



## Economics, Policy, and Obesity

Maria L. Loureiro and Rodolfo M. Nayga, Jr.

Until very recently, obesity was not considered an economic problem. Rather, it was regarded as an individual problem derived from private food choices, which carried esthetic and, if severe, medical consequences. However, obesity has now become quite severe in some countries, carrying large associated medical costs to all of society as well as to private individuals. Today, an estimated 64% of Americans are classified as overweight or obese. Currently, in the United States, health care for overweight and obese individuals costs an average of 37% more than health care for people of normal weight, adding an average of \$732 to the annual medical bills of each American. According to a 2004 study by Finkelstein, Fiebelkorn, and Wang, the medical costs connected to obesity and smoking each account for about 9% of all health expenditures in the United States.

The social consequences of obesity are also serious. Multiple studies have shown that obesity negatively (and significantly) affects personal and working relations and wages, particularly for females. Given the presence of such costs and the possibility that food market information might be used to alter individual behavior, economists are addressing policy options to reduce the incidence of obesity.

In this issue of *Choices*, we present three papers that shed light on economic aspects of obesity. The first paper, by Guest Editor Maria Loureiro, reviews the economic consequences of obesity and its socio-economic and cultural roots. Similarities and differences are presented therein between experiences in the United States and other countries. The second paper, by Fred Kuchler and Elise Golan, addresses whether there is a role for economic policies and government intervention in reducing the prevalence of obesity and suggests that information gaps

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and societal costs may justify action. The authors are skeptical about finding a convincing efficiency argument for intervention. The third contribution, by Parke Wilde, considers possible conflicting goals in the United States between interest groups and government when formulating policy.

Collectively these papers illuminate the complexity of the obesity and overweight phenomenon.





# Obesity: Economic Dimensions of a “Super Size” Problem

Maria L. Loureiro

Changes in lifestyles, as well as higher consumption rates of foods rich in fat and carbohydrates, are contributing considerably to a more overweight population around the world. This article considers socioeconomic causes and consequences of obesity. Obesity is an international problem, and as such is compared on an international basis where data are available.

## Overview

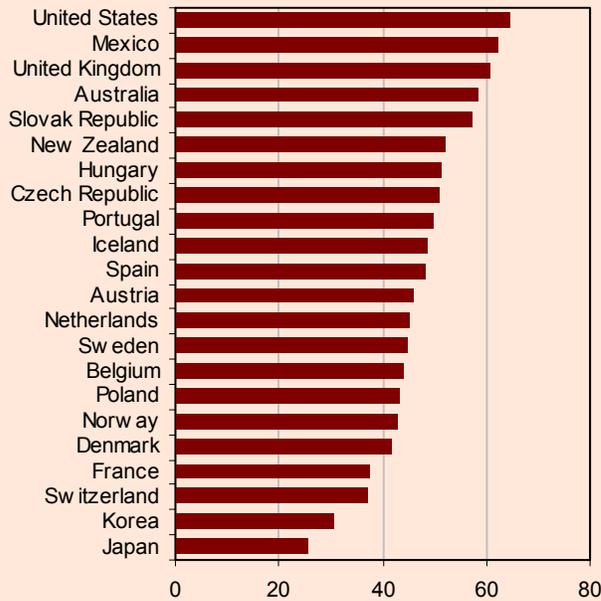
Obesity is a growing health concern for both developed and developing countries. World Health Organization (WHO) figures indicate that obesity is a “global epidemic.” Obesity is a severe condition of overweight. There are more than one billion overweight adults, and at least 300 million of them are clinically obese. Overweight affects more people than malnutrition and hunger (WHO, 2004). However, economists still know very little about its causes, consequences, and potential remedies. In particular, economists wonder why obesity is more prevalent in Western industrialized countries, many developing countries, and new transitional economies.

Unfortunately, obesity is not a well-documented problem; thus, statistical data are hard to obtain. Figure 1 shows percentages of overweight and obese individuals for Organisation for Economic Co-operation and Development (OECD) countries (OECD, 2004). The United States has the highest percentage of obese and overweight population (64.5%); Mexico (62.3%), the United Kingdom (61%), and Australia (58.4%) follow close behind. The lowest percentages are recorded in Japan (25.8%) and Korea (30.6%).

Globally, the incidence of weight-related problems is the highest ever reported (Figure 2). As in the United States, overweight rates remained more-or-less stable in OECD countries during the 1980s and grew enormously in the 1990s. Many speculate that this trend may go up, particularly when we consider the incidence of obesity among children and adolescents. According to the American Obesity Association (2004), the percentage of obese children grew from 7% in 1976–1980 to 15.3% in 1999–2000. A similar trend occurred among adolescents, rising from 5% in 1976–1980 to 15.5% in 1999–2000. Multiple studies have shown that obese children are likely to become obese adults.

## Consequences of Weight-Related Problems

Obesity and overweight problems have serious social and economic consequences. Multiple studies have shown that obesity negatively affects earnings and wages, particularly for females (Cawley, 2004). In the OECD, obesity-related medical costs are rising, although the contribution of obesity to the total health bill is not easy to determine. Obesity carries both direct and indirect costs. Direct costs include those for preventive, diagnostic, and treatment services. Indirect costs occur through losses in labor-force participation due to increases in health-related problems, including type 2 diabetes, heart disease, certain cancers, stroke, and depression. Table 1 shows statistical correlation rates between the percentage of obese and overweight individuals and data on health costs and other socio-demographic variables in OECD countries. The data show that increased incidence of obesity is associated with increased observed health expenditures and decreased life expectancy.



