

**Pour Some Sugar on Me:
The Contribution of U.S. Agricultural Policy to Obesity¹**

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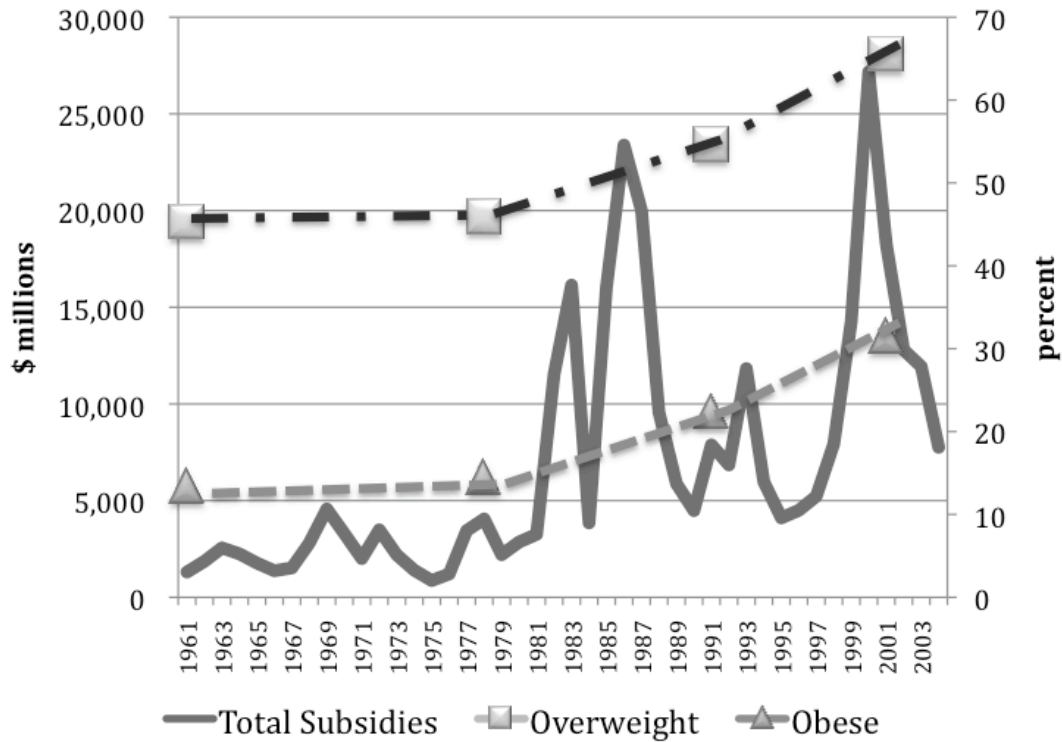
1 Introduction

The prevalence of obesity in the U.S. has risen dramatically in the last several decades, from 15 percent of the population during 1976-1980 to 30.4 percent during 1999-2002 (Flegal et al., 2002; Hedley et al., 2004). Obesity is associated with serious health problems, including diabetes mellitus, hypertension, stroke, gallbladder disease, cardiovascular disease, respiratory disease, cancer, arthritis, and gout (Bray, Bouchard, & James, 1998, Pi-Sunyer, 2002), which has led the government to declare the rise in obesity a public health crisis (U.S. DHHS, 2001). In response, the U.S. Federal government has set the goal of reducing the U.S. prevalence of obesity by more than half -- to 15% -- by the year 2010 (U.S. DHHS, 2000).

Developing effective interventions and policies to reduce the prevalence of obesity requires studying the factors that contributed to the problem. While genetic factors partly determine whether a person becomes overweight, the gene pool could not have changed quickly enough to explain the recent rise in obesity. Instead, much of the recent trend must be explained by factors that influence individual behavior. A person becomes overweight when he consistently takes in more calories than he expends (IOM, 2004). Thus, to reduce the prevalence of obesity, we must understand what factors lead individuals to consume a diet that leads to energy imbalance.

One possibility is that agricultural policy contributes to obesity by promoting lower prices and greater production of certain commodities. Over the same time that the U.S. has witnessed a dramatic rise in obesity, U.S. agricultural subsidies have risen (figure 1), and farmers, spurred at least in part by agricultural subsidies, have produced food in record quantities

at record low prices. The research question of this paper is whether these trends are related; in other words, does U.S. agricultural policy promote obesity?



The most direct way that agricultural subsidies may affect obesity is by encouraging overproduction and low food prices. If consumers respond to these low prices by consuming more food without changing their lifestyle, the result is obesity. In this paper we outline the microeconomic framework of U.S. agriculture policy, and show how subsidies influence food production, food prices, and ultimately obesity. We explore the evidence of such effects and find that agricultural subsidies account for about 1 percent of the increase in obesity over the past two decades. While this is a small fraction of the overall rise, it is particularly interesting because it is an unintended consequence of government policy, and illustrates a case in which “one hand does not know what the other hand is doing”: at the same time that the U.S. is setting goals to cut

the prevalence of obesity by half by 2010, it was implementing agricultural policies that aggravated the problem.

