The Impact of Farm Share on Body Mass Index in the United States*, 16 *Geo. Public Pol'y Rev.* 75 (2010 – 2011). In 2000, the average American consumed 300 more calories per day than in 1985, with refined grains, added fats, and added sugars accounting for 93 percent of the extra calories (Putnam, Allshouse, and Kantor 2002). 76

¹²³ Wallinga, *supra* note 82, at 405, on how these low costs have affected consumption decisions. "In 2002, U.S. Department of Agriculture (USDA) researchers said that the prime factor behind soaring obesity rates was a 300-calorie jump, from 1985 to 2000, in how many calories the U.S. food supply delivered to the average eater. Of the extra calories, 24 percent came from added fats; 23 percent, from added sugars. Grains, mostly refined grains accounted for 46 percent.8 Recently updated, the USDA data for 2007 show that Americans' average daily calorie intake is 400 calories higher than in 1985 and 600 calories higher than in 1970.9Amonggrains, corn calories (from corn flour, corn meal, hominy, and corn starch) led the way with a 191 percent increase since 1970. Added

calories.¹²⁴ Specifically, the number of calories we receive from corn has increased by about 191 percent since 1970¹²⁵ Added sugar intake has increased by 14 percent since that same year.¹²⁶ Finally, corn sweeteners—like high fructose corn syrup—are up 359% since its 1970 intake level.¹²⁷ This means that we consume, on average, 246 calories of corn sweeteners per day, which can come from a vast range of foods, including the buns and meats of sandwiches served at fast food restaurants, to processed cookies and treats, and even to a wide range of fruit juices and dairy products.¹²⁸ This pattern should be of particular concern to those concerned childhood obesity, as high fructose corn syrup has been linked to obesity and diabetes.¹²⁹ The average child drinks approximately 172 calories from sugar sweetened beverages (including those sweetened by HFCS) every day.¹³⁰

A USDA survey of changes in calorie intake between 1985 and 2000 also reveal trends in higher consumption of those food products that have the backing of agricultural subsidies.¹³¹ Specifically, during this period, Americans increased their consumption of calories by approximately 300 calories.¹³² Of these 300 calories, 24% were attributed to added fats, 23% to added sugars, and refined grains accounted for 46% of the increase.¹³³

Many scholars argue that sellers of highly processed foods, including fast foods, snacks, and beverages have primarily benefited from agricultural food subsidies.¹³⁴ These foods consist of the heavily subsidized commodities of corn, wheat, sugar, and milk.¹³⁵ As the

sugar intake—including cane and beet sugar, honey, syrups, and corn sweeteners—is up 14 percent over 1970 levels, but corn sweetener calories alone rose 359 percent to 246 calories per day. By 2005–06, the average child drank 172 daily calories from sugar-sweetened beverages, including those sweetened with high-fructose corn syrup.”

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ Angelo, *supra* note 102, at 612 (Finally, industrial agriculture can impact human health indirectly, by influencing the foods people eat. For example, the glut of corn resulting from U.S. agricultural policy has resulted in cheap high fructose corn syrup that has been incorporated into virtually all processed foods. High fructose corn syrup has been linked to obesity and diabetes).

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

¹³⁴ Spring, *supra* note 89 (“This conflict between public health and business profits is further compounded by the fact that highly-processed foods that contribute more to obesity deliver higher profits than lower-processed, but less profitable foods. Highly processed foods, like fast food, snacks, and beverages, are more profitable because they are made from inexpensive products that have the strong support of agricultural subsidies. This creates a dilemma for food companies that publicly [*233] say that they want to be part of the obesity fight, and the stockholders that they must be held accountable to for successful business results).

¹³⁵ Luna, *supra* note 94 at 240 (“Heavily subsidized commodities that gain the benefit of the law’s protection include corn, wheat, sugar, and milk”).

production costs of these commodities decrease, so do the prices of high caloric foods made from these commodities. In addition to the proliferation of cheap, high caloric foods, others have noticed a subsidies' link to an increase in factory farming and the gutting of family farms.¹³⁶ This development threatens to perpetuate the negative health effects of current farm subsidies because factory farms hold substantial more market power than family farms, and consequently, hold more political clout in the shaping of public policy. Though family farms grow subsidized crops, the benefits of the subsidies accrue predominantly to agribusiness, both in terms of the proportion of subsidies and in the increased market power subsidies give agribusiness by preventing small farms from entering the market, buying small farms that are competitors, or driving small farms out of business.¹³⁷

