Feeding the Racial Disparity in Disease: how Federal Agricultural Subsidies Contribute to a Racial Disparity in the Prevalence of Diet Related Illness

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Introduction

A deadly epidemic is sweeping the United States. This new epidemic accounts for more deaths per year in the United States than car accidents, gun violence, natural disasters, suicide and a host of common illnesses.¹ However, the deaths associated with this new epidemic are attributable to a fundamental feature of American life: food. New research suggests that obesity accounts for 18% of all deaths in the United States per year.² And, what is worse, the federal government has been complicit in this new deadly epidemic.

On October 17, 2013, President Barack Obama gave a speech to reporters gathered at the White House. Speaking the day after Congress voted to fund the federal government after a sixteen day shutdown, President Obama declared that the passage of a new farm bill was among his top legislative priorities.³ The innocuous sounding, yet highly controversial farm bill is probably best known for its provisions funding the Federal Government’s primary food program for low-income families and individuals, commonly referred to as the food stamp program. In recent years, Republicans and Democrats in Congress have publically sparred over their conflicting views concerning the scope of the food stamp program, as well as the level of federal funding the program should receive.⁴

However, while the Supplemental Nutrition Assistance Program (SNAP) may be the most highly publicized aspect of the farm bill, the parts of the bill which may be having the greatest impact on the health and wellbeing of Americans are the provisions which provide direct payments to the owners of farms. Beginning in the 1970’s during the Nixon administration, the Federal Government has provided direct payments to farmers. While the program was implemented in response to rising food prices, a growing body of evidence suggests that these subsidies have played a role in America’s worsening obesity epidemic and the myriad of health conditions associated with obesity and poor diet.

In particular, recent research has focused on the relationship between direct payments to farmers for commodities, such as corn and soy beans, and how these commodities are used in the production of inexpensive foods and food additives, such as high-fructose corn syrup. While direct payments may be effective in reducing the price of certain foods, many researchers are increasingly expressing concern that direct payments might be indirectly subsidizing the production of unhealthy foods, thereby lowering the price of high-calorie, non-nutritious foods, relative to the price of nutritious foods. For example, while producers of fresh fruits and vegetables receive little to no federal subsidization, 14 of the 37 ingredients that go into a Twinkie are subsidized by the federal government. Accordingly, public health advocates are increasingly concerned that direct payments to farmers may be contributing to the rise in obesity and other diet related illnesses among Americans.

While the rise in diet related diseases has impacted all racial groups, African Americans and other racial minorities have been disproportionately affected by the increase in diet related illness. For example, the U.S. Department of Health and Human Services stated

7. See generally, MIKE RUSSO, APPLES TO TWINKIES: COMPARING FEDERAL SUBSIDIES OF FRESH PRODUCE AND JUNK FOOD (2011).
8. Id. at 6.
that in 2011, African American women were 80% more likely to be obese than non-Hispanic white women. Similarly, according to the American Diabetes Association, African Americans are almost twice as likely to develop diabetes, an illness commonly associated with diet. While numerous factors contribute to the racial disparity in the prevalence of diet related illnesses, direct payments to farmers by the federal government for the production of certain commodities play a role in the disease disparity. Because racial minorities in the United States are disproportionately subjected to poverty, they are disproportionately forced to purchase inexpensive, unhealthy foods. In poorer communities across America, which are disproportionately populated by racial minorities, supermarkets, convenience stores and fast food restaurants sell foods which are exceedingly processed and unhealthy when compared to food choices available in affluent communities. However, one of the factors which makes the food found in low-income communities cheap is also one of the factors which makes it unhealthy: the food contains derivatives of corn and other commodities for which farmers receive direct payments for producing. For example, foods ranging from Pringles Potato Chips, to Coca-Cola, to Wonder Bread all contain soybeans or corn (often in the form of an oil derivative). Farmers producing corn or soybeans receive substantial direct payments from the federal government. However, the use of these commodities as a food additive has the effect of drastically increasing the caloric content of food, while providing no additional nutritional value. For example, adding a single tablespoon of high fructose corn syrup to a food product adds approx-

imately fifty-three calories, while providing no additional micronutrients or important macronutrients, such as protein or fiber.17

This article explores how direct payments to farmers by the Federal Government contribute to a racial disparity in the prevalence of diet related illnesses. Previous research has explored the effects of agricultural subsidies on the American diet, while other research has discussed the racial disparity in diet related illnesses. However, previous research has failed to address the intersection of these two topics. For instance, in a study published in the American Journal of Preventative Medicine, researchers Caroline Frank, Sonia M. Grandi and Mark Eisenberg explained how agricultural subsidies have contributed to the obesity epidemic in the United States.18 However, their research fails to explain the disproportionate effect agricultural subsidies have had on minority populations. Conversely, in an article published in the Journal of the American Dietetic Association, Dr. Jessie A. Satia discussed the racial disparity in a host of diet related illnesses.19 However, Satia’s research does not discuss the role of agricultural subsidies in producing this disease disparity.

Part I of this article provides a brief history of agriculture subsidies in the United States. Part II explores the impact of agriculture subsidies on the price of food and public health. Part III discusses why African Americans and other racial minorities are disproportionately impacted by the negative effects of cheap food. Finally, Part IV explores some possible alternatives to current Federal Agricultural subsidies which would benefit public health and ameliorate the racial disparity in the prevalence of diet related illnesses.

Part I: A Brief History of Agriculture Subsidies in the United States

The Legacy of Roosevelt’s New Deal

The modern practice of the federal government providing subsidies to the owners and operators of farms has its roots in the Great Depression and the New Deal policies of the Roosevelt administration. The economic calamity which followed the stock market crash

18. Franck et al., supra note 6.
of 1929 was particularly disastrous for farmers. As historian Tom Morain explains, “In the early 1930s prices dropped so low that many farmers went bankrupt and lost their farms. In some cases, the price of a bushel of corn fell to just eight or ten cents. Some families began burning corn rather than coal in their stoves because corn was cheaper.”