Obesity increases as people consume more calories by consuming more food or altering the composition of food consumed to calorie-dense foods. Agricultural policy influences consumption through food advertising and the composition of school lunches. Publicly sponsored research further reduces the price of calories by inventing inexpensive substitutes for primary ingredients such as sugar. We highlight the role played in the obesity epidemic by agricultural policies that influence consumption and suggest directions for further research.

2 Agricultural Subsidies

U.S. agricultural policy is complex and dynamic, and changes significantly approximately every five years when Congress passes a new Farm Bill. In spite of these frequent changes, agricultural subsidies have consistently fallen into three main categories: price supports, production subsidies, and farmland subsidies. Price supports aim to elevate the prices received by all producers of subsidized crops.² Production subsidies pay farmers for each unit produced, while farmland subsidies subsidize the land but not necessarily the amount produced. Each of these subsidy types affect production, hence food prices, differently. We will address the effects of agricultural subsidies within each of these three categories. We will examine the evidence of their effects, ultimately illustrating their plausible impact on the American obesity epidemic.

2.1 Price Supports

Price supports are the most enduring feature of U.S. agricultural policy. Instituted in 1933, price supports have survived in some form for over 70 years. Traditionally, agricultural

² The vast majority of subsidy dollars support just a few crops, i.e. wheat, corn, barley, oats, sorghum, rice, cotton, soybeans, and other oilseeds. This section of the paper focuses on the subsidies to these crops.

price supports have been the textbook example of how price supports work. Price support programs guarantee that farmers will receive a minimum price for their crops; this minimum price is typically set higher than that which would prevail in a free market. This creates disequilibrium: supply is greater than demand. A free market would resolve this disequilibrium; price would fall until supply equaled demand. However, such an adjustment would defeat the intention of the price support legislation, so the government typically kept the price high by buying any excess supply. While the intent of price support legislation was to benefit farmers (by reducing risk and raising incomes) it had the consequence of raising the prices that consumers must pay for food. Therefore, it may have had the unintended consequence of keeping calorie consumption lower than what would have occurred in a completely free market for agricultural commodities.

We illustrate a model price support system using figure 2, which depicts supply and demand curves for wheat. In the absence of government intervention, the price of wheat is determined by the intersection of the supply and demand curves at P^* . On the horizontal axis, Q^* denotes the amount of wheat that would be produced in this competitive equilibrium.

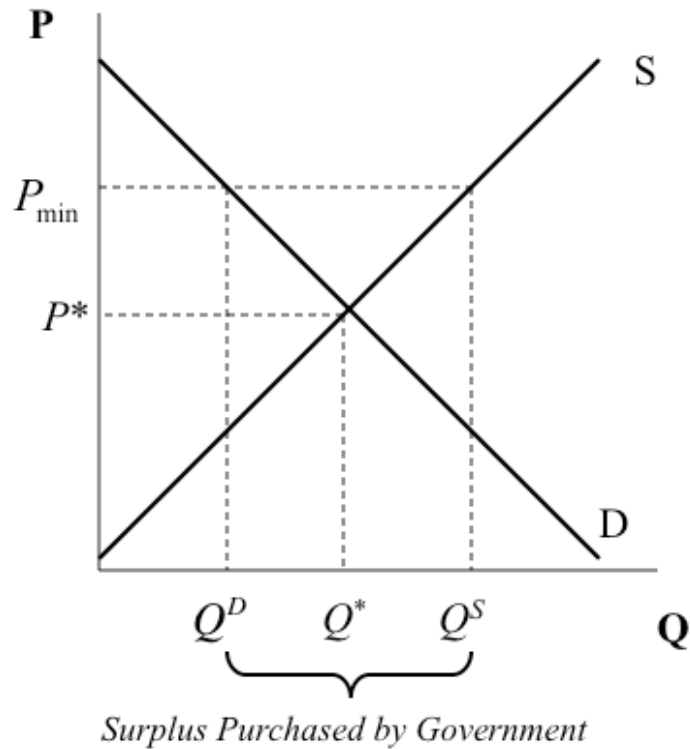


Figure 2

Now suppose the government establishes a price support at P_{\min} . This will create disequilibrium in the market; specifically, there is excess supply: farmers wish to sell quantity Q^S but consumers only wish to buy quantity Q^D . Note that under price supports, the quantity consumed (Q^D), is less than what would be consumed in a free market (Q^*). To prevent the price from falling to P^* , the government purchases the difference, $Q^S - Q^D$.

What becomes of the crops purchased by the government? It may be stored until the market price rises above the minimum price support, at which point the government sells it on the open market. During the late 1980s this turned out to be a costly strategy when the competitive price stayed below the price support, government stockpiles increased, and total storage costs became substantial. Figure 3 illustrates the government's inventory of five major

subsidized crops from 1980 – 2004. These inventory costs caused policy makers to shift their emphasis away from price supports toward production subsidies as a means of assisting farmers.