The political influence of factory farms becomes apparent when we consider the two-fold incentives facing the USDA. The USDA appears to be in the middle of a tug-of-war between agricultural producers and those people demanding healthy foods to decrease obesity rates. On one hand, the USDA is in charge of setting dietary standards for school programs and often gives nutritional advice to the public. On the other hand, the USDA is also required to be responsive to agricultural businesses. Consequently, as a recent volume of the *Drake Journal of Agricultural Law* states, any “type of dietary guidelines, which tell consumers to restrict their intake of meat or dairy — two major agricultural commodities — are going to be met with hostility by producers of those products.”¹³⁸ In short, agribusiness has a major voice in determining what ends up on our dinner plate as the 10th largest campaign contribution donor among economic sectors.¹³⁹

In addition to the effect of agricultural subsidies programs on what gets produced and the prices at which foods are sold in the market, governmental farm subsidies also negatively affect what foods become part of school meal programs. Farmers receive

¹³⁶ Mark Bittman, *Don't End Agricultural Subsidies, Fix Them*, *The New York Times* (2011), http://opinionator.blogs.nytimes.com/2011/03/01/dont-end-agricultural-subsidies-fix-them/?_r=0 (“Agricultural subsidies have helped bring us high-fructose corn syrup, factory farming, fast food, a two-soda-a-day habit and its accompanying obesity, the near-demise of family farms, monoculture and a host of other ills”).

¹³⁷ Brian M. Riedl, *How Farm Subsidies Harm Taxpayers, Consumers, and Farmers, Too*. Heritage Foundation, Backgrounder No. 2043 (2007), <http://www.heritage.org/research/reports/2007/06/how-farm-subsidies-harm-taxpayers-consumers-and-farmers-too>.

¹³⁸ Spring, *supra* note 89, at 224 (“Therefore, any type of dietary guidelines, which tell consumers to restrict their intake of meat or dairy — two major agricultural commodities — are going to be met with hostility by producers of those products”).

¹³⁹ Luna, *supra* note 94, at 241 (“For example, the 1996 Farm Bill left economic protections in force for growers and producers, but also arguably lead to the increasing demise of smaller owner-operators”). See also James A. Thurber, *Dynamics of policy subsystems in American politics*. American University Center for Congressional and Presidential Studies (1991). Policy in this domain is made in what public policy scholars call a policy subsystem. In a subsystem, key industry players, a government agency, congressional subcommittees, and few other actors make policy decisions. These subsystems are often difficult to disrupt given the entrenched, mutually beneficial relationship among the actors. For campaign contribution totals, see Open Secrets data at <https://www.opensecrets.org/industries/>.

subsidies in exchange for surplus output. Unfortunately, a large proportion of that surplus of high-fat beef, pork, and dairy products is distributed to schools in low-income areas where it becomes one more source of potential obesity.¹⁴⁰

Critics point out that the link between childhood obesity and school lunch programs arises, in part, from the fact that the USDA serves two — often conflicting — goals: “(1) setting income and pricing supports for [agriculture] commodities, and (2) creating nutrition programs.”¹⁴¹ To supply food to national school lunch programs, the USDA encourages commodity processing agreements (CPAs), which permit schools to contract with food processors that convert agriculture commodities into cheap food.¹⁴² The problem with these arrangements, however, is that the highly-processed, low-cost foods are the very same foods that contribute to childhood obesity.¹⁴³ Furthermore, when Congress attempts to enact dietary guidelines that would limit the amount of unhealthy foods available to students, the confluence of underfunded school lunch programs and a heavy agribusiness lobby¹⁴⁴ often restricts meaningful progress.¹⁴⁵

¹⁴⁰ Wiley, *supra* note 74. “Through the surplus commodity distribution programs, the USDA ‘buys hundreds of millions of pounds of excess beef, pork, milk, and other high-fat meat and dairy products to bolster dropping prices,’ which it then dumps into school meal programs. The USDA also brokers the processing of those commodities into high-calorie, high-fat foods with low nutritional value. The USDA has responded by arguing that USDA foods make up only fifteen to twenty percent of food served in federal school meal programs and that the nutritional quality of these foods is improving.”

¹⁴¹ J. Amy Dillard, *Sloppy Joe, Slop, Sloppy Joe: How USDA Commodities Dumping Ruined the National School Lunch Program*, 87 Or. L. Rev. 221, 244 (2008). This does not mean that the USDA’s efforts and the agriculture industry cannot potentially be aligned. *See, e.g.*, USDA National Institute of Food and Agriculture, *USDA’s National Institute of Food and Agriculture Awards \$8.6 Million in Community Food Projects* (Sept. 30, 2016), <https://nifa.usda.gov/press-release/usda%E2%80%99s-national-institute-food-and-agriculture-awards-86-million-community-food> (describing an endeavor by the USDA to fund local businesses and education initiatives that seek to make healthy foods more accessible in low-income neighborhoods).