**Figure 1.** Percentage of obese and overweight population by country.  
Source: OECD Health Statistics, 2004.

Studies based in the United States reveal that health-care costs for overweight and obese individuals averages 37% more than for people of normal weight, adding an average of \$732 to the annual medical bills of each American. Estimated medical costs connected to obesity and smoking each account for about 9.1% of all health expenditures in the United States (Finkelstein, Fiebelkorn, & Wang, 2003).

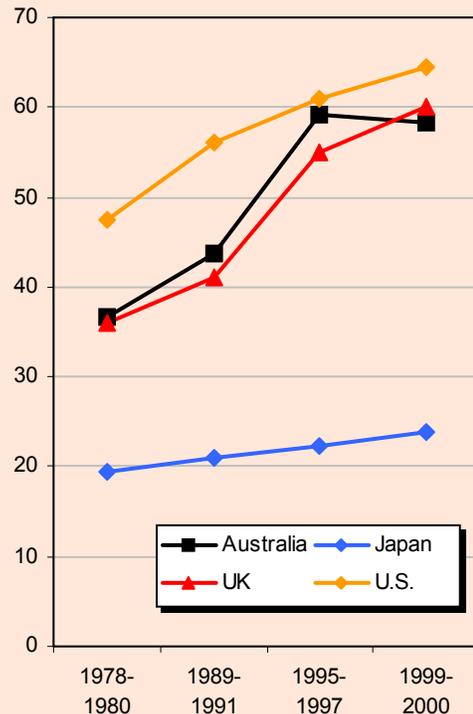
### Exploring the Roots of the Problem

Leaving genetics aside, weight-related problems are caused by the difference between calories consumed and calories used. Cultural and sociodemographic factors contribute to this calorie imbalance. Some argue that obesity growth is mainly due to a higher intake of calories, but others state that it is mainly caused by a lower expenditure of calories in daily activities.

In connection with the higher-calorie-intake argument, a popular justification is the growth of fast-food and soft-drink consumption, associated with increases in dietary intake of saturated fats, sugars, and calories. In addition, increases in serving portions are also considered quite important. Other researchers argue that female labor participa-

tion is a contributing factor: Presumably, healthier home-cooked dinners have been widely replaced by TV dinners or restaurant dinners—which frequently take place in fast-food restaurants. Cutler, Glaeser, and Shapiro (2003) analyze changes in food consumption between the mid-1970s and mid-1990s and observe that the growth in calories is enough to explain the increase in weight. In the process, they partially invalidate the fast-food argument, pointing out that the main reason for increased dietary caloric intake was calories consumed outside the main meals (i.e., snacks). They also failed to find a strong interrelationship between obesity and the number of women working.

In terms of calories expended, other researchers emphasize the role of reduced physical activity and technological change—products of the transition from rural to urban societies—as well as a higher rate of passive entertainment. Lakdawalla and Philipson (2002) concluded that a worker who spends his/her career in a sedentary job will be heavier than someone in a highly active job. Further, they esti-



**Figure 2.** Percentage of obese and overweight individuals in selected OECD countries.

Source: OECD Health Statistics, 2004. Note: figure for US 1995 has been extrapolated.

mated that about 40% of the total growth in weight in the United States may be due to expansion in calories, potentially through increased food abundance (agricultural innovation), and about 60% due to demand factors, such as a decrease in physical activity.

Other potential economic explanations which justify the imbalance of calories refer to the consequences of becoming a more industrialized society in which the value of time increases. As Chou, Grossman, and Saffer (2004) point out, in industrialized societies, workers sell more of their time to the labor market and have less disposable time for entertainment and other household activities (including food preparation). This lack of time is what may explain the growth of fast-food restaurants in the United States. Their results indicate that not only restaurant availability and restaurant food prices matter when explaining weight gain, but also a set of sociodemographic characteristics of the individuals. In particular, they conclude that wealthier and more educated individuals are less likely to have obesity problems, whereas black and Hispanic are more likely to suffer from obesity or have higher weights. Thus, all evidence shows that obesity is a complex phenomenon, linked not only to the demand and supply conditions of food products, but also to economic transitions and cultural change of societies. This makes it harder to disentangle.

### What Do the Data Tell Us?

It is difficult to develop a globally applicable explanation of weight-related problems, because different socioeconomic and cultural factors are at work (Loureiro & Nayga, 2004). The proliferation and impact of weight-related problems vary largely between most European countries, North America, and the Asian countries. One of the main reasons is higher calorie intake, which may contribute to calorie imbalance (Table 2). According to the OECD, US daily calorie intake grew by 716 calories (almost 25%) between 1973 and 1999. Significant calorie growth was observed elsewhere in the Netherlands, New Zealand, and Spain. On the contrary, in Japan, for example, there is a clear control of calorie intake, and calorie growth during the last 20 years has been the lowest in the entire OECD. This corresponds with one of the lowest rates of weight problems in the OECD. However, in countries

**Table 1.** Correlation coefficients between health variables, selected sociodemographics, and the presence of individuals suffering weight-related problems.

	Correlation coefficient <sup>a</sup>
Life expectancy	-0.2577
Potential years of life lost	0.2568
Health expenditures (% GDP)	0.1676
% rural population	-0.3948
% females in labor market	0.3409
Calorie consumption (per capita)	0.5957
GDP (per capita)	-0.2385

<sup>a</sup> The correlation coefficient can have a value between -1 and 1. The larger it is (ignoring its sign), the stronger the association between any two variables.

such as Australia, the daily calorie intake during the same period has grown also moderately (87 calories), while the percentage of obese individuals increased by 23.4%. Thus, it seems that the spread of obesity has not been caused everywhere by higher calorie intake, although calorie intake has gone up in all OECD countries over the past decade. In the context of the OECD, female labor participation may have contributed to unhealthy food habits. Table 1 shows that countries with more females working outside the house are more likely to suffer weight-related problems. Other factors, such as the transition from rural to urban societies, changes in food habits, and the reduction of strenuousness of work, also contribute.