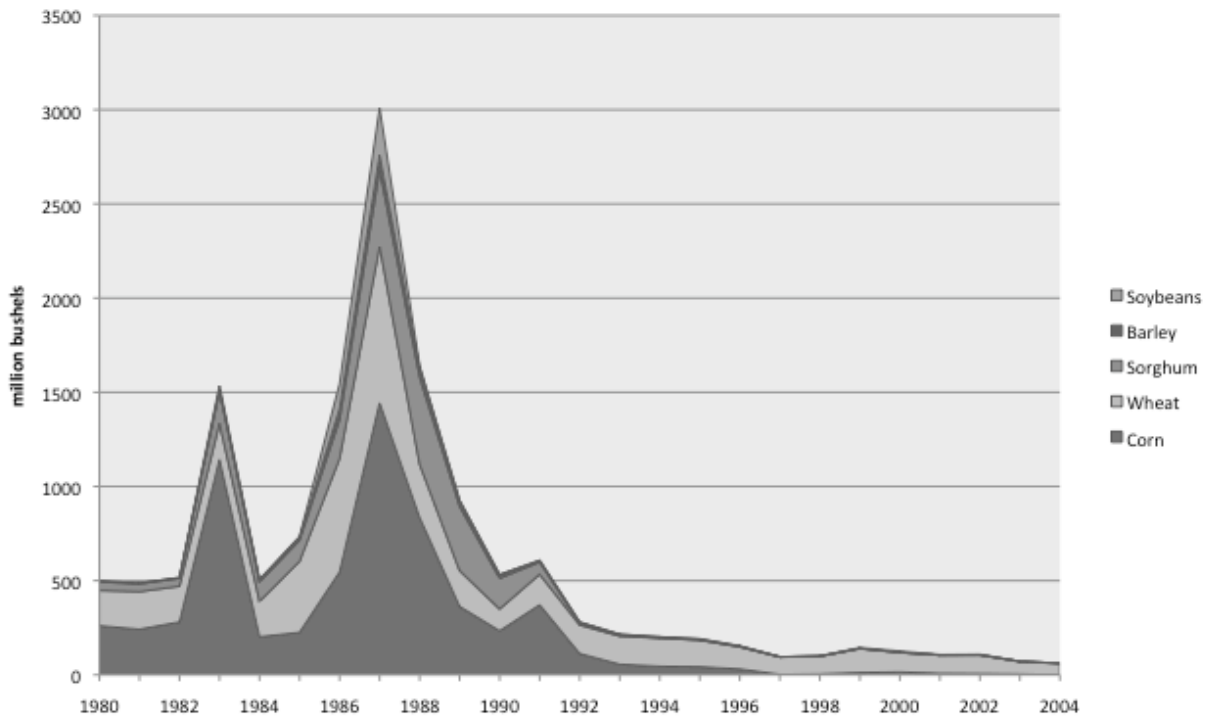


Figure 3

2.2 Production Subsidies

In part because of these additional costs to the government, a new farm bill was drafted in 1985 that reshaped agricultural policy. This bill introduced a new method of guaranteeing commodity prices without saddling the government with the burden of storing and reselling the commodity. Beginning in 1985 for cotton and rice, 1991 for soybeans and oilseeds, and 1993 for wheat and feed grains, farmers had the option to sell their commodity on the open market at prices below the support price, and the government would make up the difference. In other words, the government pays farmers the difference between the support price and the market price for every unit of the commodity they produce; this payment is effectively a subsidy for farmers to produce

more food. The traditional price support continues to be offered, but a vast majority of producers utilize the new policy.

An extremely important consequence of this change in policy is that consumers switched from paying *above-market* prices for protected commodities to *below-market* prices. This impact is illustrated in figure 4, which again depicts the supply and demand curves for a hypothetical wheat market. The competitive equilibrium price and quantity are again denoted by P^* and Q^* , and the price support is P_{\min} . To determine the effect of the new subsidy policy, we note that whenever the market price is below P_{\min} the government provides a per-unit direct payment that effectively brings the price received by the farmer up to P_{\min} .