Accordingly, Governor Franklin D. Roosevelt made agriculture relief a central plank in his 1932 presidential campaign. After securing the presidency, Roosevelt set out to provide relief to American farmers as part of his New Deal initiatives to combat the Great Depression. The Agricultural Adjustment Act of 1933 was among Roosevelt’s early initiatives to provide relief to farmers. The Act’s stated goal was “to establish and maintain such balance between the production and consumption of agriculture commodities...as will reestablish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy...” To achieve this goal, the Agriculture Adjustment Act instituted a number of new federal programs and regulations. For example, the bill provided the Secretary of Agriculture with the power to enter into agreements in which farmers would agree to limit their production of various agricultural commodities and, in exchange, the Secretary of Agriculture would provide the farmers with subsidy payments. The goal of the program was to reduce the supply of certain commodities in an effort to increase their prices.

However, like other New Deal initiatives, the constitutionality of Roosevelt’s agriculture policies was the subject of various legal disputes. For example, the Agriculture Adjustment Act also utilized the federal government’s power to tax in an effort to limit the production of certain agricultural commodities. In United States v. Butler, the Supreme Court considered the constitutionality of taxes imposed on producers of certain agricultural commodities in the Agricultural Adjustment Act of 1933. In Butler, the Court held that the act’s provisions imposing taxes were in fact regulations of agricultural produc-

22. AGRICULTURAL ADJUSTMENT ACT, Pub. L. 73-10 (1933).
23. Id.
tion and the taxes were a “mere incident of such regulation.”25 The Court concluded that the regulation of agricultural production was beyond the scope of the federal government’s power.26 Despite the Supreme Court’s ruling, the federal government under the Roosevelt administration continued to conceive and implement new initiatives to provide relief to farmers during the Great Depression era.

American Farm Policy under the Nixon Administration

The current federal practice of providing direct payments to farmers for producing various agricultural commodities owes its existence to Earl Butz, the Secretary of Agriculture under President Richard Nixon. In the early 1970’s, the inflation rate for groceries had risen dramatically.27 Housewives began organizing protests outside supermarkets.28 To combat the spike in prices, Butz set out to replace many of the policies implemented during the New Deal with direct payment to farmers.

Direct payments are money paid by the federal government directly to farmers for producing certain specified crops. The payment is based on acreage allotted to a particular crop, regardless of the crop yield or how much the crop brings in at the market place.29 The purpose of the payments was to incentivize farmers to produce certain commodities, thereby increasing their supply and decreasing food costs.30 While the subsidy payments offered by the Roosevelt Administration paid farmers for limiting the production of various crops, the direct payments championed by Butz offered a financial incentive to farmers for increasing the production of these commodities. Butz’s plan was consistent with his belief that bigger farms were more productive.31 The effect that direct payments had on American agriculture, however, was enormous. Author Michael Pollan discusses the impact of direct payments in his influential book, The Omnivore’s Dilemma:

25. Id. at 61.
26. Id. at 68.
27. POLLAN, supra note 5, at 51.
28. Id.
30. POLLAN, supra note 5, at 52.
31. Id.
Paying farmers directly for the shortfall in the price of corn was revolutionary, as its proponents surely must have understood. They had removed the floor under the price of grain. Instead of keeping corn out of a falling market as the old loan programs and federal granary had done, the new subsidies encouraged farmers to sell their corn at any price, since the government would make up the difference.32

From 1995 to 2012, the federal government provided $84,427,099,356 in corn subsidies alone.33 Currently, these subsidies come in the form of both direct payments as well as counter-cyclical payments. Counter-cyclical payments are additional payments provided by the government directly to farmers whenever the market price for a particular commodity falls below a stated target price.34 Along with corn, commodities also receiving substantial subsidies include cotton, soybeans, and sorghum.35 From 2003 to 2011, the U.S. Department of Agriculture made more than $46 billion in direct payments.36

Recently, farm subsidies have come under increased public scrutiny, primarily for their impact on the federal budget. As the U.S. Government Accountability Office explains, “Direct payments may no longer be affordable given the United States’ current deficit and debt levels.”37 Additionally, others have argued that many farm subsidies have become increasingly hard to justify, as farmers are currently receiving record grain prices.38 In fact, more than fifty percent of direct payments go to farmers with more than $100,000 in income.39 The Government Accountability Office recently recommended that Congress consider eliminating or reducing direct payments.40

32. Id.
33. ENVIRONMENTAL WORKING GROUP, supra note 15.
35. ENVIRONMENTAL WORKING GROUP, supra note 15.
37. Id at 17.
38. Masterson, supra note 29.
39. Id.
Current Federal Spending on Agriculture Subsidies

Despite the Government Accountability Office’s recommendation, the practice of providing federal subsidies to farmers has persisted and has had an impact on both the price of food and public health. Direct payments to farmers, as well as other farm subsidies, skew agricultural markets toward the overproduction of commodities that are basic ingredients in highly-processed foods, with high caloric values.41 Conversely, farmers producing those food items which are essential to a healthy diet, such as fruits and vegetables, receive significantly less federal subsidies.42 Thus, current federal agriculture policy provides producers and manufacturers of “junk food” — defined as food which is high in calories but low in nutritional content43 — with a substantial financial benefit which has not been afforded to producers of many of the most basic healthy food options.

The agricultural commodity which receives the most federal subsidization is corn. In 2012, American corn farmers received $2,702,462,268 in federal subsidies.44 Between 1995 and 2012, the federal government provided corn farmers with $84,427,099,356 in direct payments and counter-cyclical payments.45 While these figures may not initially seem particularly troubling, a closer look into corn production in the United States demonstrates how corn subsidies have been problematic for the American diet.