An interesting finding is that countries with a higher percentage of urban population are more likely to suffer weight-related problems (Table 1). As shown in Table 2, Australia, Netherlands, and the U.K, all with almost 90% of the total population living in urban areas, have large percentages of overweight population. By contrast, in countries where the percentage of individuals living in urban areas is smaller, weight-related problems are also present and serious, as in the United States. This may be due to the mechanization and technical progress of agriculture, which could be reducing significantly the daily use of calories in rural areas while increasing the calorie supply. In general, a preliminary data analysis confirms that in OECD countries, obesity is linked to many of the same factors as in the United States, related to the industrialization and westernization of societies around the world.

**Table 2.** Relevant variables per country.

Country	Years	Growth in % of overweight individuals <sup>a</sup>	Growth in calories per capita <sup>a</sup>	Per-capita calorie intake <sup>a</sup> (last year series)	% urban population <sup>a</sup> (last year series)	% of female labor participation <sup>a</sup> (last year series)	Price of a Big Mac, in US\$ <sup>b</sup>
Australia	1980-1999	23.4	87	3092	85.75	43	2.27
Czech Republic	1993-2001	4.6	69	3097	74.63	44	2.13
France	1990-2000	6.5	79	3597	74.04	46	3.28
Japan	1976-2001	5.8	44	2746	76.06	41	2.33
Netherlands	1981-2001	11.5	281	3282	88.39	42	3.28
New Zealand	1989-1998	9.1	75	3130	84.52	45	2.65
Spain	1987-2001	11.1	203	3422	74.66	39	3.28
U.K.	1980-2000	26	220	3312	88.63	44	3.40
U.S.	1973-2000	16.8	716	3814	73.73	46	2.90

<sup>a</sup> Growth rates calculated from the entire period. Calorie and female labor participation data were obtained from OECD Health Data. Data related to Percentage of Urban Population come from the FAOSTAT database (FAO, Food and Agriculture Organization).

<sup>b</sup> Big Mac Prices were collected from The Economics, online edition, May 27<sup>th</sup> 2004.

There are, however, some cultural differences that should be taken into consideration in order to understand the spread of obesity and weight-related problems around the world. For instance, the spirit of massive consumption and the idea of “getting a good value for your money” are more linked to some countries than others. In addition, the effects related to the imitation of western lifestyles are also different, depending on the degree of reception and adoption of these new cultural habits, which include the consumption of fast food, sodas, and snacks.

## Conclusions

Population and consumption data reveal that socio-economic and cultural factors are affecting the spread of obesity around the world. Although economists have recently started exploring the economic causes and consequences of obesity, providing a solution to this problem may require a complex vision that incorporates more than economic incentives to help consumers eat healthier foods (such as providing mandatory nutritional food information, taxing food products with high levels of sugars, carbohydrates, and fats, or subsidizing certain fruits and vegetables for lower-income groups). Given that both consumption and expenditure of calories matter, new health policies promoting more active lifestyles should be put forward by countries affected by the obesity epidemic. This would alleviate the symptoms of new sedentary life-

styles common to all industrialized countries. The fight against weight problems may also require having an understanding of the sociological perspectives of cultural change and economic growth, reminding individuals that “they are what they eat.”

## For More Information

- American Obesity Association. (2004). *Childhood obesity*. Available on the World Wide Web: <http://www.obesity.org/subs/childhood/prevalence.shtml>.
- Cawley, J. (2004). The impact of obesity on wages. *Journal of Human Resources*, 39(2), 451-474.
- Chou, S.-Y., Grossman, M., & Saffer, H. (2004). An economic analysis of adult obesity: Results from the behavioral risk factor surveillance system. *Journal of Health Economics*, 23, 565-587.
- Cutler, D.M., Glaeser, E.L., & Shapiro, Jesse M. (2003). Why have Americans become more obese? *Journal of Economic Perspectives*, 17(3), 93-118.
- Finkelstein, E.A., Fiebelkorn, I.C., & Wang, G. (2003). National medical spending attributable to overweight and obesity: How much, and who's paying? *Health Affairs*, W3, 219-226. Available on the World Wide Web: <http://content.healthaffairs.org/cgi/content/full/hlth-aff.w3.219v1/DC1>.
- Lakdawalla, D., & Philipson, T. (2002). *The growth of obesity and technological change: A theoretical and empirical examination* (working paper

8946). Cambridge, MA: National Bureau of Economic Research.

Loureiro, M.L., & Nayga, Jr., R.M. (2004). *Analyzing factors affecting obesity rates in OECD countries*. Available on the World Wide Web: <http://agecon.lib.umn.edu>.

World Health Organization. (2004). *Obesity and overweight*. Geneva: WHO. Available on the

World Wide Web: <http://www.who.int/diet-physicalactivity/publications/facts/obesity/en/>.

*Maria L. Loureiro is a Ramón y Cajal Research Fellow at IDEGA-Universidade de Santiago de Compostela, Spain, and a Guest Editor of Choices.*





# Is There a Role for Government in Reducing the Prevalence of Overweight and Obesity?

Fred Kuchler and Elise Golan

Whether counted in lives or dollars, obesity is a sizable problem. However, this observation alone does not justify government intervention. Without evidence that the market solution leaves room for improvement, neither economic logic nor federal regulatory guidelines would support government action.