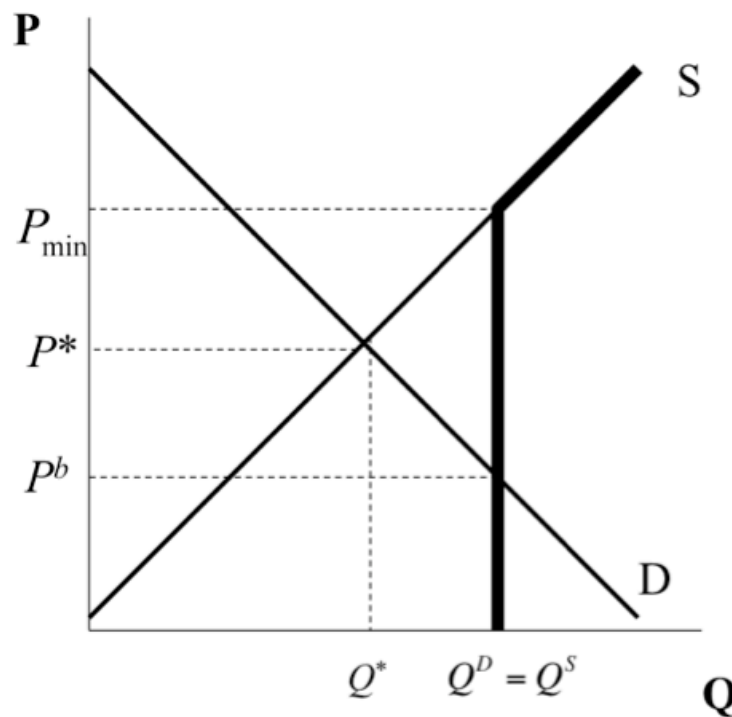


Figure 4

The supply curve indicates the amount of the commodity produced at various prices. At the supported price, P_{\min} , the quantity supplied is denoted Q^S . Note that as long as the market price is below P_{\min} farmers will always receive P_{\min} and supply Q^S , which is more than Q^* , the

amount they would supply in a free market. Hence, the effective supply curve is vertical at Q^S until the point where price equals P_{\min} . At market prices above P_{\min} the original supply curve determines the quantity produced. The effective supply curve under the new production subsidy policy is depicted by the bold, kinked curve in figure 4.

The amount paid by consumers is determined by the intersection of the effective supply curve and the demand curve. This price, denoted as P^b in the diagram, is *lower* than the competitive equilibrium price, P^* . Critically, the quantity consumed is greater than the quantity consumed in a free market. In other words, there is no commodity surplus and consumers are consuming more than they would if there were no production subsidy at all. The transition over the last two decades from price supports to production subsidies may explain one way in which agricultural policy causes obesity.

2.3 Evidence

The shift from traditional price supports toward production subsidies is reflected in program spending and in the commodity inventory accumulated through the price support program over the past two decades. Figure 5 illustrates the total amount spent on price supports, production subsidies, and farmland subsidies from 1980 – 2003 in a stacked-area graph. As illustrated, price support payments peaked during the “farm crisis” in the mid-to-late eighties. Figure 3 illustrates the massive commodity stocks the government accumulated as part of the price support policy during this time. Both figures illustrate the shift to a greater reliance on production subsidies. Although price supports played a major role in the 1980s farm crisis, virtually all of the assistance farmers received around the turn of the century were production subsidies, which spur production and depress food prices.

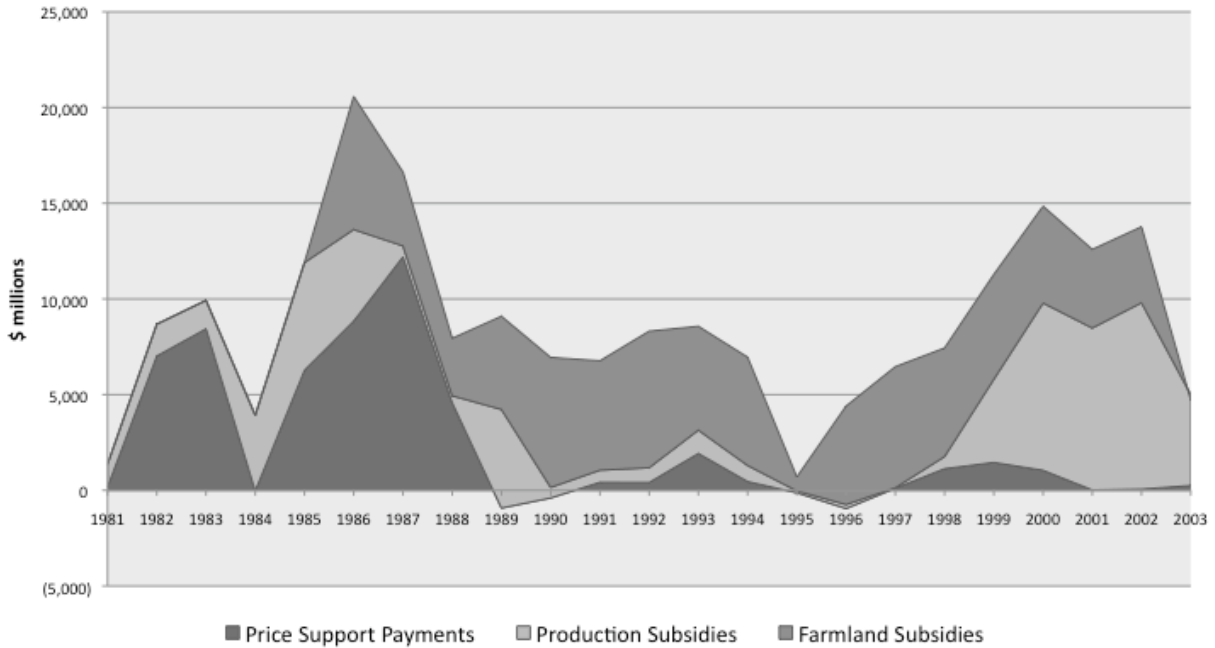


Figure 5

The model outlined in section 2.2 predicts that, relative to a free market, production subsidies are associated with lower prices and higher quantities sold. Empirical evidence confirms these predictions. The USDA (2001) estimates that commodity prices decreased as a result of the recent production subsidy regime. Table 1 contains the estimated effects on prices.