Of the approximately eighty million acres of land in the United States which are planted with corn, an exceedingly small percentage is the species of corn with which most Americans are familiar. Currently there are three major types of corn grown in the United States.46 Sweet corn, the variety of corn with which most Americans are familiar, accounts for less than 1% of the total corn produced in the United States.47 The overwhelming majority of corn produced in the United States is known as field or grain corn.48 Unlike sweet corn,
field corn is not typically consumed by humans immediately after being harvested. Rather, field corn is used for a variety of other purposes related to commercial food production. For example, most of the corn produced in the United States is used as livestock feed.\textsuperscript{49} Another significant portion of the field corn produced is processed into products used in industrial food production, such as sweeteners, corn oil and high-fructose corn syrup.\textsuperscript{50} Thus, while the federal government is heavily subsidizing the production of corn, very little of the corn produced is the common vegetable with which most Americans are familiar.

Farmers producing soybeans also receive significant federal subsidies. Between 1995 and 2012, producers of soybeans received $27,829,683,988 in direct and counter-cyclical payments.\textsuperscript{51} In 2012, soybean farmers received $1,469,484,005 in federal subsidies.\textsuperscript{52} Like corn, very little of the total amount of soybeans produced in the United States is consumed directly by humans.\textsuperscript{53} Rather, soybeans are processed into oils and are used as an ingredient in commercial food products.\textsuperscript{54} And like corn, soybeans are commonly used as livestock feed.\textsuperscript{55} In fact, 98\% of the soybeans produced in the United States are used as animal feed.\textsuperscript{56}

Finally, and perhaps most surprisingly, tobacco farmers receive significant federal subsidies. While the detrimental health effects caused by tobacco use are not diet related and therefore fall outside the scope of this article, it is important to briefly note the federal government’s continued support for tobacco farmers, given the racial disparity in illness caused by tobacco use. Between 1995 and 2012, tobacco farmers received $1,518,567,410 in federal subsidies.\textsuperscript{57} In 2012 alone, the federal government provided tobacco producers with

\textsuperscript{49} Id.
\textsuperscript{50} Id.
\textsuperscript{51} \textsc{Environmental Working Group}, \textit{supra} note 15.
\textsuperscript{52} Id.
\textsuperscript{53} \textit{How Soybeans are used}, \textsc{North Carolina Soybean Producers Association, Inc.}, http://www.ncsoy.org/ABOUT-SOYBEANS/Uses-of-Soybeans.aspx.
\textsuperscript{54} Id.
\textsuperscript{55} Id.
\textsuperscript{56} Kendra Wills, \textit{Where Do All the Soybeans Go?}, \textsc{Michigan State University} (October 8, 2013), http://msue.anr.msu.edu/news/where_do_all_these_soybeans_go.
\textsuperscript{57} \textsc{Environmental Working Group}, \textit{supra} note 15.
$188,776,927 in direct and counter-cyclical payments.\textsuperscript{58} While the level of federal funding provided to tobacco producers is small when compared to the federal subsidies enjoyed by corn farmers, tobacco subsidies are perhaps the most confusing of all agriculture subsidies, given the level of scrutiny the manufacturers of tobacco products have come under. In 2012, the same year the federal government provided hundreds of millions of dollars to tobacco producers, the Centers for Disease Control and Prevention (CDC), a division of the federal government, declared tobacco usage to be the single largest preventable cause of death in the United States.\textsuperscript{59} The racial and health implications of tobacco subsidies are discussed further below.

Compared with farmers producing commodities such as field corn, producers of fresh fruits and vegetables receive significantly less federal assistance. In fact, the only fruit or vegetable for which farmers have received significant federal subsidies for producing are apples.\textsuperscript{60} Since 1995, the federal government has provided apple farmers with $262 million dollars in subsidies.\textsuperscript{61} While these funds provide apple producers with some degree of financial support, they are exceedingly less than what the producers of other, less healthy, food commodities receive in federal funding. In fact, one study concluded that if agriculture subsidies went directly to consumers to purchase food, rather than producers, each American would be given funds to purchase nineteen Twinkies, but only one-quarter of one apple.\textsuperscript{62} The study’s conclusion was based on the fact that manufacturers of many junk food products receive substantial federal support, in the form of agriculture subsidies that provide cheap basic ingredients for many junk food products.

\textsuperscript{58} Id.

\textsuperscript{59} Current Cigarette Smoking Among Adults, CENTERS FOR DISEASE CONTROL AND PREVENTION (November 9, 2012), http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6144a2.htm.

\textsuperscript{60} Russo, supra note 7, at 4.

\textsuperscript{61} Id.

\textsuperscript{62} Id. at 1.
Part II: Impact of Farm Subsidies on Food Prices and Public Health

Health and Price Effects of Farm Subsidies

As noted above, only a small percentage of the commodities for which farmers receive federal subsidies for producing are used for direct human consumption. The majority of corn, soybeans and the like are used either as cattle feed or as commercial food ingredients. One of the more common of these ingredients is high-fructose corn syrup. High-fructose corn syrup is a liquid sweetener produced from field corn.63 It serves as a common alternative to sucrose (table sugar) and is used in a multitude of processed foods and beverages.64 A debate exists in the medical community as to whether there is a significant difference in the health implications of consuming high-fructose corn syrup as opposed to conventional table sugar.65 Thus, there may or may not be a difference in how high-fructose corn syrup affects one’s health when compared to sugar. However, there is little dispute as to the ubiquity of high-fructose corn syrup as an additive in processed foods. And the most significant way in which high-fructose corn syrup impacts public health lies in the degree in which its increased use as an ingredient has contributed to the overall consumption of calories and sweeteners among Americans.

