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How Do Government Programs and Policies Influence Consumers' Food Choices?

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Federal economic and regulatory policies and programs affect food choices by influencing the supply and demand for food as well as by giving food to needy consumers. Food assistance programs aim to improve the diets of the poor. Farm commodity programs indirectly affect nutrient consumption by influencing the availability or price of food. Still other policies control information about food, whether through advertising, research, or public education, thus influencing consumers' perceptions about food and their nutrition.

Consumers' food choices are influenced by the prices of foods and other items in their budgets, their incomes, and other demand factors (such as demographic variables). Advertising or dietary guidance can alter food choices by changing consumers' perceptions about a food. A policy or program that changes prices, income, or the other demand factors will affect consumers' food choices. This report presents an overview of some of the Federal programs that affect food choices and hence nutrition, including food and income assistance, farm commodity programs, and food safety and quality regulations. This overview shows how a policy decision in one program can influence policy in another program: for instance, a decision to support farm commodity prices not only affects food prices but could create surplus commodities that food assistance programs might use to feed the poor.

Programs Directly Affecting Food Choices

Public programs can directly alter food demand and nutrition by giving people food or greater purchasing power and by providing information about food. Such programs include food and income assistance aimed at increasing food consumption.

Food assistance programs give low-income people either food or money to buy food for adequate nutrition.

- The Food Stamp Program gives needy people funds (in the form of food stamps) to buy food to improve their nutrition. Over 19 million people received food stamps in 1987, and total program expenditures were \$11.6 billion.

Although food stamps can only be used to buy food, they replace some of the income recipients would have previously spent for food. A dollar's worth of food stamps increases purchases of food consumed at home by about 26 cents, according to one study. Because food stamps in effect raise income, the Food Stamp Program influences demand for those foods most responsive to income increases. As income rises, demand increases for meats, certain fresh and frozen fruits and vegetables, and foods in more convenient form. Demand declines for cereals, eggs, potatoes, and canned and dried fruits and vegetables. Households participating in the Food Stamp Program have higher dietary nutrient levels than do eligible nonparticipating households.

- The Women, Infants, and Children (WIC) program provides supplemental food to low-income pregnant women, nursing mothers, infants, and children. The WIC program has directly improved nutrient intake by giving recipients vouchers for specific foods, including infant formula, infant cereal, orange juice, whole milk, eggs, cheese, and dry beans or peanut butter. The program supplements other food assistance, such as food stamps, for which recipients may qualify. In 1987, the WIC program cost approximately \$1.7 billion and served more than 3.4 million women and children each month.
- The National School Lunch Program, subsidizing lunches for school children based on their family income, upgrades the quality of their diets by serving them more meat, dairy and cereal products, and fruits and vegetables. The program fed 24 million school children on an average school day in 1987 and cost approximately \$3.7 billion.

Income assistance programs raise people's purchasing power, enabling them to spend more for food. Programs include Aid to Families with Dependent Children, housing assistance, Supplemental Security Income, Social Security, and even the progressive nature of the Federal income tax structure in which lower incomes are taxed at lower rates.

Public education programs encourage food consumption and proper nutrition. The Government sponsors nutrition research and informs consumers about the components of a healthy diet. The dietary guidelines published by the U.S. Departments of Agriculture and Health and Human Services provide information on recommended changes in diets. If consumers incorporate these nutrition guidelines into their diets by changing their food choices, some will reduce consumption of fats, saturated fats, and sugar and increase consumption of whole grains, fruits, and vegetables.

Programs Indirectly Affecting Food Choices

Federal policies and programs that influence the supply and prices of agricultural products indirectly affect food choices and nutrient consumption. Some programs retire farmland, restricting commodity production and raising prices. Others encourage commodity production with guaranteed prices. Still other programs affect supplies through import restrictions.

Supply restricting programs reduce crop production and change food prices. The Conservation Reserve Program will take 40 to 45 million acres of highly erosive land out of production by 1990. Other supply restriction programs pay farmers directly or offer other program benefits to retire land for a single growing season.

Supply restriction raises the price of the raw commodity and the price of the foods produced from the commodity. The effect on the prices of foods made from wheat, rice, and oats is direct but typically small because the farm value of grains used to make bread and other bakery products is less than 10 percent of the retail product price. A price increase for feed grains is more indirect and appears in meat prices. Higher feed grain prices initially may lower meat prices when producers slaughter more animals to avoid higher feed costs. In the following years, meat prices would rise as less meat is available. Because producing a pound of beef or pork requires more feed than producing a pound of chicken, higher feed prices are likely to boost beef and pork prices relative to chicken. Higher red meat prices will lead consumers to choose less expensive alternatives.