Crop	Year	Price Relative to Competitive Equilibrium	Percentage Price Reduction
Wheat	2000	-\$0.07/bushel	2.8%
Corn	2000	-\$0.09/bushel	5.0%
Soybeans	2001	-\$0.49/bushel	10.5%
Rice	2000	-\$0.20/cwt	3.3%
Cotton	2000	-\$0.05/lb	11.1%

Source: USDA, 2001. "Analysis of the U.S. Commodity Loan Program with Marketing Loan Provisions" AER 801 p. 19

The price reduction caused by the production subsidy ranges from 5 cents per pound of cotton to 49 cents per bushel of soybeans. Others have estimated similar effects of the price support programs. Bruce Babcock (2004), an economist at Iowa State University, estimated that soybean

and feed grain prices would fall by 5 – 7 percent if price supports were removed. In separate research, Bruce Gardner (2002), an economist at the University of Maryland, predicted a 6 percent decrease in the price of grains and soybeans due to price supports.

It has also been estimated that total cropland acreage in 2002 was 4 million acres greater than it otherwise would have been without the production subsidies (Westcott and Price, 2001). This greater production implies a greater quantity sold as a consequence of lower prices. We further elaborate on the link between lower prices, higher quantities, and obesity in section 4.

3 Farmland Subsidies

In addition to receiving the price supports and production subsidies outlined above, farmers also receive subsidies attached to the farmland. The 1973 farm bill introduced “direct payments” as a production subsidy that worked in parallel with the traditional price support policy. Both policies quickly increased government owned inventories and eventually led to the divorce of direct payments from crop production in 1985. After 1985, the direct payment subsidy was attached to the land and became a land-specific subsidy. The following sections elaborate the details of each of these policies and describe their effects.

3.1 Original Direct Payments Policy and Effects

Initially, direct payments were designed as production subsidies that provided a fixed payment per unit of the commodity produced. In other words, direct payments were structured in a manner very similar to the production subsidy component of the price support/production subsidy policy outlined above. Hence, the effects of early direct payment policy are captured by the production subsidy model developed above and illustrated in Figure 2.

3.2 New Direct Payments Policy and Effects

The fiscal burden caused by the incentives to overproduce led Congress to fundamentally change the direct payments policy. In the early 1980s, responding to the incentives of the direct payments, supplies of subsidized commodities surged. In order to maintain the price supports, the government found itself purchasing and storing increasing quantities of excess production. Policymakers responded by implementing various supply control measures.

Finally, in the 1985 farm bill, policymakers divorced direct payments from the quantity produced and instead tied them to the number of acres farmed. This change fundamentally altered the nature of the direct payments. Rather than production subsidies, they became farmland subsidies. By subsidizing farmland, policy makers caused more land to be brought into production.

The ‘new’ direct payment policy is designed to pay the farm operator a subsidy for each acre upon which he grows a subsidized crop. When faced with a decision between growing a subsidized or an unsubsidized crop, the farmer will choose to grow the subsidized crop, all else equal. Hence, the number of farm acres devoted to subsidized crops increased. This behavior is modeled in figure 6, which now represents a hypothetical market for wheat *acres* with no other government intervention. The competitive equilibrium is again characterized by the equilibrium price P^* and quantity Q^* . The policy-induced increased demand for wheat *acres* (i.e. land for raising wheat, not the wheat itself) is illustrated by a shift of the demand curve from D to D' . The price that the farmer pays for wheat acres increases from P^* to P^S , but the price increase ($P^S - P^*$) is less than the amount of the subsidy³. Therefore, the farmer effectively pays P^B , a lower price for the farmland than the competitive equilibrium price. Research has shown that

³ This can be shown by noting that the quantity of wheat acres that the farmer demands, $Q^D(P^B)$, must equal the quantity that the landowner supplies, $Q^S(P^S)$, and the price the farmer effectively pays, P^B , equals the difference between the price the landlord receives, P^S , and the per-acre subsidy, A .

expanding farmland typically causes an increase in crop production. With the removal of price supports, this increase in crop production leads to lower prices for consumers.

