

Prices, Income, and Information Are Standard Policy Levers That Influence Food Choice

The standard economic framework for evaluating consumer behavior treats food as a good that provides both short- and long-term benefits. While some aspects of food, such as flavor, texture, and relief from hunger provide immediate gratification, the effect of other aspects, such as nutrient content, calories, and the presence of certain bacteria, are not usually realized until some point in the future. In line with the saying, “a moment on the lips, a lifetime on the hips,” economic analysis of food choices typically assumes that individuals must make tradeoffs between enjoyment of today’s choices and the consequences of those choices at some point in the future. How well individuals are able to translate food choices into future health outcomes is related to how much they know about diet, health, and nutrition.

Typically, this framework is then used to evaluate if and how much food choices will vary with three primary economic variables: income, prices, and information about diet and health. Historically, providing information about diet and health has been the most widely used tool to help consumers make more healthful food choices. For over 100 years, USDA has provided advice on how and why to eat a healthful diet (Welsh, Davis, and Shaw, 1993). Since 1980, USDA and the U.S. Department of Health and Human Services have jointly issued the *Dietary Guidelines for Americans* every 5 years. Although there have been variations over time, the primary focus has been on educating consumers in ways to achieve proper nutrition while consuming reasonable proportions of the various food groups in moderation.

In 1990, Congress passed the Nutrition Labeling and Education Act (NLEA), which requires that all packaged foods have nutrition labeling and use standardized definitions for terms such as serving size, “low fat,” and “light.” Many of the government-funded food and nutrition programs, such as food stamps, WIC, and the school meals programs, also earmark funds for nutrition education. The evidence is mixed on whether information and labels actually improve the healthfulness of food choices. Several studies have found a positive correlation between nutrition knowledge and diet quality, such as lower fat intake (Gould and Lin, 1994), the probability of being obese (Nayga, 2000b; Variyam and Cawley, 2006), and food label use (Nayga, 2000a). Others, however, have found no significant correlation or one that may be very short-lived (e.g., Chang and Just, 2007).

Rising obesity rates have led some health researchers to advocate raising the price of less healthful foods, such as salty snack chips, soft drinks, and ice cream, relative to more healthful foods, such as fruits, vegetables, and whole grains. Logistical problems aside, economic analysis of consumer’s sensitivity to prices shows that such a measure would have limited efficacy because peoples’ diets are not very responsive to prices. Using 1999 scanner data on food purchases, Kuchler, Tegene, and Harris (2005) estimate that taxing potato chips by 20 percent would bring about only a quarter-pound loss in body weight per year per potato-chip eater. Changing prices could also have some unintended consequences due to the interdependent nature of food choices. Kinsey and Bowland (1999) found that modest decreases in the price of fruits, meats, and dairy products would lead to small improvements in individuals’ diet quality and that the price of fat would have to rise

by as much as 15 percent to bring about a 1-percent reduction in fat consumption. Huang (1999) estimated that changing prices would also lead to some peculiar substitutions—decreasing the price of fruits or vegetables would increase consumption of fat, decreasing the price of vegetables would decrease consumption of vitamin A, and increasing the price of fat would reduce consumption of protein, calcium, iron, and folate. Such research shows that simply manipulating food prices is not likely to induce significant improvements in American consumers' diets.

The full “price” of food also includes the value of time spent acquiring, preparing, cooking, and cleaning up after meals. Many of the market-driven changes to the current U.S. food distribution system have reduced the time required to procure and prepare food by providing convenient, ready-to-eat snack foods, microwavable meals, vending machines at workplaces and schools, and drive-through windows at fast-food restaurants. These changes may have inadvertently made the environment more fat-friendly for consumers. It is extremely easy to access large quantities of food and expend hardly any time or energy doing so.

There is evidence that an increased availability of convenient foods is one underlying cause of increased consumption. This explanation conforms with standard economic theory, which predicts that people will consume more of an item whose total cost (combination of time and money) of production has declined (Cutler, Glaeser and Shapiro, 2003; Variyam, 2005). Cutler, Glaeser, and Shapiro (2003) found that prices, income, calorie expenditures (exercise), and caloric intake at meals all remained relatively stable during the period that obesity rates began increasing. The amount of time spent preparing food dropped by about 50 percent, thus the time cost of a snack declined sharply. Chou, Grossman, and Saffer (2004) also examine the effects of monetary prices and convenience (via an increased availability of fast food and other food sources) on obesity levels. While the relationship between food prices and obesity is statistically significant, it is small in magnitude. Availability of fast food, on the other hand, appears to play a much larger role in obesity. This indicates that while Americans may not be so responsive to monetary costs of food, they may be more sensitive to time costs.

This brief overview illuminates how a fairly standard economic framework can help explain some of the reasons behind food choices, but that the impact of standard economic levers—and the policy options associated with them—are limited. The next sections show that adding more realism into economic models by incorporating the psychological and behavioral aspects of food consumption reveals a broader range of policy options to increase the likelihood that individuals will make more healthful food choices.