Farm price support programs encourage commodity production and sometimes create surpluses that are used by

food assistance programs. The Government guarantees dairy farmers minimum milk prices by purchasing (at the support price) all unsold cheese, butter, and nonfat dry milk. Dairy farmers eager to benefit from historically high Government-set prices established by the Food and Agricultural Act of 1977 increased production and investment in facilities and herds. By the early 1980's, milk supply exceeded demand by at least 10 percent. In late 1981, faced with a huge surplus of dairy products, USDA began the Temporary Emergency Food Assistance Program (TEFAP), which donated surplus cheese directly to needy people. Over the next 6 years, needy persons received about twice their normal consumption of American cheese, increasing their food intake and altering their mix of nutrients by replacing meat and other protein products with cheese.

Policies Overseeing Food Marketing

Policies that oversee the quality and safety of the food supply, advertising claims, and technological change can alter the mix of foods available to consumers and influence their choices among these foods.

Regulations governing food safety or quality deter the introduction of unsafe or adulterated foods into the marketplace and help maintain consumer confidence in the food supply. Such regulations give consumers the freedom to choose foods for reasons other than their safety and ensure them of a minimum level of quality.

- **Food Safety:** Safety rules specify proper processing practices and ingredients as a means of eliminating food adulteration. These rules require that foods posing an acute safety hazard, such as canned mushrooms with botulism or milk with heptachlor residues, be recalled. But these recalls have typically had little lasting effect on food choices. Over the past 20 years, safety rules have also permanently removed from the food supply several additives found to cause cancer in laboratory animals. Safe and reasonably economical substitutes for these additives usually existed, minimizing the effects of their removal on food choices. However, food safety laws could significantly affect food choices by removing additives for which there are no adequate substitutes. For example, in the late 1970's, one study concluded that sodium nitrite, the preservative used to cure nearly two-thirds of the pork consumed in the United States, caused cancer in laboratory animals. If further studies had not contradicted those results, sodium nitrite would have been banned under present law, forcing many traditional cured pork products to be marketed in fresh or frozen form. Consumers unaccustomed to eating pork in those forms would probably have changed their meat consumption patterns and hence their nutrient intake.

- **Food Quality:** The Food, Drug, and Cosmetic Act of 1938 established standards of quality to prevent foods known by a traditional name from being debased by the substitution of inferior ingredients. Standards of identity require foods that do not conform to the official recipe to be clearly labeled. This requirement can include "negative" labeling, such as "imitation mayonnaise" for a product that contains less fat or eggs than mayonnaise, or "tissue from ground bone," the name originally proposed by USDA for a mechanically deboned meat product. While standards are generally desirable because they assure a high quality food supply, they have some potentially negative side effects. For example, negative labeling may lead manufacturers to withhold foods that fail the standards from the marketplace, thus limiting consumer choice and potentially altering the nutrient supply.

Qualifying labels required by the Government influence consumers' choices in food products, and companies may fear that consumers will shun products carrying such labels. In a 1984 industry-funded study, 60 percent of surveyed consumers said that they "definitely" or "probably" would not buy pizza prominently labeled with the words "substitute" and "imitation" cheese, even though the product contained less cholesterol and saturated fat.

Standards of identity may also include attributes that have become negative since the standard was established. For example, dietary fat and cholesterol are now known to be linked to heart disease. These links were not considered when the mayonnaise standard was written. Yet because there is a mayonnaise standard, a similar product with less fat or cholesterol cannot be called mayonnaise.

Advertising and food label claims can influence consumers' perceptions and knowledge of food and nutrition. The Government provides some producer groups (at their request) with the authority to assess all producers of specific commodities for generic advertising funds. Generic advertising programs promote a product group rather than a single brand. Beef, pork, and dairy products have large national promotion programs. Although generic advertising has been shown to increase consumption of the advertised food group, its effects on consumption of other foods is not fully known.

Industry health claims about specific foods could shift the food choices of some consumers. Some food manufacturers have taken advantage of consumers' growing interest in the relationship between diet and health by promoting dietary practices that include eating their products. In October 1984, the Kellogg Company launched a national media advertising campaign for its high fiber cereal with a message about the value of high fiber foods for preventing some kinds of cancer.