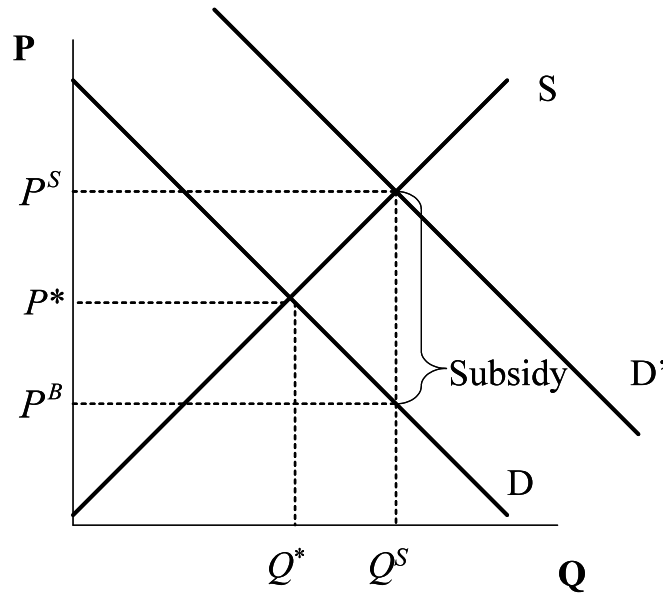


Figure 6

In an attempt to remove the distortionary influence of direct payments, the 1996 farm bill limited the number of subsidized acres to the 1995 level. After 1995 no new farmland could qualify for a subsidy. Even with this modification, current evidence suggests that production has continued to expand in response to direct payments (Kirwan, 2005).

3.3 Evidence

The acreage response caused by farmland subsidies is one of the unanticipated consequences of subsidy policy. As illustrated in figure 5, since 1986 policy makers have transferred a substantial amount in the form of farmland subsidies. In their annual reports to the World Trade Organization, the USDA categorizes farmland subsidies a non-distortionary. In spite of this characterization of farmland subsidies, several researchers have verified the acreage expansion effect outlined above, and have estimated the magnitude of the acreage effects. Using

a nationally representative dataset of individual farms, Kirwan (2005) found that total farmland increased by only 0.1 percent in 1997 in response to direct payments. Goodwin and Mishra (2005) found substantially greater effects when examining the effects on specific crops from 1999 – 2001. They found that farmland subsidies were responsible for an increase of 3.4 percent of corn acres, 2.2 percent of soybean acres, and 4.3 percent of wheat acres. These acreage responses imply a 4 percent reduction in commodity prices on average. Gardner (2002), using aggregate data, translated the acreage effect into the increased output caused by farmland subsidies, estimating that about 1 percent more output was produced because of direct payment. In terms of the price effect, Gardner estimated that farmland subsidies reduced the price of grains and soybeans by 2 percent during the 1998 – 2002 period.

4 The Link Between Price Supports, Direct Payments, and Obesity

Agricultural subsidies and obesity are primarily connected by the subsidies' effect on quantity produced and price and by the consumers' response to the lower prices. The models and evidence presented above quantify the effects of subsidies on production and prices. In this section we use the findings presented above along with measures of responsiveness that can be found in the literature in order to examine the magnitude of the subsidies' influence on obesity.

The first link in the chain that connects agricultural subsidies and obesity is quantified by the responsiveness of commodity and food prices to the increased output caused by the subsidy policy. Evidence presented above suggests that agricultural subsidies lead to a 6 – 10 percent decrease in commodity prices. However, consumers rarely purchase the raw agricultural commodities that are subsidized. Typically, food processors purchase the agricultural commodities and transform them into the food products that consumers buy. Agricultural commodities constitute one of many inputs used to produce the final food product, hence

processed food prices typically will not respond one-for-one with commodity prices. Morrison Paul and McDonald (2003) estimate that food prices decrease by 0.27 percent when commodity prices fall by 1 percent. This measure of food price responsiveness to commodity price changes implies that agricultural subsidies result in 1.6 – 2.7 percent lower food prices.

The relationship between food prices, consumption, and obesity is the final link in the chain connecting agricultural subsidies and obesity. Previous research by Cawley (1999); Lakdawala and Philipson (2002); and Chou et al. (2004) examined the connection between food price changes and obesity. Chou et al. find that a 1 percent decrease in the price of food consumed at home corresponds to a 0.039 percent increase in body mass index (BMI). Using this estimate, we estimate that agricultural subsidies cause BMI to be 0.062 – 0.105 percent higher than it otherwise would be. This effect translates into a BMI increase of between 0.016 – 0.026 kg/m² for a person with an average BMI in 1984 (24.94 kg/m²). To put this into perspective, the average BMI increased by 2.13 kg/m² between 1984 and 1999. Our estimates suggest that agricultural subsidies account for 0.75 – 1.2 percent of this change.

5. Other Policies

5.1 Surplus Disposal

The manner in which the government disposes of the surplus commodities it accrues due to price support policy is also of interest. To some extent, the government disposes of the surpluses by waiting until the market price of the commodity rises above the price support level, and then selling the surplus on the open market. However, that is not the only method of disposal. The U.S. government also distributes surplus commodities through the U.S. Department of Agriculture's Schools / Child Nutrition Commodities Program, which sells the excess products at low prices to school districts for the National School Lunch Program, the

Child and Adult Care Food Program, and the Summer Food Service Program. For each of these programs, information on the start date, number of children participating, and recent budgets are provided in table 2. The foods that the program distributes are not chosen because they are the healthiest for children, but because they are in surplus as a result of programs to increase profits for farmers. In particular, the policy of the USDA is that over 60 percent of the foods purchased for the Programs must be determined by the USDA to be in surplus at the time of purchase. In most cases the commodities involved are energy-dense, such as beef, pork, and cheese. Thus agriculture policy may have the unintended side effect of increasing calorie intake and obesity among children, and in particular among low-income children who participate in the school lunch program.