In 1970, high-fructose corn syrup represented less than 1% of the sweeteners available for consumption in the United States.66 Beginning in the 1980s, however, the availability and consumption of high-fructose corn syrup increased dramatically, and by the year 2000, high-fructose corn syrup accounted for 42% of all sweeteners available for consumption.67

In the United States, high-fructose corn syrup can be found in virtually all processed foods that are at least somewhat sweet.68 For example, certain yogurts, breads, breakfast cereal bars, jellies and jams, ketchup and other condiments, apple juice and apple sauce,

64. Id.
65. Id.
67. Id.
68. Id.
canned fruits, salad dressings, roasted peanuts, and frozen dinners are just some of the foods that contain high-fructose corn syrup. Furthermore, virtually all soft drinks and commercially produced fruit juices contain high-fructose corn syrup. In fact, about two-thirds of the high-fructose corn syrup consumed in the United States is consumed in beverages. Thus, unlike conventional sugar, high-fructose corn syrup has found its way into an increasing number of food products. Furthermore, while many Americans would expect certain food products to contain some form of sweetener, many would be shocked to learn bread which was labeled 100% whole wheat also contained high-fructose corn syrup.

The rise in high-fructose corn syrup use is attributable to the low cost of corn caused by the federal government’s subsidization of corn production. The primary requirement necessary to produce high-fructose corn syrup, as the name suggests, is corn. As noted above, agricultural subsidies have made corn both cheap and abundant. Thus, corn subsidies provide food producers with a sweetener which, unlike table sugar, is immune from price and availability extremes. As a result, high-fructose corn syrup is now found in a countless number of food products available at virtually every grocery store in the United States. And while the presence of high-fructose corn syrup may make food a bit sweeter, its long term impact on one’s health is far less pleasant. High-fructose corn syrup, like regular sugar, adds calories to food. Not surprisingly, the increased prevalence of high-fructose corn syrup as a food additive coincided with increased obesity levels among the American public. High-fructose corn syrup consumption is also associated with diet related illness such as type 2 diabetes. In fact, researchers from the University of Oxford and the University of Southern California found that the prevalence of diabe-

69. Id.
70. Id.
71. White, supra note 63.
72. Id.
74. Bray, supra note 66.
75. Nelson, supra note 73.
tes was 20% higher among countries that use high-fructose corn syrup compared with countries that do not use it.\(^\text{76}\)

Corn starch, corn oil and soybean oil are further examples of ingredients which are found in virtually all junk foods and which are made from raw ingredients receiving significant federal financial assistance.\(^\text{77}\) And like high-fructose corn syrup, the common presence of these ingredients in a multitude of foods has contributed to a host of diet deficiencies and diet related illnesses.\(^\text{78}\) However, federal funding of the basic raw materials necessary to manufacture these ingredients has given producers of junk food a competitive edge at the market place. As previously noted, of the thirty-seven ingredients found in a Twinkie, at least fourteen of them are made with the assistance of federal agriculture subsidies.\(^\text{79}\) From 1995 through 2010, American taxpayers spent $16.9 billion dollars subsidizing junk food production.\(^\text{80}\)

Federal agriculture subsidies undercut efforts to improve the diet of Americans by skewing the market in favor of unhealthy calories.\(^\text{81}\) Because federal payments encourage farmers to produce certain commodities, agriculture subsidies encourage the overproduction of many of the basic ingredients of most unhealthy food items.\(^\text{82}\) Between 1970 and 2000, the average per person consumption of added fats increased by 38% and the average per person consumption of added sugars increased by 20%.\(^\text{83}\) According to a study published in the American Journal of Preventative Medicine, the average consumption of high-fructose corn syrup alone increased by more than 1000% between 1970 and 1990, and today it accounts for more than 40% of caloric sweeteners added to food and beverages.\(^\text{84}\) The researchers concluded that this excessive intake of fats and sugars is worsened by the availability of extremely cheap caloric options.\(^\text{85}\)


\(^{77}\) Russo, *supra* note 7, at 5.

\(^{78}\) Id.

\(^{79}\) Id.

\(^{80}\) Id.

\(^{81}\) SCIENTIFIC AMERICAN, *supra* note 9.

\(^{82}\) Franck et al., *supra* note 6, at 328.

\(^{83}\) Id. at 327.

\(^{84}\) Id.

\(^{85}\) Id.
Not all of the commodities for which farmers receive federal payment for producing are processed into food additives however. A large proportion of corn and soybeans produced by farmers are used as livestock feed. In fact, most of the corn produced in the United States is used as livestock feed.\textsuperscript{86} The use of corn and soybeans as feed for animals which will themselves ultimately be consumed as food has also negatively impacted public health and the price of food. For example, while the cow is evolutionarily designed to consume grass, the modern American beef cow is typically no longer fed a grass diet after it is six months old.\textsuperscript{87} Rather, most American cattle are fed corn and soybeans.\textsuperscript{88} The primary reason for this is that grain fed animals get fatter significantly quicker.\textsuperscript{89} Furthermore, the effect of low-cost feed made from corn and soybeans translates into lower cost of raising poultry, hogs and cattle, which in turn has implications of the relative prices of meat products.\textsuperscript{90}

The impact of feeding grain and soybeans to livestock however is decidedly less beneficial for the health of Americans who subsequently consume these animals. For example, researchers at California State University concluded that consuming grass-fed, rather than grain-fed, beef helps improve cholesterol and provides beneficial nutrients.\textsuperscript{91} Furthermore, researchers are increasingly expressing concern regarding the level of antibiotics Americans are exposed to by consuming livestock.\textsuperscript{92} Because most livestock are not evolutionarily accustomed to eating grain, they will inevitably get ill from eating a corn or soybean based diet.\textsuperscript{93} Thus, in order to raise cattle and other livestock on grain, as is the prevailing practice, farmers must also give their livestock antibiotics.\textsuperscript{94} One researcher estimates that 15 to 17 million pounds of antibiotics are used for cattle production each