Generally, markets do a good job coordinating economic activity so that resources are put to their most valued use. However, it is possible that some markets could fail to accurately reflect consumer or societal preferences. In its guidance to regulatory agencies on how to evaluate the costs and benefits of government intervention, the US Office of Management and Budget (OMB) states that the first requirement for such intervention is a demonstration that relevant markets are failing to allocate resources correctly (OMB, 1996). This requirement has been reaffirmed by the current administration (OMB, 2003).

Without evidence of market failure, there is the danger that any government policy, including food policy to curtail overweight and obesity, could cause more harm than good. In this paper, we examine how the evidence stacks up for the obesity problem. We investigate whether failure in food markets may help explain the growth of overweight and obesity in this country.<sup>1</sup>

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*1. Although failures in markets for exercise or medical interventions could also contribute to the obesity problem, they are not the topic of this paper.*

## Is There Evidence that Obesity and Overweight are the Result of Market Failure?

We considered three possible market-failure scenarios: (a) producers are not responsive to consumer demand and do not supply the types of food desired by consumers; (b) consumers do not have enough information to make informed choices and inadvertently demand (and consume) diets high in calories; or (c) consumers make poor diet choices because they do not bear all the health costs of their choices. Any of these failures could potentially result in the production of a mix of foods that does not best satisfy consumer or societal preferences. We examine the evidence for each scenario below.

### Do Markets Supply the Types of Foods Desired by Consumers?

It is difficult to imagine that a business strategy that disregards consumer preferences could succeed for long. This is particularly true in the highly competitive and innovative modern food industry. Technological advances in processing, storage, transportation, and communication have increased the ability of food manufacturers to both gauge and satisfy variations in consumer food preferences. Consumers in the United States had about 40,000 food products to choose from in the typical supermarket in 2000 (Harris, Kaufman, Martinez, & Price, 2002).

The wide variety of food products on grocery store shelves reflects the willingness and ability of the industry to adapt to consumer preferences—even short-lived or faddish ones. For example, low-

fat and low-carb diets have both influenced the mix of foods. In 1996, at the height of the low-fat movement, manufacturers introduced 3,434 new food products that were labeled “low fat” or “no fat.” Between 1987 and the end of September 2004, manufacturers introduced 35,272 such products (Figure 1). In 2003, 700 “low-carb” or “no-carb” products hit the market; through the end of September of 2004, 2,753 such products followed.

Competition to attract and keep customers extends to the fast-food and restaurant industries. Large portions, boasting good value for the buck, and high-fat (tasty) foods are one way to draw customers. “Healthy” foods, such as salads topped with broiled chicken breast, bunless burgers, low-carb pizza, low-fat yogurt parfaits, and heart-healthy menu options, are another.

In fact, the urban landscape is dotted with specialty grocery stores that attest to the willingness of markets to supply whatever consumers want, even when those consumers have low incomes. Asian, Caribbean, Indian, and South American stores all dish up a variety of processed foods, fresh fruits, and vegetables for their customers, many of whom are low-income recent immigrants. Perhaps one of the most extreme examples of how far retailers will go to tailor their services to the needs of low-income consumers is the emergence of “WIC-only” stores, which cater exclusively to participants in the Special Supplemental Nutrition Program for Women, Infants, and Children.

Overall, the evidence does not seem to support the conclusion that industry is unwilling or unable to supply the types of foods that consumers desire. We conclude that it is very unlikely that unhealthy food consumption patterns stem from this sort of market failure.

### ***Do Consumers Have Enough Information to Make Informed Food Choices?***

If consumers do not have enough information to make informed choices, then the foods they purchase and consume may not actually match their preferences. They may inadvertently choose poor diets simply because they do not know which diets are healthy and which are not. They may also be uninformed about what constitutes a healthy weight and about the negative health consequences of overweight and obesity. In either case,

the market outcome may not reflect true consumer preferences.

The sheer volume of media coverage devoted to diet and weight makes it difficult to believe that many Americans are not conscious of the relationship between a healthful diet and obesity. Even a consumer who managed to avoid the popular media could not escape the onslaught of information. Physicians, government education programs, nutrition labels, and product health claims all provide consumers with information on what constitutes a healthy diet and weight. Mirrors, bathroom scales, and belt notches provide constant updates, as do unsolicited comments about our changing weight status from friends or relatives.

Survey results indicate that this barrage of information has informed Americans. Results from the US Department of Agriculture’s (USDA) Diet and Health Knowledge Survey indicate that a majority of American consumers have basic nutrition knowledge. Survey results indicate that most people can discriminate among foods on the basis of fat, fiber, and cholesterol. Most are aware of health problems related to nutrients (Variyam & Blaylock, 1998).

Though a lack of information does not seem to characterize most food markets, there is, nevertheless, evidence of some information blackout zones. One such zone involves public perceptions of appropriate weight. Kuchler and Variyam (2002) found that 41% of individuals whom health professionals would classify as overweight (but not obese) did not perceive themselves to be overweight. Among individuals whom professionals would classify as obese, 13% said that their weight is about right or even too low. Furthermore, the highest frequency of these “doubters” is found in the ranks of those who scored lowest in diet and health knowledge.

One of the most widely discussed information blackout zones is for food sold at restaurants and fast-food establishments. Although the 1994 National Labeling and Education Act requires that manufacturers include a nutrition information panel on the label of almost all packaged foods, it does not require any similar disclosure for foods purchased at restaurants—food away from home (FAFH).<sup>2</sup> This information requirement gap may be increasingly important as a source of information failure. Not only are Americans consuming

large amounts of FAFH, but the nutritional content of FAFH tends to be less healthy than foods prepared at home (Guthrie, Lin, & Frazão, 2002).