Table 2: School/Child Nutrition Commodities Programs

Commodity Program	Date started	# of children participating in U.S. (for past couple years)	Budget for program (current and past years)
National School Lunch Program	1946	<u>2003</u> : (total avg. participation) = 28.4 mil (total lunches served) = 4,763.3 mil <u>2002</u> : (tap) = 28.0 mil (tls) = 4,716.8 mil <u>2001</u> : (tap) = 27.5 mil (tls) = 4,584.6 mil	<u>2003</u> : (total federal costs) = 8,853.5 mil <u>2002</u> : 8,436.7 mil <u>2001</u> : 7,940.5 mil
Child and Adult Care Food Program	1968	<u>2003</u> : (total participation) = 2,911,000 (meals served) = 1,766 mil <u>2002</u> : (tp) = 2,852,000 (ms) = 1,737 mil <u>2001</u> : (tp) = 2,725,000 (ms) = 1,681 mil	<u>2003</u> : (total costs) = 1,926.2 mil <u>2002</u> : 1,853.1 mil <u>2001</u> : 1,738.2 mil
Summer Food Service Program	1968	<u>2003</u> : (peak participation) = 2,094,000 (meals served) = 117.1 mil <u>2002</u> : (pp) = 1,926,000	<u>2003</u> : (Total Federal Expenditure) = 256.0 mil

		(ms) = 121.9 mil <u>2001</u> : (pp) = 2,090,000 (ms) = 130.7 mil	<u>2002</u> : 262.6 mil <u>2001</u> : 272.0 mil
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5.1 Sugar Quotas

Certain aspects of U.S. agriculture policy likely decrease calorie consumption. For example, the U.S. imposes quotas on sugar imports; as a result, the U.S. price of sugar is considerably higher than the world price and thus consumers likely buy and consume less sugar than they would otherwise.

5.2 Check-Off Programs

Government “check-off” programs may also contribute to obesity. The U.S. government requires producers of commodities that enjoy price supports to contribute a specific amount of money for each unit they sell into a fund that is used for commodity-specific advertising and research. The intention of this program is to increase consumer demand for the commodity (in terms of Figure 1, to shift the demand curve until P_{\min} becomes the new equilibrium price), leaving less excess supply for the government to purchase at taxpayer expense. It is the money raised by check-off programs that pays for such advertising campaigns as: “Got Milk?” “Milk Moustache”, “Ahh—The Power of Cheese”, “California Raisins,” “Beef – It’s What’s For Dinner,” and “Pork – The Other White Meat.” These advertising campaigns, financed using government-mandated contributions from growers, in many cases dwarf the government advertising campaigns for healthy diets. For example, many check-off programs spend tens of millions of dollars a year on advertising, while the advertising budget for the National Cancer Institute's 5-A-Day promotion of fruit and vegetable consumption was less than \$1 million.

These advertising campaigns can have dramatic effects. It has been estimated that the generic advertising of milk associated with the Dairy and Fluid Milk Acts, which totaled \$29.8 million between October 1995 and September 1996, increased milk sales by 1.4 billion pounds, or 5.9 percent (Blisard, 1999). Over the same period, generic advertising of cheese funded by check-off programs increased sales of cheese by 62.7 million pounds or 2.8 percent (Ibid).

Check-off funds are also used to increase the sale of commodities through fast food outlets. The Pork Board's 2003 Checkoff Timeline Brochure reports: "1989: Technology developed with producer Checkoff funds is used by McDonald's nationally to market The McRib pork sandwich." It continues: "2002: Through the Pork Checkoff, pork items are added to menus at Taco Bell, T.G.I. Friday's, McDonald's, Burger King, Applebee's and other restaurants across America". A press release from the Dairy Checkoff program touts their success providing Pizza Hut with menu development and market research in bringing to market the Insider Pizza, which uses one pound of cheese per pizza. Research is urgently needed to determine the extent to which these government-mandated expenditures on advertising energy-dense foods contribute to obesity.

The advertising and menu development funded by check-off dollars appears to increase consumer demand. However, the collection of check-off funds from producers is a form of a tax, and raises prices by shifting up the supply curve. On net, however, the check-off programs have been shown to increase sales of commodities (Blisard, 1999).

Note that check-off funds are not taxpayer dollars. However, they are government-mandated contributions from producers, and to some extent the government is responsible for their use in increasing the demand for energy-dense foods. A list of check-off programs is provided in table 3, with information on their budgets for advertising and research and

development in recent years (many cells in the table are empty due to difficulties in acquiring this information from various check-off boards. Note that while some products are relatively nutritious and low-calorie (e.g. mushrooms, watermelon, popcorn, blueberries), the programs with the largest advertising budgets are generally those for energy-dense foods such as beef, pork, eggs, and milk.