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\item \textsuperscript{86} Corn, U.S. Dept. of Agriculture, \textit{supra} note 46.
\item \textsuperscript{87} Interviews - Michael Pollan, PBS, http://www.pbs.org/wgbh/pages/frontline/shows/meat/interviews/pollan.html.
\item \textsuperscript{88} Id.
\item \textsuperscript{89} Franck et al., \textit{supra} note 6, at 328.
\item \textsuperscript{90} Id.
\item \textsuperscript{91} Cynthia Daley, \textit{A Review of Fatty Acid Profiles and Antioxidant Content in Grass-Fed and Grain-Fed Beef}, 9 \textit{Nutritional J.} 2 (2010).
\item \textsuperscript{92} Antibiotic Debate Overview, PBS, http://www.pbs.org/wgbh/pages/frontline/shows/meat/safe/overview.html.
\item \textsuperscript{93} Interview by PBS with Michael Pollan, \textit{supra} note 87.
\item \textsuperscript{94} Antibiotic Debate Overview, \textit{supra} note 92.
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year.\textsuperscript{95} However, public health advocates are increasingly concerned that administering antibiotics to livestock may present a danger to human health. If livestock are treated with antibiotics, overtime bacteria living in those animals become resistant to that drug.\textsuperscript{96} According to microbiologist Dr. Glenn Morris, this is problematic for humans because persons who ingest antibiotic resistant bacteria by eating meat may not respond to antibiotics if they become ill.\textsuperscript{97} Concerns over public health led the European Union and Canada to ban the use of antibiotics in rearing livestock.\textsuperscript{98}

**Part III: The Racial Disparity in Diet Related Illness and the Role of Agriculture Subsidies**

**A Disease Disparity**

Obesity is the disease which is perhaps most commonly associated with a poor diet. Obesity is defined as having body fat in excess of what health care professionals have deemed to be healthy.\textsuperscript{99} A doctor will diagnose an individual with obesity when that individual has a Body Mass Index (BMI) in excess of 30.00.\textsuperscript{100}(BMI is calculated by dividing a person’s weight in kilograms by their height in meters squared\textsuperscript{101}). The primary cause of obesity is an energy imbalance, i.e., consuming more calories daily than a person expends.\textsuperscript{102} As a person continues to consume more calories than they burn, those excess calories are stored in the body as fat, thereby resulting in increases in bodyweight and body fat.\textsuperscript{103}

Obesity is associated with numerous other health conditions, many of which can independently be caused or exacerbated by poor diet and are discussed in detail below. For example, according to the Mayo Clinic, individuals suffering from obesity are more likely to develop the following health conditions: high cholesterol, type 2 diabetes, high blood pressure, heart disease, metabolic syndrome, stroke,

\textsuperscript{95} Id.
\textsuperscript{96} Id.
\textsuperscript{97} Id.
\textsuperscript{98} Id.
\textsuperscript{100} Id.
\textsuperscript{101} Id.
\textsuperscript{102} Id.
\textsuperscript{103} Id.
cancer, sleep apnea, depression, infertility, nonalcoholic fatty liver disease, osteoarthritis and skin problems.\textsuperscript{104} According to the CDC, there are approximately 112,000 obesity associated deaths per year in the United States.\textsuperscript{105}

The negative impact federal agricultural subsidies have had on public health have affected virtually all subsets of the American population. However, African Americans and other racial minorities have been disproportionally impacted by the effects of agricultural subsidies. For example, the CDC reports that the rate of obesity among African Americans is 51% higher than it is among whites.\textsuperscript{106} Additionally, the CDC reports that the obesity rate among Hispanics is 21% higher than it is among whites.\textsuperscript{107} Similarly, the childhood obesity rate among African Americans is 19%, compared with 11% for white children.\textsuperscript{108} Rates of diabetes and heart disease, two diseases commonly associated with diet and obesity, are also higher among racial minorities.\textsuperscript{109} While the racial disparity in diet related illness has many causes, federal agricultural policy, and in particular agricultural subsidies, have played a role.

According to the Kaiser Family Foundation, in 2011 72% of African Americans were classified as either obese or overweight, while 62% of whites were classified as obese or overweight. The disparity was also present among Hispanics, with 68.7% classified as either obese or overweight. While the racial disparity in the prevalence of obesity is alarming, the racial disparity in rates of obesity related deaths is potentially even more troubling. For instance, Columbia University’s School of Public Health reports African American women have the highest risk of dying from obesity at 27%, compared

\textsuperscript{104} Id.

\textsuperscript{105} \textsc{Centers for Disease Control and Prevention, Frequently Asked Questions About Calculating Obesity-Related Deaths available at} \url{http://www.cdc.gov/PDF/Frequently_Asked_Questions_About_Calculating_Obesity-Related_Risk.pdf}.

\textsuperscript{106} \textit{Compared With Whites, Blacks Had 51\% Higher and Hispanics Had 21\% Higher Obesity Rates}, \textsc{Centers for Disease Control and Prevention} (April 5, 2010), \url{http://www.cdc.gov/Features/dsObesityAdults/}.

\textsuperscript{107} Id.

\textsuperscript{108} Sonia Caprio \textit{et al., Influence of Race, Ethnicity and Culture on Childhood Obesity: Implications for Prevention and Treatment}, 31 \textsc{Diabetes Care} 2211, 2212 (2008).

\textsuperscript{109} \textit{Diabetes Disparities Among Racial and Ethnic Minorities}, \textsc{Agency for Healthcare Research and Quality} (Nov. 2001), \url{http://www.ahrq.gov/research/findings/factsheets/diabetes/diabdisp/index.html}. 
with 21% for white women.110 While the study noted that obesity related mortality rates were actually lower for black males when compared to white males, the researchers noted that obesity mortality rates among black males were “crowded out” by a host of other socioeconomic factors which cause high rates of early mortality among African American males.111

Rates of type 2 diabetes are also disproportionately higher among racial minorities. Type 2 diabetes is the most common form of diabetes in the United States.112 Type 2 diabetes is a disease characterized by higher than normal levels of sugar in a person’s blood.113 In a person who does not suffer from the disease, insulin, a hormone produced by the pancreas, moves sugar into cells to be stored and used for energy.114 With individuals who suffer from Type 2 diabetes, their cells begin to not respond to insulin and, as a result, blood sugar does not get into cells to be stored as energy, causing a buildup in blood sugar.115

