Economics of Food Labeling

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Introduction

There is a lot to know about the food we eat. For example, the ingredients for a jar of spaghetti sauce, a box of cereal, or a cup of coffee could come from around the corner or around the world; they could be grown with numerous pesticides or just a few; they could be grown on huge corporate organic farms or on small family-run conventional farms; they could be harvested by children or by machines; they could be stored in hygienic or pest-infested storage facilities; or they could increase or decrease the risk of cancer. A description of any one food product could include information on a myriad of attributes.

Consumers, food processors, third-party entities, and governments all play a role in determining which of a food's many attributes are described on food labels. Consumers use their purchasing power (their consumption choices) and political activities to help determine which attributes are described on labels. Private firms seek out attributes that are attractive to consumers and voluntarily provide information about these attributes when the benefits of doing so outweigh the costs. Third-party entities, including private organizations, governments, and international organizations, contribute to enhancing the intelligibility and credibility of information about some food attributes through standard setting, certification, and enforcement. These services can increase the amount of information supplied by labels. Governments may require that information on some attributes be included on food labels.

Government intervention in labeling in the United States has served three main purposes: to ensure fair competition among producers, to increase consumers' access to information, and to reduce risks to individual consumer safety and health (Hadden, 1986). Table 1, which highlights some of the major milestones in U.S. food labeling, shows that a motivation for many government labeling laws has been to ensure fair competition.

In recent years, government intervention in labeling has begun to target a new purpose, namely, influencing individual consumption choices to align them with social objectives. We traced the first explicit mention of the link between labels and a social goal to the White House Conference on Food, Nutrition, and Health in 1969. One of the major recommendations from this conference was that, to help address deficiencies in the U.S. diet, the Federal Government should consider developing a system for identifying the nutritional qualities of food (U. S. Food and Drug Administration, 1998). Two decades after that White House conference, the Food and Nutrition Board of the National Academy of Sciences convened a committee to consider how food labels could be improved to help consumers adopt or adhere to healthy diets. The U.S. Food and Drug Administration (FDA) proposed the Nutrition Labeling and Education Act (NLEA) in 1990 (for reviews of food labeling history in the United States, see Blechner and Fontana, 1997, and U.S. Food and Drug Administration, 1998).

Designing a labeling policy to achieve a social objective like a healthier population highlights some of the problems at the heart of any government decision to intervene in labeling, for whatever reason. As with any policy, the costs and benefits of government intervention in labeling must be weighed, and the sometimes conflicting demands of economic efficiency, consumer and producer concerns, public opinion, political expediency, and current events must be sorted and evaluated.

In this report, we examine the economics of food labeling. We examine how different types of benefit-cost calculations influence the information supplied by private firms, the information required by governments, and the role of third-party entities in standardizing and certifying the veracity of the information. We show that the appropriate level of government intervention in labeling decisions, whether establishing mandatory labeling laws, providing services to enhance voluntary

Table 1--Milestones in U.S. food labeling

Date	Law or event[1]	Objective[2]			
		Regulate competition	Information	Safety	Social goal
1906	The Federal Pure Food and Drugs Act and the Federal Meat Inspection Act authorize the Federal Government to regulate the safety and quality of food. These acts also defined adulteration and prohibited selling misbranded or adulterated foods.	x	x	x	
1913	The Gould Amendment requires food packages to state the quantity of contents.	x	x		
1924	In U.S. v. 95 Barrels Alleged Apple Cider Vinegar, the Supreme Court rules that the Food and Drugs Act condemns every statement, design, or device which may mislead, misdirect, or deceive, even if technically true.	x	x	x	
1930	The McNary-Napes Amendment requires labeling on products that do not meet common-usage standards.	x	x	x	
1938	The Federal Food, Drug, and Cosmetic Act replaces the 1906 Food and Drugs Act. Among other things, it requires the label of every processed, packaged food to contain the name of the food, its net weight, and the name and address of the manufacturer or distributor. A list of ingredients also is required on certain products. The law also prohibits statements in food labeling that are false or misleading.	x	x		
1950	The Oleomargarine Act requires prominent labeling of colored oleomargarine to distinguish it from butter.	x			
1951	Nutrilite Consent Decree allows the FDA to establish industry guidelines for vitamin and mineral labeling.	x	x	x	
1957	The Poultry Products Inspection Act authorizes USDA to regulate, among other things, the labeling of poultry products.	x	x		
1958	The Food Additives Amendment (which contains the Delaney Clause) expands the FDA's authority to monitor dietary and health claims and food ingredients (including restricting or banning any additive or food ingredient deemed unsafe). Processors are required to prove that additives are safe. Creates the "zero-risk" standard for carcinogens in processed foods.		x	x	
1966	The Fair Packaging and Labeling Act requires all consumer products in interstate commerce to contain accurate information and to facilitate value comparisons.	x	x		

[1]The primary source for this information is "Good Reading for Good Eating," U.S. Food and Drug Administration, http://www.fda.gov/fdac/special/foodlabel/goodread.html. We have augmented and updated the FDA list of milestones (Hadden, 1986; Blechner and Fontana, 1997).

[2]Hadden (1986) finds three main purposes underlying U.S. labeling laws: ensuring fair competition among producers, increasing consumers' access to information, and reducing risks to individual consumer safety and health. Recently, a fourth purpose has emerged, namely that of altering individual consumption choices to align them with wider social costs or benefits.