5.3 Agricultural Extension Research

Agricultural extension programs use Federal land-grant funds to subsidize research into new uses for agricultural commodities. For example, extension funds subsidized research into the development of high-fructose corn syrup (HFCS) as a new use for corn. HFCS is a low-cost, high-energy sweetener that has been blamed for contributing to the recent increase in calorie consumption and obesity epidemic in the U.S. However, it should be noted that no single food causes obesity (IOM, 2004); obesity is the result of energy imbalance (more calories consumed than expended) and is the result of entire diets and lifestyles. However, many are especially interested in HFCS because it is an energy-dense sweetener that has become ubiquitous in recent years. Interestingly, the development of HFCS was in part a response to the high price of sugar resulting from the sugar quotas.

Table 3-Checkoff Program Details

Agricultural Commodity	Name of Board	Dates in operation	Current Adv. Budget (FY 2004)	Current R&D Budget (FY 2004)	Adv. Budget (FY 2003)	R&D Budget (FY 2003)	Adv. Budget (FY 2002)	R&D Budget (FY 2002)
Eggs	American Egg Board www.aeb.org (847) 296-7043	1976-present	\$8.7 million	\$3.7 million	\$11.4 million	\$4.2 million	\$9.5 million	\$3.3 million
Beef	Cattlemen’s Beef Board www.beefbaord.org (303) 220-9890	1985-present			Promotion: \$26,706,111 Consumer Info: \$6,007,136 Foreign Mkting: \$5,127,115	Research: \$5,138,396 Industry Info: \$1,793, 213	Promotion: \$25,714,446 Consumer Info: \$5,780,603 Foreign Mkting: 5,178,498	Research: \$5,099,219 Industry Info: \$1,613,768
Cotton	Cotton Board www.cottonboard.org (901) 683-2500							
Honey	National Honey Board www.nhb.org (800) 553-7162	1988-present			Total Adv./ PR/research (2003): \$3,189,480		Total Adv./ PR/research (2002): \$2,420,900	Total Adv./ PR/research (2001): \$2,416,850
Mushrooms	Mushroom Council www.mushroomcouncil.com (925) 556-5970							
Dairy products	National Dairy Research and Promotion Board www.dairyinfo.com (847) 803-2000	1995-present					Marketing: 66,496,432 Research: 3,204,090 87.2 million (2002)	Marketing: 73,228,579 Research: 2,537,295 Total (2001): 91.5 million
Milk	National Fluid Milk Processor Promotion Board www.dairyinfo.com						Media/ Promotions/ PR:	R&D: 1,884,444

	(847) 803-2000						89,279,189	
Pork	National Pork Board www.porkboard.org (515) 223-2620	1987-present	Demand Enhance: \$22.25 mil	Scien.&Tech: \$13.23 mil	*Demand enhance: \$23,500,000	Scien.&Tech: \$5,050,000	Demand enhance: \$26,617,000	Scien.&Tech: \$6,341,000
Potatoes	National Potato Promotion Board www.healthypotato.com (303) 369-7783	1971-present	Won't release information – from NY Times article on website	2/4/04: \$4 million advertising & marketing campaign				
Watermelons	National Watermelon Promotion Board www.watermelon.org (407) 895-5100							
Popcorn	Popcorn Board www.popcorn.org (877) POP-ALOT							
Soybeans	United Soybean Board www.unitedsoybean.org (800) 989-USB1	Adopted 1995-present	International mkting: \$9,303,122 Domestic mkting: \$6,158,989 TOTAL: \$15,462,111	Production Research & Coordination: \$7,793,217 New Uses Development: \$4,099,763 TOTAL: \$11,892,980	International Mkting: \$8,359,200 Domestic mkting: \$5,261,878 TOTAL: \$13,621,078	Production Research: \$6,606,810 New Uses Development: \$3,281,529 TOTAL: \$9,888,339	International Mkting: \$10,627,951 Domestic Mkting: \$6,718,297 TOTAL: \$17,346,248	Production Research: \$7,734,434 New Uses Development: \$4,610,500 TOTAL: \$12,344,934
Lamb	American Lamb Board www.americanlambboard.org (888) 450-LAMB	2002-present	Promotion: \$1,725,000	Research: \$690,000				
Peanuts	National Peanut Board www.nationalpeanutboard.org (866) 825-7946	2001-present			Domestic Promotion: \$2,840,000	Export Promotion/Research: \$700,000 TOTAL 2001 2002	Domestic Promotion: \$1,100,000	Export Promotion/Research: \$1,400,000 TOTAL 2001 Promo/Mkt Dev/ Research:

						Promotion/ Mkt Dev/ Research: \$5,272,000		2,590,000
Blueberries	U.S. Highbush Blueberry Council www.ushbc.org (916) 933-9399							

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