Type 2 diabetes has a number of potential causes, some of which are unrelated to diet. However, being overweight is a primary risk factor for Type 2 diabetes.116 Additionally, the more fatty tissue one has on his or her body, the more resistant the person’s cells will become to insulin.117 Numerous health complications can result from Type 2 diabetes, including heart disease, nerve damage, cataracts, glaucoma, kidney damage and foot or toe amputation.118 Complications from Type 2 diabetes can also result in death.119

When compared to whites, the rate of Type 2 diabetes is 77% higher among African Americans and 66% higher among Hisp-
ics. 120 In 2011, 18.7% of all African Americans ages twenty and older were diagnosed with Type 2 diabetes.121 This compares to a rate of 10.2% among whites ages twenty and older during that same year.122 Rates of Type 2 diabetes among African Americans also appear to be on the rise. From 2004 to 2006, the rate of type 2 diabetes among African Americans was 12.6%, approximately 6% lower than the rate in 2011.123

African Americans are also disproportionally impacted by heart disease, another illness commonly associated with diet. Heart disease is a term used to describe a range of diseases that affect the heart, including coronary artery disease, heart arrhythmias and heart infections.124 Heart disease is the most common cause of death in the United States, irrespective of race.125 However, in 2007, African American men were 30% more likely to die from heart disease than white men.126 The racial disparity in heart disease rates persist today.127

The causes of heart disease vary depending on the specific type of heart disease. However, high amounts of fats and cholesterol in the blood, high blood pressure, and high amounts of sugar in the blood due to insulin resistance or diabetes are among the leading causes of heart disease.128 The CDC lists poor diet, obesity and being overweight among the primary causes of heart disease in the United States.129

122. The Facts About Diabetes: A Leading Cause of Death in the U.S., NATIONAL DIABETES EDUCATION PROGRAM, supra.
123. THE NATIONAL DIABETES EDUCATION PROGRAM, THE DIABETES EPIDEMIC AMONG AFRICAN AMERICANS, supra.
126. Id.
127. Id.
Illness and death from tobacco use also disproportionally affects racial minorities and, as previously mentioned, the federal government continues to provide direct payments to farmers for producing the crop. According to the Campaign for Tobacco Free Kids, a non-profit advocacy organization, “African Americans tend to smoke fewer cigarettes per day and begin smoking later in their life than whites, but their disease mortality is still significantly higher. As a result of this disturbing paradox, the years of potential life lost before the age of 65 is two times higher in black smokers than white smokers.”

While many federal agriculture subsidies seem to conflict with basic public health initiatives, tobacco subsidies present the greatest conundrum. For instance, in 2012 the federal government spent $54 million on a new anti-smoking campaign. That same year, the federal government also provided tobacco producers with over $188 million in subsidies for producing the harmful crop. Thus, the same year the federal government spent millions urging Americans not to smoke, it paid farmers over twice as much to produce the very product it purported to want Americans to quit using.

The Role of Agriculture Subsidies in the Disease Disparity

As racial minorities in the United States statistically receive lower wages and are disproportionately subjected to poverty, the distortion in market prices for various food items caused by agriculture subsidies disproportionately impacts racial minorities. Furthermore, as described above, agriculture subsidies themselves contribute to the unhealthy nature of various food products, as the subsidies support the production of ingredients which add calories, fat and sugar to foods, such as high-fructose corn syrup. Many of these high-calorie, non-nutritious food products are subsequently sold in communities predominately populated by racial minorities, where access to healthy food choices are often limited.

Researchers Adam Drewnowski and Nicole Darmon explored the relationship between income levels and diet related illness in an article published in the American Journal of Clinical Nutrition, titled, *The Economics of Obesity: Dietary Energy Density and Energy Cost*. In the article, Drewnowski and Darmon made the following observations:

The rates of obesity and type 2 diabetes in the United States and other industrialized countries follow a socioeconomic gradient, with highest rates observed among minorities and the poor. At the individual level, obesity rates are linked to low incomes, low education, minority status and higher incidences of poverty. At the environmental level, obesity rates were higher in lower-income neighborhoods, legislative districts and low income states.\(^{133}\)

To explain this phenomenon the researchers explained that “what refined grains, added sugars and added fats have in common is their low energy cost.”\(^{134}\) Their research explains refined grains, added sugars and added fats are among the lower-cost sources of energy, whereas more nutritious, vegetables, fruits and lean meats are considerably more expensive.\(^{135}\) Thus, economic barriers to healthy food options is a central reason for the observed prevalence of diet related illness among low-income individuals. However, the relative prices of healthy and unhealthy food items are influenced by the federal subsidization of ingredients for junk food.

In the United States, variation in income levels have historically been, and continued to be, especially pronounced along racial lines. For instance, in 2012, the median income for a white household in the United States was $57,009, whereas the median income for an African American household was $33,321.\(^{136}\) Poverty rates in the United States follow a similar racial pattern. For example, the Kaiser Family Foundation reports that in 2011, the poverty rate among African Americans was 35%, while the poverty rate among whites was 13%.\(^{137}\) The poverty rate among Hispanics was also higher than the rate for whites, with 33% of Hispanics falling under the poverty

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\(^{134}\) *Id.* at 270S270.

\(^{135}\) *Id.* at 270S270.


While the disparity in national poverty rates is alarming, in certain geographic locations within the United States the disparity is even more pronounced. For instance, in the District of Columbia, the rate of poverty among African Americans is 39%, while the rate among whites is only 7%. Similarly, in Minnesota almost half of the African American population (48%) lives in poverty, while the rate of poverty among white Minnesotans is 9%.

Given the racial disparity in income and poverty rates among white Americans and racial minorities, the influence of agriculture subsidies on food prices, as well as diet and public health, has created a far greater burden for racial minorities than it has for white Americans. Because minorities are more likely to experience lower incomes and higher poverty rates, they are more likely to be forced to purchase cheaper food items, which tend to be less nutritious and contain higher caloric values. However, one of the factors contributing to the low cost of these foods is the federal government subsidization of many of the basic ingredients they contain. Thus, if the federal government were to subsidize healthy food choices, such as fresh fruits and vegetables, rather than junk food ingredients, purchasing nutritious food could be a more economically feasible option for low-incomes individuals. As Drewnowski and Darmon explain in their article, “evidence is emerging that obesity in America is largely an economic issue.”