Table 1--Milestones in U.S. food labeling, continued

Date	Law or event[1]	Objective[2]			
		Regulate competition	Information	Safety	Social goal
1966	FDA publishes proposed dietary supplement regulations. Proposal triggers legal challenges from industry.	x	x	x	
1969	The White House Conference on Food, Nutrition, and Health addresses deficiencies in the U.S. diet. It recommends that the Federal Government consider developing a system for identifying the nutritional qualities of food.				x
1973	FDA issues final dietary supplements regulation. Industry continues legal challenges.	x	x	x	
1973	FDA issues regulations requiring nutrition labeling on food containing one or more added nutrients or whose label or advertising includes claims about the food's nutritional properties or its usefulness in the daily diet. Nutrition labeling is voluntary for almost all other foods.	x	x		
1975	Voluntary nutrition labeling, postponed from its originally planned 1974 date, goes into effect.	x	x		
1976	Vitamin-Mineral amendments limit FDA's authority and enforcement power in relation to vitamin and dietary supplements.				
1983	In face of legal setbacks and Federal budget cuts, FDA repeals dietary supplement regulation.				
1988	Surgeon General C. Everett Koop releases The Surgeon General's Report on Nutrition and Health, the Federal Government's first formal recognition of the role of diet in certain chronic diseases.				x
1989	The National Research Council of the National Academy of Sciences issues "Diet and Health: Implications for Reducing Chronic Disease Risk," which presents additional evidence of the growing acceptance of diet as a factor in the development of chronic diseases, such as coronary heart disease and cancer. Under contract with FDA and USDA's Food Safety and Inspection Service (FSIS), the Food and Nutrition Board of the National Academy of Sciences convenes a committee to consider how food labels could be improved to help consumers adopt or adhere to healthful diets. Its recommendations are presented in Nutrition Labeling: Issues and Directions for the 1990s.				x

Table 1--Milestones in U.S. food labeling, continued

Date	Law or event[1]	Objective[2]			
		Regulate competition	Information	Safety	Social goal
1990	Dolphin Protection Consumer Information Act regulates labeling of dolphin-safe tuna.				x
1990	Congress passes the Organic Foods Production Act requiring the Secretary of Agriculture to establish a Federal organic certification program.	x	x		
1990	FDA proposes extensive food labeling changes, which include mandatory nutrition labeling for most foods, standardized serving sizes, and uniform use of health claims. The proposed Nutrition Labeling and Education Act reaffirms the legal basis for FDA's labeling initiative and establishes an explicit timetable.	x	x		
1991	FDA issues more than 20 proposals to implement NLEA. In addition, the agency issues a final rule that sets up a voluntary point-of-purchase nutrition information program for raw produce and fish. FSIS unveils its proposals for mandatory nutrition labeling of processed meat and poultry and voluntary point-of-purchase nutrition information for raw meat and poultry.	x	x		x
1992	Dietary Supplement Act delays implementation of new dietary supplement regulation until the end of 1993. Authorizes the FDA to grant permission to producers to make specific health claims for products.		x		
1992	FDA's voluntary point-of-purchase nutrition information program for fresh produce and raw fish goes into effect.	x	x		x
1993	FDA issues the final regulations implementing NLEA. Regulations covering health claims become effective.	x	x		x
1994	NLEA regulations pertaining to nutrition labeling and nutrient content claims become effective (including those for meat and poultry).	x	x		x
1994	The Dietary Supplement Health and Education Act (DSHEA) defines a "dietary supplement" as a food, not as a drug, thereby subjecting supplements to less restrictive regulatory and labeling requirements.	x	x	x	
1997	USDA releases the first proposed rule for a national organic foods standard (in compliance with the Organic Foods Production Act). The proposal drew over 275,000 comments, largely negative.	x	x		
1997	FDA issues final rules implementing the major provisions of the DSHEA of 1994.	x	x	x	

Table 1--Milestones in U.S. food labeling, continued

Date	Law or event[1]	Objective[2]			
		Regulate competition	Information	Safety	Social goal
1999	Mandatory labeling of foods containing biotech ingredients is proposed in the House (HR 3377).		x		x
2000	USDA releases the second proposed rule for a national organic foods standard (in compliance with the Organic Foods Production Act). The most controversial aspects of the first proposal—the potential to allow the use of genetic engineering, irradiation, and sewage sludge in organic production—were dropped from the second proposal.	x	x		
2000	White House announces Food and Agricultural Biotechnology Initiatives: Strengthening Science-Based Regulation and Consumer Access to Information authorizing (1) FDA to develop guidelines for voluntary efforts to label food products under their authority as containing or not containing bioengineered ingredients in a truthful and straightforward manner, consistent with the requirements of the Federal Food, Drug, and Cosmetic Act; (2) USDA to work with farmers and industry to facilitate the creation of reliable testing procedures and quality assurance programs for differentiating non-bioengineered commodities to better meet the needs of the market.	x	x		
2000	Mandatory labeling of foods containing biotech ingredients is proposed in the Senate (S 2080).		x		x

labeling, or not intervening at all, depends on the type of information involved and the level and distribution of the costs and benefits of providing that information. In general, we find that mandatory food-labeling requirements are best suited to alleviating problems of asymmetric information and are rarely effective in redressing environmental or other spillovers associated with food production and consumption.

We begin by examining the types of benefit-cost calculations used by private firms when deciding whether or not to provide specific product information. Next we explore the reasons for third-party involvement in labeling. We then examine the types of benefit-cost calculations relevant to determining the government's role in labeling. We conclude the theory section of the report by providing some guidelines as to when mandatory labeling may be an appropriate policy tool. In the second part of the report we present three case studies in which the government has intervened in labeling: nutritional labeling, dolphin-safe tuna labeling, and organic labeling. We also examine two examples in which the government has contemplated intervention: country-of-origin labeling and biotech labeling.