¹⁴² *Id.* at 249 (“The USDA has declared that CPAs are mutually beneficial to the food industry and NSLP [National School Lunch Program] participants alike. The benefits to the USDA and food processors are clear. Food industries, including huge agribusiness firms like ConAgra, are guaranteed to profit from government contracts for turning raw commodities into highly processed, marketable, table-ready products. Local schools with no funding for training kitchen personnel and necessary equipment are supplied table-ready food that needs only microwave preparation”).

¹⁴³ *Id.* at 244-45.

¹⁴⁴ *See, e.g.*, Wiley, *supra* note 74 (“In 2010, a two-year process of federal reform, informed by a commissioned report from the Institute of Medicine, culminated in passage of The Healthy, Hunger-Free Kids Act (HHFKA). The Act directed the USDA to establish national school nutrition standards that are consistent with the most recent Dietary Guidelines for Americans ... Agriculture and food and beverage organizations have protested the new federal regulations and lobbied for modification”).

¹⁴⁵ *See* Dillard, *supra* note 135, at 247-48 (“When Congress attempted to require the NSLP to comply with new dietary guidelines set in 1994, economists estimated that the new guidelines would displace millions of pounds of butter, cheese, and beef annually. Interestingly, both the food industry and school food services opposed the requirement of compliance: the food industry wanted to maintain its market share, and schools recognized the impossibility of serving meals that met the dietary guidelines without additional funding. Congress ultimately made significant concessions in its compliance agenda. For example, even though school children get fifty percent of

The combined effect of subsidies encouraging factory farming and the increased production of highly processed foods have accelerated levels of obesity,¹⁴⁶ This impact on the health of Americans, as discussed in the previous sections, falls particularly hard on those living in poverty.¹⁴⁷

In fact, farm subsidies have not only aided the proliferation of highly processed, cheap foods, but they have also chipped away at social programs seeking to provide food those most in need. For example, the Food Stamp Program aims at helping those in poverty have access to foods. However, the low prices of low-nutritive, high caloric foods that are purchased through food stamp programs contribute to the cycle of poverty.¹⁴⁸ Thus, rather than actually addressing food insecurity, the Food Stamp Program serves as veil behind which agricultural subsidies influence the production of highly processed foods, benefitting the agribusiness at the expense of the more vulnerable members of society.

VI. Conclusion

There is nothing intrinsic to the idea of food subsidies that increases inequality. The effects documented here are the consequence of particular farm subsidies put in place to enhance the income and longevity of particular interest groups. A more consistent democracy would insist on directing farm subsidies to those producers who produce crops consistent with a healthy population. While grassroots programs seek to promote healthy lifestyles and consumption decisions,¹⁴⁹ those living in poverty depend on the consciences

their recommended fat calories from whole milk, the dairy industry was able to block any changes to the rule that requires schools to offer whole cow's milk").

¹⁴⁶ Patricia L. Farnese, *Remembering the Farmer in the Agriculture Policy and Obesity Debate*, 65 *Food Drug L.J.* 391 (2010) at 392 (Thus, the argument that a link exists between agricultural policy and obesity appears to be supported by the fact that obesity rates have risen at the same time as government intervention in the bulk commodity sectors intensified after World War II).

¹⁴⁷ Luna, *supra* note 94, at 226 ("The negative externalities flowing from agricultural subsidies are evident in the explosion of low quality food foisted on the poor. By failing to connect the health and nutrition needs of the nation's hungry with the nation's agricultural agenda, the current regime in expediting food production has created an inhospitable nutritional environment where malnourishment can thrive").

¹⁴⁸ *Id.* at 236 ("For example, the stated purpose of the Food Stamp Program is, 'to safeguard the health and well-being of the Nation's population by raising levels of nutrition among low-income households.' This objective would appear to underscore governmental intent and assure citizens that hunger in the nation is on the decline").

¹⁴⁹ See, e.g., Wiley, *supra* note 74 (describing the Health at Every Size movement, which "shifts the focus from weight management to health promotion" and whose primary intent is to "support improved health behaviors" by emphasizing "the importance of encouraging a healthy relationship with food and physical activity). See also The White House, *The White House and FDA Announce Modernized Nutrition Facts Label* (May 20, 2016), <https://www.whitehouse.gov/the-press-office/2016/05/20/white-house-and-fda-announce-modernized-nutrition-fact-s-label> (describing the efforts of Michelle Obama's "Let's Move!" program to make nutrition facts labels more readable and therefore more accessible).

of a caring electorate to pressure legislators and the Executive branch to create cooperation between the twin goals of stabilizing farm incomes and allowing the poor to enjoy the same healthy foods available to affluent Americans.

Received: March 22, 2016

Revised: October 12, 2016

Accepted: December 14, 2016