The negative characteristics of FAFH do not necessarily indicate that information fails to reach consumers. As long as consumers are just a little cynical, markets will work to disclose information on even negative product characteristics. For example, a sandwich restaurant advertising “low-fat, low-carb” menu options may cast into doubt the fat and carbohydrate content of the sandwiches in a competing restaurant that does not advertise such claims. This competitive disclosure drives firms to make explicit claims for all positive aspects of their products and allows consumers to make appropriate inferences about foods without claims.

A possible limitation to the success of competitive disclosure in FAFH markets is the fact that negative attributes are widely shared by producers in the market. Restaurants offer foods high in fat and calories because these foods tend to taste good. No producer has an incentive to disclose information about fat and calories because no competitive advantage can be gained by doing so; it is difficult for any producer to reduce fat and calories without compromising taste, given the current state of food technology. As a result, there may be little advertised nutritional information against which to contrast and compare any particular food option.

Another possible limitation to nutrition disclosure in markets for FAFH is the complexity of nutrition information (Jessup, 2001). Though savvy consumers may be able to infer that a dessert that does not have a “heart healthy” logo next to it on the menu has more cholesterol or saturated fat than one with the logo, they cannot infer any information about sugar or calorie content. Inference is just not adequate for accurately disclosing all of the nutrients that may be of interest to consumers.

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2. *Food away from home is the term used to describe all foods prepared outside the home, including foods prepared and eaten at restaurants and fast-food establishments, take-out meals prepared by restaurants and fast-food establishments, ready-to-eat meals from supermarkets, and home-delivered meals.*

The evidence is mixed on whether these limitations to nutrition disclosure in FAFH are hindering the flow of information and the ability of consumers to make informed decisions about FAFH choices. On the one hand, most consumers suspect that food served at fast-food restaurants is not the healthiest. A 2003 Gallup Poll survey found that two thirds of consumers thought that most food sold at fast-food restaurants was not good for them (Saad, 2003). On the other hand, consumers may not be able to gauge precisely the nutritional content of FAFH. A 1996 survey conducted by New York University and the Center for Science in the Public Interest found that trained dietitians underestimated the calorie content of five restaurant meals by an average of 37% and the fat content by 49% (Backstrand, Wootan, Young, & Hurley, 1997).

### ***Are Individual Food-Consumption Choices Socially Optimal?***

Individual consumers may not consider all the costs and benefits of their food-consumption choices. The existence of health insurance, both private and public, may distort the correspondence between the personal and social costs of maintaining an unhealthy weight. Insurance may reduce consumers’ incentives to take all cost-justified health precautions (including choosing a healthy diet), because it reduces the medical costs paid directly by consumers. Economic efficiency will be compromised if individuals react to insurance by replacing healthy diets (preventive care) with tasty but unhealthy ones (and much more expensive ameliorative care for their chronic illnesses).

The fact that a large part of the health-care bill from overweight and obesity is eventually footed by taxpayers—not private insurance providers—may further misalign social and private costs. Finkelstein, Fiebelkorn, and Wang (2004) found that Medicare and Medicaid pay for at least half of obesity-attributable medical expenses. This means that what would otherwise be a matter of personal choice (and responsibility) has become a matter of concern for all taxpayers. Though simply transferring the bill for health care to the public sector does not guarantee inefficiencies and declining diet quality, it does guarantee controversy when the bill is large. In addition, if diet quality does decline and taxpayers foot an ever-growing bill for overweight

and obesity, their financial interest in the health behavior of others is also bound to grow.

Tapping the public purse for health-care expenses does not by itself demonstrate an efficiency problem. If it did, there would be no end to the number of risky behaviors that we might want to discourage and no end to the public sector's control over individual choices. Many activities, including skiing, unprotected sex, and home repairs involving power tools, raise health-care expenses. Eating raw oysters is clearly a more risky proposition than eating many other foods. An efficiency loss from having the public sector pay health-care expenses arises if individuals choose unwisely because of the health-care subsidy. In this case, it may be the public sector and not the market that has failed.

### **Evidence of Market Failure is not Evidence of Cost-Effective Policy**

Identification of potential market failure opens the door to government intervention. It also suggests which type of policy intervention may be best targeted to ameliorating the problem. Information policy, such as nutrition education programs and labeling, would seem to be best targeted to information problems, whereas medical plans that internalize the costs of overweight and obesity would seem to be best targeted to correcting spillover cost problems.

However, even the best-targeted policy tools may not pass a cost-benefit test. Moreover, even if they do, more fundamental causes of weight-gain trends—causes that have nothing to do with market failure—may remain. For example, neither public education nor revamped health insurance will fundamentally alter the shift in technology-induced relative prices that may underlie the growth in overweight and obesity. Technological change has created a largely sedentary workforce (Philipson & Posner, 2003), meaning that workers have to exercise more outside work or reduce their calorie intake to maintain weight. In addition, improvements in food-storage technology (e.g., frozen microwavable meals) have reduced the time cost of preparing meals (Cutler, Glaeser, & Shapiro, 2003), encouraging consumers to eat. Medical technology in the treatment of obesity-related illnesses has also improved, turning some hopeless situations into chronic illnesses and reducing the

health costs of obesity. If medical advances continue to reduce the health consequences of obesity, the incentive to maintain a healthy weight will continue to diminish, maybe one day becoming a function only of vanity.