Kellogg's campaign prompted Government regulators to rethink their position on health-related claims for foods. The Food and Drug Administration (FDA), which regulates labeling for food other than meat and poultry products, had previously considered drugs to include foods for which health or disease prevention claims were made, requiring the company to prove that the food was both effective and safe in achieving its claim. FDA proposed that the agency not consider a food to be a drug solely because its label contained a health-related nutritional claim if the claim is truthful and not misleading, is based on valid scientific studies, is consistent with generally recognized medical and nutritional principles for a sound total diet, and complies with FDA's other labeling requirements. The Federal Trade Commission (FTC), which regulates advertising, permits qualified, truthful health-related claims before scientists have reached a consensus, provided the claims are based on competent and reliable scientific studies.

Technological developments in agricultural production and food processing affect both nutrient supply and demand. Technologies raising plant yield and animal growth or lowering production costs can provide more food at lower prices, enhancing nutrient consumption. Food quality improvements or cheaper food alternatives can increase consumption of certain foods.

Although the Government conducts basic research and sponsors similar research at universities to encourage technological advancements, Government regulations protecting the environment and the wholesomeness of the food supply can influence commercialization of those technologies. For example, for a new food additive (such as irradiation or fat substitutes), FDA must decide in which foods processors may use it, how much of it they may use, how they may add it, and any special labeling or packaging requirements.

- **Irradiation:** If industry decides to offer irradiated foods and consumers will eat them, food irradiation can alter nutrient demand and consumption in several ways. Food irradiation, regulated as an additive by FDA, is the process of exposing food to radiation to kill or sterilize insects and food spoilage microorganisms. The effects of the radiation depend on the particular food and the dose of radiation absorbed. Irradiation can reduce spoilage loss for certain foods and expand the supply of some tropical fruits and vegetables now barred by quarantine restrictions. Irradiation may be able to enhance food safety by substituting for some chemical preservatives, such as nitrite in bacon, and reducing pathogens in meats and fish. But not all consumers may perceive irradiation as safer than chemicals.

Although the Government has sponsored development of irradiation, it has approved only specific uses of the process, thus limiting the selection of irradiated foods in the marketplace. In April 1986, FDA issued a

blanket approval allowing processors to use low doses of irradiation to inhibit sprouting and maturing of fresh foods and to rid foods of insects. FDA requires that retail packages or bulk containers of irradiated foods be labeled "Treated with radiation" or "Treated by irradiation" and a designated symbol. Consumers' reaction to the process and the labels will influence sales of irradiated food and consumption of the nutrients they contain.

- *Fat Substitutes:* The NutraSweet Company and the Procter & Gamble Company have petitioned FDA for permission to market their substitutes for traditional fats in dairy products such as ice cream, cheese spreads, sour cream, and dips as well as oil-based products such as salad dressings, shortenings, and mayonnaise. These fat substitutes will lower the food's caloric and cholesterol level and alter its traditional nutrient composition.

Under current FDA regulations, dairy products covered by standards of identity often specify a minimum milkfat content. If a fat substitute replaced this milkfat, the product would need some kind of qualifying label. Thus, in addition to deciding whether and how these substitutes can be used, FDA must decide what to call the products they are used in. The effects of such regulations on consumers' demand for and consumption of the new products remain to be seen.

Note: Use of brand names and company names in this publication is for identification only and does not imply endorsement by the U.S. Department of Agriculture.

Additional Readings

Morrison, Rosanna Mentzer. "Irradiation's Potential for Preserving Food," *National Food Review*, NFR-33, U.S. Dept. Agr., Econ. Res. Serv., Spring 1986, pp. 1-6.

U. S. Department of Health and Human Services and U.S. Department of Agriculture. *Nutrition Monitoring in the United States—A Report from the Joint Nutrition Monitoring Evaluation Committee*. DHHS Pub. No. (PHS) 86-1255. July 1986.

Zellner, James A. "Market Responses to Public Policies Affecting the Quality and Safety of Food and Diet," *Consumer Demands in the Marketplace: Public Policies Related to Food Safety, Quality, and Human Health*, ed. Katherine L. Clancy. National Center for Food and Agricultural Policy, Resources for the Future, 1988, pp. 55-74.

Zellner, James A., and Rosanna Mentzer Morrison. "Economic and Regulatory Policies: Implications for Nutrition," *Family Economics Review*, No. 1, U.S. Dept. Agr., Agr. Res. Serv., January 1988, pp. 13-18.

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