Agriculture subsidies have also had a disproportionate impact on minorities, as predominately minority neighborhoods and communities are often characterized by a lack of availability of food free from the unhealthy ingredients subsidized by agricultural subsidies. In 2012, the United States Department of Agriculture published a report titled, Characteristics and Influential Factors of Food Deserts. The study defines a food desert as an area where people have limited access to a variety of healthy and affordable food. The study explained that, in general, the higher the percentage of minority population, the more likely the area is to be a food desert. Individuals

138. Id.
139. Id.
140. Id.
141. Drewnowski, supra note 133, at 271.
143. Id.
living in food deserts have difficulty gaining access to fresh fruits and vegetables and tend to eat fast food and buy processed foods from convenience stores.\textsuperscript{144} This in turn fuels rates of obesity and diabetes in these communities.\textsuperscript{145} Thus, in predominately minority communities, gaining access to foods free from the nutritional defects fueled by agriculture subsidies can be challenging.

An article published in the Michigan Journal of Race & Law in 2009 addressed the issue of food quality in low-income, predominately minority communities.\textsuperscript{146} The article explains that studies which have analyzed the quality of food in low-income communities demonstrate that “residents of poorer neighborhoods—who also happen to be predominately African American and Latino—have less access to quality produce and healthy food items. As a result, poor non-whites are less likely to eat a healthy diet. . .”\textsuperscript{147} The article notes that grocery stores in poorer communities typically sell food products of a lower nutritional quality when compared to grocery stores in affluent communities.\textsuperscript{148} Furthermore, grocery stores in low income communities are generally characterized by a lack of fresh produce.\textsuperscript{149}

\section*{Part IV: Relieving the Disparity in Diet Related Illness through Reform}

\subsection*{Smarter Federal Spending on Agriculture Commodities}

Completely eradicating the disparity in diet related illnesses among racial groups will require radical changes in a multitude of social, economic, and cultural conditions in the United States. However, one way in which the federal government could begin to ameliorate this disparity is by redirecting federal funds currently allocated to the production of unhealthy agricultural commodities towards the production of basic healthy food items. For example, providing farmers who produce fresh fruits and vegetables with federal subsidies would help reduce the price of these items at the market place,

\textsuperscript{145} Id.
\textsuperscript{146} Smith, \textit{supra} note 14.
\textsuperscript{147} Id. at 217.
\textsuperscript{148} Id www.ers.usda.gov/topics/crops/corn.aspx#.UqtHgPRDuHN at 217.
\textsuperscript{149} Id. at 208.
thereby increasing access to healthy food choices among minority communities. Furthermore, providing subsidies to producers of healthy food choices would help skew the prices of foods at the market place in favor of health calories. As a recent article in *Scientific American* explains, “fruits and vegetables do not have to be more expensive than a corn-laden chicken nugget or corn-syrup—sweetened drink. One reason they are costly is that the current farm bill categorizes them as specialty crops that do not receive the same direct payments...that commodity crops do.”150 Thus, providing federal financial support to healthy food options, while removing the support which promotes the consumption of unhealthy calories, could make those food options more economically enticing relative to the cost of junk foods—the inverse of the current federal agriculture scheme. Furthermore, as the United States is already spending hundreds of billions of dollars on agriculture subsidies, subsidizing healthy calories would not require new federal funds, only redirecting current funds towards the production of healthier foods.

Critics of this proposal are likely to argue that, given current levels of federal deficits and debts, agriculture subsidies are unsustainable and should be eliminated altogether. As previously noted, the U.S. Government Accountability Office recently recommended that agriculture subsidies be eliminated to help alleviate current federal deficit spending.151 Similarly, members of Congress from both major political parties, as well as both liberal and conservative leaning media outlets have called for the abolition of farm subsidies.152 However, what those arguments fail to consider is the considerable degree to which diet related illnesses cost the American economy and the amount of current federal spending on these illnesses. For example, the Harvard School of Health reports that in 2005 alone, the United States spent $190 billion on obesity-related health care expenses.153 Furthermore, obesity has been estimated to cost the U.S. economy an additional $153 billion in lost productivity annually.154 Thus, while

152. Id.
the cost of continuing agriculture subsidies may be great, the costs of continuing current trends in American dietary habits are far greater. Redirecting federal agriculture subsidies towards the production of healthier foods choices may actually save the United States money by reducing the economic impact of the illnesses that result from poor diet.

Federal Taxation of Unhealthy Foods

To further alleviate the disparity in diet related illness the federal government could impose an excise tax on unhealthy foods. Such a tax would help reduce the disease disparity in two important ways. First, the imposition of a tax on junk food would increase the price of this food relative to the cost of healthier foods choices. This could help deter consumers from purchasing these foods and steer them towards healthier calories. If such a tax was imposed in conjunction with subsidizing healthier foods, the general difference in the price of healthy versus unhealthy foods would be even more pronounced. Second, the imposition of a tax on unhealthy foods would provide the federal government with a significant source of revenue for funding future public health initiatives. These funds could be directed towards various initiatives targeted at improving public health in minority communities.