### **For More Information**

- Backstrand, J., Wootan, M.G., Young, L.R., & Hurley, J. (1997). *Fat chance*. Washington, DC: Center for Science in the Public Interest.
- Cutler, D., Glaeser, E.L., & Shapiro, J.M. (2003). Why have Americans become more obese? *Journal of Economic Perspectives*, 17(3), 93-118.
- Finkelstein, E.A., Fiebelkorn, I.C., & Wang, G. (2004). State-level estimates of annual medical expenditures attributable to obesity. *Obesity Research*, 12(January), 18-24.
- Guthrie, J.F., Lin, B.-H., & Frazão, E. (2002). Role of food prepared away from home in the American diet, 1977-78 versus 1994-96: Changes and consequences. *Journal of Nutrition Education and Behavior*, 34, 11-16.
- Harris, J.M., Kaufman, P.R., Martinez, S.W., & Price, C. (2002). *The U.S. food marketing system, 2002* (agricultural economic report no. 811). Washington, DC: US Department of Agriculture Economic Research Service.
- Jessup, A. (2001). Nutrition labeling. In *Economics of Food Labeling* (agricultural economic report no. 793). Washington, DC: US Department of Agriculture Economic Research Service.
- Kuchler, F., & Variyam, J.N. (2002). Misperceptions in self-assessed weight status vary along demographic lines. *FoodReview*, 25(Winter), 27-33.
- Office of Management and Budget, The Executive Office of the President. (1996). *Economic analysis of federal regulations under Executive Order 12866*. Available on the World Wide Web: <http://www.whitehouse.gov/omb/inforeg/riaguide.html>.
- Office of Management and Budget, The Executive Office of the President. (2003). *Circular A-4*. Available on the World Wide Web: <http://www.whitehouse.gov/omb/circulars/a004/a-4.pdf>.
- Philipson, T.J., & Posner, R.A. (2003). The long-run growth in obesity as a function of techno-

logical change. *Perspectives in Biology and Medicine*, 46(3 Summer supplement), S87-S107.

Saad, L. (2003). *Public balks at obesity lawsuits*.

Princeton, NJ: The Gallup Organization. Available on the World Wide Web: <http://www.gallup.com/content/login.aspx?ci=8869>.

Variyam, J.N., & Blaylock, J. (1998). Unlocking the mystery between nutrition knowledge and

diet quality. *FoodReview*, 21(May-August), 21-28.

*Kuchler and Golan are economists in the Food and Rural Economics Division, Economic Research Service, USDA. The views expressed here are those of the authors and not necessarily those of the USDA.*





## Message under Revision: USDA Speaks About Beef, Pork, Cheese, and Obesity

Parke Wilde

The following messages for food consumers have something important in common:

- “Beef. It’s what’s for dinner.”
- “Pork. The other white meat.”
- “Ahh, the power of cheese.”
- “Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.”

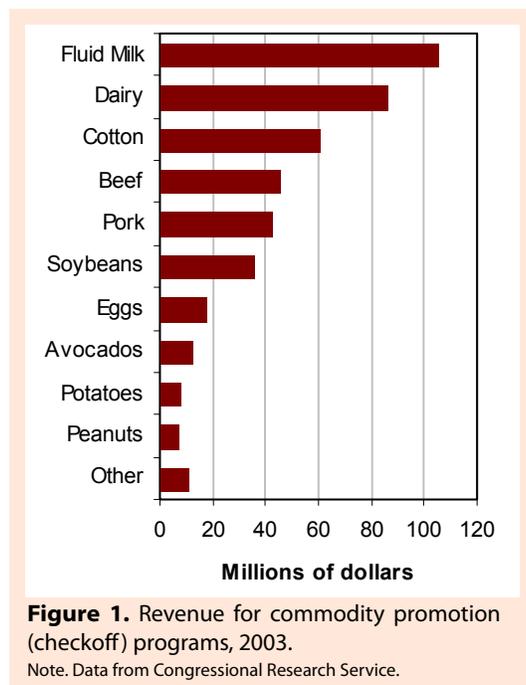
The slogans are not equally catchy. Not equally expensive to produce. Not equally beloved by nutrition educators. The common theme is that the US Department of Agriculture (USDA) has supported each of these messages, but each message may disappear in the coming year.

For the first three messages, the challenge comes from dissident farmers who have sued the messages’ sponsors in the beef, pork, and dairy industries. These sponsors, known as “checkoff boards,” collect several hundred million dollars each year in mandatory payments from producers to support advertising and promotions (Figure 1). Some farmers have objected to the taxes and the marketing messages. In three separate cases, federal courts have declared that checkoff boards violate the First Amendment rights of these farmers by forcing them to pay for marketing messages with which they disagree. The US Supreme Court has agreed to hear the beef case this season. The Court’s decision will also decide the fate of the pork and dairy checkoff boards.

For the fourth message, the challenge comes from an expert panel that has recommended major changes in the federal government’s *Dietary Guidelines for Americans*. The *Guidelines* are the centerpiece of federal efforts to combat obesity and poor nutrition. They provide the basis for the Food Guide Pyramid and the nutrition requirements for

the National School Lunch Program. Every five years, the US Department of Agriculture asks an expert panel for advice on revising the *Guidelines* (Dietary Guidelines Advisory Committee, 2004). In August 2004, the panel recommended replacing the fourth message above with more general advice, “Choose fats wisely for good health” (Table 1). The USDA will review the panel’s report and release the new guidelines in 2005.

The checkoff controversy and the *Dietary Guidelines* controversy have become connected. On behalf of the Secretary of Agriculture and the USDA, the federal government’s lawyers recently told the Supreme Court that dissident farmers are not being forced to speak out against their will. Rather, the government is taxing the farmers to



**Table 1.** The Dietary Guidelines in 2000 and the expert panel's recommendations for 2005.

USDA's Dietary Guidelines (2000)	Expert panel recommendations for USDA's Dietary Guidelines (2005)
Aim for a healthy weight.	Control calorie intake to manage body weight.
Be physically active each day.	Be physically active every day.
Let the Pyramid guide your food choices.	[No corresponding recommendation].
Choose a variety of grains daily, especially whole grains.	Consume a variety of foods within and among the basic food groups while staying within energy needs.
Choose a variety of fruits and vegetables daily.	Increase daily intake of fruits and vegetables, whole grains, and nonfat or low-fat milk and milk products.
Keep food safe to eat.	Keep food safe to eat.
Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.	Choose fats wisely for good health.
Choose beverages and foods to moderate your intake of sugars.	Choose carbohydrates wisely for good health.
Choose and prepare foods with less salt.	Choose and prepare foods with little salt.
If you drink alcoholic beverages, do so in moderation.	If you drink alcoholic beverages, do so in moderation.

support the government's own message. According to the government's lawyers, the advertisements are "government speech," because Congress specified the message and USDA officials control the boards (Bryson et al., 2004).

This reasoning overturns the usual view of the checkoff programs as private organizations sponsored by farmers for their own benefit. It places the USDA in the perhaps absurd position of standing by all of these messages at once: Eat more beef, more pork, more cheese, *and* choose a diet that is low in saturated fat and cholesterol. One could go on: ...*and* eat more potatoes, eggs, and soybeans, and still "aim for a healthy weight." Not surprisingly, these seemingly mixed messages have come under some questioning.

### Commodity Promotion Programs Under Scrutiny

In studies of a single checkoff program, agricultural economists often measure a small but positive benefit for farmers. However, the programs appear less successful when they are studied as a group. For

example, in a recent report to Congress, the USDA described independent research showing that dairy consumption would have averaged 2% lower without the advertising (USDA Agricultural Marketing Service, 2004). But in a special issue of the journal *Agribusiness* last year, economists found that beef advertising reduced sales of pork, while pork advertising reduced sales of beef (Boetel & Liu, 2003).

Other economists in the same issue said these "beggar-thy-neighbor" effects of promotion cause one group of farmers to profit at another group's expense, giving rise to "excessive promotion from the national viewpoint" (Alston, Freebairn, & James, 2003). The economists worried that beef advertising could hurt poultry sales. This is no idle concern, judging by the Beef Board's recent print ads disparaging chicken (Figure 2).

A study by Cornell University economists in the *American Journal of Agricultural Economics* this year found that the effectiveness of milk advertising may have peaked in the early 1990s and declined since then. The effectiveness of cheese advertising grew steadily over time, but it was held back somewhat by higher levels of food away from home (Schmit & Kaiser, 2004). The authors suggested that to get more bang for their dollar, dairy producers might want to change their cheese advertising to focus more on the restaurant segment.

To some extent, the dairy checkoff program has been following such a strategy. According to the USDA's report to Congress, the dairy program "worked closely with top national restaurant chains, including Pizza Hut and Wendy's, to drive cheese volume and ensure that cheese was featured prominently in menu items." The Wendy's partnership supported the Wild Mountain Bacon Cheeseburger, a sandwich with 640 calories, more than half of which come from fat. The other checkoff boards also use this approach. The National Pork Board helped McDonald's expand its marketing for a Breaded Pork Sandwich.

Even if nutrition were not an issue, the economic research would raise doubts that checkoff programs help the farm community as a whole. And, of course, nutrition *is* an issue. Taking ownership of all the boards' consumer messages would complicate the USDA's desire to speak with one voice about nutrition.

## Dietary Guidelines to Be Revised

“The *Dietary Guidelines*... serve as the vehicle for the Federal government to speak with ‘one voice’ on nutrition issues for the health of the American public,” Eric Hentges told a Congressional hearing in September, 2003. Hentges was Vice President of Applied Technology and Education Services for the National Pork Board until February, 2003, when he became head of the USDA’s Center for Nutrition Policy and Promotion. In his new capacity, he will oversee the revision of the *Dietary Guidelines* and the Food Guide Pyramid in the coming year.

It will not be an easy task. Whatever Hentges’ hopes for the output, the input to this very public revision process has many voices. At a USDA meeting this August about the Food Guide Pyramid, vegetarians proposed, “Limit or avoid foods of animal origin.” The National Cattlemen’s Beef Association described meat as “a fundamental building block in food guidance.” The representative from Atkins Nutritionals said that railing against the “evils of fat” does little good. He proposed a revised Pyramid that emphasizes the benefits of protein and the principles of “carbohydrate awareness.” The scientist and antifat advocate Dean Ornish recalled a previous argument with the late Dr. Atkins in the same USDA auditorium, but said that both he and Atkins agreed on the dangers of simple carbohydrates (as in sugars and refined grains). The rice industry speaker noted the many earlier comments in favor of whole grains over other grains and said, “We strongly disagree with this direction.”

Seeking to stay above the fray, the expert panel on the *Dietary Guidelines* focused its recent report strictly on the scientific evidence. But, even here, the report’s small print could make it hard for the USDA to keep its constituents in the nutrition community and the commodity promotion boards equally happy.

Take fats and cholesterol, as perhaps the most important example. Cholesterol is complicated, because it comes in “good” and “bad” varieties. Also, “dietary” cholesterol in food does not translate directly into “serum” cholesterol in our blood. Still, the expert panel concluded that the effect of dietary cholesterol on “bad” serum cholesterol is “direct and progressive,” increasing the risk of coronary heart disease. The panel said people should

www.BeefitsWhatsForDinner.com

LEAN BEEF'S ACTUALLY LOWER IN FAT THAN YOU THINK. MAKES YOU WONDER ABOUT EATING ALL THAT SKINLESS CHICKEN, DOESN'T IT?

THE FACT IS, LEAN BEEF HAS ONLY ONE MORE GRAM OF SATURATED FAT THAN A SKINLESS CHICKEN BREAST... AND SIX TIMES MORE ZINC, THREE TIMES MORE IRON AND EIGHT TIMES MORE VITAMIN B12. SO YOU CAN EAT HEALTHY, AND IT DOESN'T TASTE LIKE IT.