For instance, a study published in the *British Medical Journal* reported that a tax on sugary beverages would reduce obesity levels in the United States by 3.5%. Similarly, a study published in the *Archives of Internal Medicine* estimated that an 18% tax on pizza and soda would cause the average American to lose five pounds per year. The use of taxes to discourage unhealthy behaviors is hardly a new concept. Currently, the federal government imposes a $1.01 tax on each pack of cigarette sold (despite that fact that it provides tobacco farmers with subsidies). The imposition of taxes on tobacco productions has effectively encouraged individuals to quit smoking. After the federal cigarette tax was raised in 2009, cigarette

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156. Id.

sales dropped by 10%.[158] The cigarette tax has also effectively raised funds for the federal government. For example, a current proposal to increase the cigarette tax by $.94 is projected to raise $78 billion in federal funds over ten years. A tax on unhealthy foods could similarly raise funds for government sponsored initiatives targeted at promoting healthy dietary choices. For instance, an article published in the Wisconsin Law Review points out that “One of the advantages of a junk-food tax is that even a small tax can generate substantial revenue, which states could use to subsidize healthy diets and exercise programs or create information campaigns about healthy choices.”[159]

Opponents of a junk food tax are likely to argue that such a tax exceeds the scope of the federal government’s power to tax. These opponents are likely to emphasize that courts have curtailed the federal government’s power to tax in instances where a purported tax can be more accurately described as a regulation. The United States Supreme Court has placed limitations on the Federal government’s power to levy taxes and has emphasized an important distinction between legitimate taxes and revenue raising regulations.[160] For example, in Bailey v. Drexel Furniture Co., the Court explained the distinction between regulations and taxes, stating the following:

“Taxes are occasionally imposed in the discretion of the legislature on proper subjects with the primary motive of obtaining revenue from them and with the incidental motive of discouraging them by making their continuation onerous. They do not lose their character as taxes because of the incidental motive. But there comes a time in the extension of the penalizing features of the so-called tax when it loses its character as such and becomes a mere penalty, with the characteristics of regulation and punishment.”[161]

However, under the most recent standards articulated by the Supreme Court, a junk food tax would fall within the scope of federal taxation power. In National Federation of Independent Business v. Sebelius, Chief Justice John Roberts provided criteria for determining whether a tax is truly or tax or a penalty. First, Justice Roberts explained that a purported tax is more likely to be deemed to be a regu-

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158. Id.


lation if it includes the element of scienter\textsuperscript{162} (i.e., knowingly engaging in a wrongful act). A junk food tax would not violate this requirement, as no junk food tax which has ever been proposed, or that is likely to be proposed, would include the scienter element. Second, Justice Roberts stated a purported tax is likely to be deemed to be a regulation if it is exceedingly burdensome, such that the taxed activity is essentially prohibited.\textsuperscript{163} A tax on unhealthy foods is also unlikely to violate this principle. A junk food tax, like a tax on cigarettes would most likely take the form of a minor fee tacked onto the price of the good sold. And like taxes on cigarettes, such a tax on junk food is unlikely to be so burdensome as to prohibit most people from purchasing these food products. Rather, a tax on junk food would only provide the consumer with mild additional incentive to choose healthier food options. Finally, Justice Roberts stated that a purported tax is more likely to be deemed a regulation if an agency other than the Internal Revenue Service is responsible for collecting the fee.\textsuperscript{164} For a junk food tax to serve its intended purpose, any federal agency could be responsible for collecting the revenue derived from the tax. Thus, a junk food tax could be implemented without violating this aspect of Justice Roberts’s criteria.

A recent article in the Yale Law and Policy Review discusses the federal government’s power to impose a tax in light of the Court’s ruling in \textit{National Federal of Independent Business v. Sebelius}:

“Characterizing the penalty imposed by the Affordable Care Act on individuals who choose not to obtain health insurance as a tax, Chief Justice Roberts emphasized that, while the penalty might affect individual behavior, the imposition of a tax nonetheless leaves an individual with a lawful choice to do or not to do a certain act, so long as he is willing to pay a tax levied on the choice. Because taxes simply nudge behavior in a desired direction without directly curtailing individual rights, they are an effective vehicle to circumvent otherwise limited federal power.”

**Eliminate Food Deserts**

Fully eradicating the disparity in diet related illness requires the elimination of the food desert phenomenon. As long as food deserts persist, there will always be a subset of the American population,

\textsuperscript{163} Id. at 2595.
\textsuperscript{164} Id. at 2595.
which has heretofore predominately been compromised of racial minorities, who will have difficulty gaining access to healthy food choices. Fortunately, the problem of food deserts has received increased public awareness. Recent media coverage and news stories have focused on the issue and First Lady Michelle Obama has focused on eliminating food deserts as part of her “Let’s Move” initiative.

In conjunction with the First Lady’s Let’s Move initiative, the Obama administration implemented the Healthy Food Financing Initiative targeted at eliminating food deserts. The Healthy Food Financing Initiative provides federal financial support to projects that increase access to healthy, affordable foods. The initiative is a joint project operated by U.S. Department of Agriculture, Department of Treasury and Department of Health and Human Services. Businesses, local governments, and non-profit organizations can apply for grants from the Healthy Food Financing Initiative to support programs which are targeted at the elimination of food deserts.

Some legal scholars have also suggested that federal laws should be enacted regulating grocery stores. Such laws could serve as an effective method of alleviating the problem posed by food deserts. For instance, one scholar suggests that Congress should enact a law which requires chain grocery stores to sell the same quality of goods in each store of the chain. Such a provision could help ensure that grocery stores which operate in both affluent and economically disadvantaged communities provide the same level of nutritional quality in both communities.

Conclusion

While the disparity in diet related illness has numerous components and will require a broad range of changes in American culture and society to fully eliminate, the current federal scheme of providing producers of certain agriculture commodities with direct payments and other forms of subsidization has contributed to the problem. Current agriculture subsidies provide junk food manufacturers with

167. Smith, supra note 14, at 247.
cheap raw ingredients and a competitive edge at the market place. Furthermore, the use of these ingredients in food has the effect of making the food drastically higher in calories, while providing little to no additional nutritional value. Because African Americans and other racial minorities statistically receive lower wages and are disproportionately subjected to poverty in the United States, they have been impacted more dramatically than white Americans by the effects of the cheap, unhealthy food, agriculture subsidies have funded. Fortunately, by reallocating agriculture subsidies towards the production of healthier food choices, the federal government can have a meaningful impact on public health and begin the march towards eliminating the disparity in diet related illness.