BASED ON USDA DATA USING THE AVERAGE OF 3 OZ. COOKED SERVINGS OF EYE ROUND ROAST, TOP ROUND STEAK, TOP SIRLOIN STEAK, BONELESS SHOULDER POT ROAST, ROUND TIP ROAST AND SHOULDER STEAK COMPARED TO 3 OZ. COOKED SERVING OF BONELESS, SKINLESS CHICKEN BREAST. FUNDED BY AMERICA'S BEEF PRODUCERS.

**Figure 2.**

consume as little dietary cholesterol as possible within an otherwise adequate diet. All of our dietary cholesterol comes from meat, dairy, and eggs—commodities that together account for most checkoff advertising.

The amount and type of fat we eat is even more important for our health than our intake of dietary cholesterol is. The expert panel continues to advise large reductions in the average consumption of saturated fat. The relationship between saturated fat and “bad” cholesterol is again “direct and progressive,” increasing the risk of heart disease. About half of the saturated fat in our food supply comes from meat and dairy products, excluding butter. If butter were counted, the fraction would be higher still.

In addition to saturated fats and cholesterol, the panel recommended that Americans reduce their consumption of *trans* fat, whose effect on “bad” cholesterol and heart disease is—you guessed it—“direct and progressive.” These *trans* fats come mainly from baked goods and hard margarine, and to a smaller extent from animal products. At the same time, because fish contain special healthy fats,

the committee recommended Americans consume more fish than we currently do.

Obesity was a central issue for the *Dietary Guidelines* expert panel. Its report suggested replacing the current guideline, “Aim for a healthy weight,” with the more specific advice, “Control calorie intake to manage body weight.” Exercising is also important, but not sufficient without controlling calorie intake.

The expert panel fiercely criticized low-carb, high-fat diets. It said they are high in saturated fat and cholesterol, low in fiber, result in low intake of fruits and vegetables, and have not been evaluated over the long term. If the *Dietary Guidelines* is the federal government’s “one voice” on nutrition, it is hard to imagine that voice endorsing the motto on the National Pork Board’s website: “Counting Carbs? Pork’s Perfect.”

### Putting it Together

The growing complexity of scientific evidence on diet and health may explain the expert panel’s recommendation to replace the current guideline about saturated fat and cholesterol with the more general proposed guideline, “Choose fats wisely for good health.” On a superficial level, such a general guideline could reduce political conflict about the USDA’s nutrition advice. Who could object to choosing “wisely”?

A guideline’s ability to avoid giving offense could prove increasingly important. Ironically, the only way USDA-supported commodity promotion programs can survive will be if the US Supreme Court accepts the idea that the commodity promotions represent the USDA’s own “government speech.” Hentges and his agency have committed to the principle that government speech on food and nutrition should have “one voice.” If the USDA’s one voice asks Americans to consume more beef, pork, cheese, and “choose fats wisely,” only a careful listener may think that the chord still sounds a bit out of tune.

In part to avoid the political hazards of criticizing specific foods, the USDA has long adhered to a principle of nutrition education, which states that there are no “good foods” or “bad foods.” Almost any food can fit into a healthy diet, so long as it is properly balanced by other healthy food decisions. But this principle can be stretched only so far. The

challenge is to limit unhealthy fats and control calories overall. Just as the economic benefits of check-off programs look weaker when one considers the programs as a group, the nutrition concerns escalate when one evaluates the checkoff advertising as a whole.

Taken as a whole, the checkoff advertising defies the *Dietary Guidelines*. It would be inconsistent for the USDA to promote increased intake of all the major meat and dairy categories, yet still advise Americans to “choose fats wisely.” It would be untenable to acknowledge all of the commodity promotions as the USDA’s own message, yet still support a new guideline to “control calorie intake to manage body weight.” Sooner or later—and the coming year is a good bet—something has to give.

### For More Information

- Alston, J., Freebairn, J., & James, J. (2003). Distributional issues in checkoff-funded programs. *Agribusiness*, 19(3), 277-287.
- Boetel, B., & Liu, D. (2003). Evaluating the effect of generic advertising and food health information within a meat demand system. *Agribusiness*, 19(3), 345-354.
- Bryson, N., Olson, T., Keisler, P., Kneedler, E., McDowell, B., Letter, D., & Collette, M. (2004). Petition for a writ of certiorari. *Ann Veneman, Secretary, United States Department of Agriculture, Et Al., Petitioners v. Livestock Marketing Association, Et Al.* Washington, DC: United States Department of Justice. Available on the World Wide Web: <http://www.usdoj.gov/osg/briefs/2003/2pet/7pet/2003-1164.pet.aa.pdf>.
- Dietary Guidelines Advisory Committee. (2004). *2005 Report of the Dietary Guidelines Advisory Committee*. Washington, DC: United States Department of Agriculture. Available on the World Wide Web: <http://www.health.gov/dietaryguidelines/dga2005/>.
- Schmit, T., & Kaiser, H. (2004). Decomposing the variation in generic advertising response over time. *American Journal of Agricultural Economics*, 86(1), 139-153.
- United States Department of Agriculture, Agriculture Marketing Service. (2004). *Report to Congress on the National Dairy Promotion and Research Program and the National Fluid Milk*

*Processor Promotion Program.* Washington, DC:  
United States Department of Agriculture.  
Available on the World Wide Web: [http://  
www.ams.usda.gov/dairy/prb/  
prb\\_rept\\_2004.htm](http://www.ams.usda.gov/dairy/prb/prb_rept_2004.htm).

*Parke Wilde is an assistant professor in the Friedman School of Nutrition Science and Policy, Tufts University.*

