HEALTH CLAIMS IN ADVERTISING: A DISCUSSION

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The paper writers for this session are to be commended for valiant efforts of both quantifying the impact of information on the quality of product in a market and assessing the appropriate role of the government sector. The paper, "Recent Public Education Efforts About Health and Diet in the United States" by Alan Levy and James Heimbach, examines whether information on the relationship between health and disease will change the consumption patterns of consumers. They suggest that this affect is independent of the source of the information (government or industry). The paper, "Health Claims in Advertising and Labeling: A Study of the Cereal Market" by Pauline Ippolito and Alan Mathios, evaluates relative differences in the impact of government sector and industry provided information. Assuming both sources of information can be effective, the paper seeks to document the source that is most effective. The paper, "How Should Health Claims For Food Be Regulated?: An Economic Perspective" by John Calfee and Janis Pappalardo, assumes that information on health and health status can impact on consumer behavior and industry should provide the information. The paper seeks to define the government's role in regulating provider supplied information.

These papers make a unique contribution to the literature. They use market and consumer data to link information provided through advertising or the government and the quality of products. Most of the current empirical analysis documents the relationship between information and prices. We know that price lists, food coupons and other types of advertising reduce the price of food. We know that information decreases the price of physician services, eyeglasses and gasoline. Researchers have considered diverse consumer markets and shown a significant relationship between information and price in most of these markets. Moreover, the goods on which consumers need the most information about quality are "credence goods," goods for which we have difficulty assessing quality, even after the good's consumption. Additionally, a costly information seeking process is necessary to determine quality for these goods.

The papers in this session pertain to credence goods. The average consumer does not have a strong foundation in the epidemiology of food consumption. After consuming food, we don't know how it will increase our health status. If it doesn't increase our health status, we don't know whether this occurs because of some physical problem in our personal chemistry or whether the problem lies in the inability of the food to affect anyone's health status. The researchers

ask, Will information about a credence good lead to the consumption of higher quality products? If so, who should provide the information? If provided, what restrictions should apply? Each of the researchers contends with assessment of a difficult research problem, given rather scanty data.

Levy and Heimbach use trend data to evaluate the impact of recent public education efforts that relate food characteristics to high blood pressure, cholesterol and cancer. They identify three major impact areas. They are public knowledge, belief and behavior. Additionally, they show that information/public education impacts on all three areas. Nonetheless, with the use of a simplistic model that identifies the relationship between the three impact areas, their data can be gleaned of more information. The task is to understand why sodium information was so effective in changing the quality of food consumed, why Kellogg's advertising that linked fiber and cancer was equally effective with a shorter time lag between information disclosure and behavioral changes (only six months between information delivery and impacts on fiber consumption, while impacts were four years latter for salt), and why a long-term, continuous information program linking fat and cholesterol has slowly changed behavior. Consider the following model:

Knowledge = f (information obtained, ability and cost of information processing, message delivery mode....)

Belief = g (new knowledge, prior circumstances, attitudes.....)

Behavior = h (belief in the value of information, cost of behavioral change that includes considerations of cultural perspectives, habits, income...).

Levy and Heimbach show that after information was supplied, awareness of and belief in the relationship between salt and high blood pressure increased. Throughout 1978-86 and prior to the information program, consumers made extensive use of product labels and ingredient lists on food products. Thus, food labels with information on salt content were a low cost method of obtaining information about the salt content of food. Therefore, knowledge and belief about particular food products could easily change. Likewise, Kellogg's informational advertising campaign provided an easy method of reducing the cost of obtaining knowledge. The release of information relating fat and cholesterol through government research studies and dietary guidelines is a costly information process. According to the above model, this information method should lead to limited changes in knowledge and beliefs by some consumers. This hypothesis is consistent with the research findings.

The above model also aides in understanding differences in the timing of the behavioral response to information provision. The cost of behavioral change relative to salt or fat intake is high. A total change in food consumption patterns is needed to incorporate health information about salt intake, i.e., an adjustment to differences in the taste of all food consumed occurs. Similarly, changing fat consumption patterns may require changing your food bundle to include foods that are more expensive. Thus, when consumer incomes were increasing during the 1975-80 expansion, the above model predicts a large behavioral impact on cholesterol intake. Finally, the model predicts an immediate behavioral change to incorporate fiber consumption. The intake of fiber is similar to supplementing the diet and reflects a low cost change in behavior. Thus, caution should be taken in associating the quantity of dollars spent on advertising with the short-term behavioral change in fiber consumption.

Ippolito and Mathios perfectly dovetail the Levy and Heimbach article. Rather than assume the information source is inconsequential, they specifically examine the relative impact of government provided information. Additionally, the role of Levy and Heimbach's three key impact factors are specifically incorporated in their theoretical model of demand for quality products.

Through the use of multiple data sources, they are able to show that producer advertising significantly changed fiber consumption (in contrast to government information) and there was not a corresponding or significant increase in sodium and fat consumption. Rather, sodium and fat consumption decreased. Also there was an increase in the number of high fiber cereals.

The strength of this paper is its creative assessment of the impact of advertising on information processing efficiency and information access. By regressing proxy measures of information processing skills, information access, culture, behavior and value, on the variable, fiber consumption, a more indepth assessment of the relationship between advertising, information and behavior is found. In this manner they find that advertising's role is to increase information access (decrease search cost), rather than increase the efficiency of information processing. This role leads to the resulting behavior change in fiber consumption.

A useful follow-up study would be one that considered a market with a different structure. Specifically, the cereal industry is oligo-polistically structured and one in which significant brand identification and quality competition are historically associated with the market. Moreover, future studies of product markets should again consider the credence good. Pratt and Hoffer's (1986) preliminary analysis of mandated disclosure in the used car market (a more competitive market for a credence good) indicates that disclosure does not significantly increase the quality of used cars. Credence goods in other potential markets, including physician services (monopolistically competitive in structure) and insurance (competitively structured), are fruitful areas for future research.

Given the Ippolito research that suggests that producer advertising is more effective than government information provision, we are ready to consider the final question asked by Calfee and Pappalardo. They evaluate the appropriate role of the government as regulator of producer supplied information. The paper presents an excellent discussion of the tradeoffs of using a fixed standard rather than a flexible expected value standard in government regulation. While shown to be a valuable approach, the expected value approach is difficult to quantify. My comments for this article relate to methods of obtaining better estimates. Consider the following in developing measures of benefits and costs:

(a) Much could be learned by converting the benefits of changing health status to monetary form. For example, changes in heart disease could be linked to changes in medical expenditures, work-loss days in the home/labor market, and losses due to premature mortality. Thus, benefits would be readily comparable to costs.
(b) Historical data that examines previous changes in quality by individual sellers and the market responses of competitors is useful for developing measures of the probability that competing firms will increase their quality.
(c) Some assessment of Ippolito and Mathios' spillover effects would also be useful in quantifying the expected value approach.

Summary

These papers are excellent efforts to tackle an important, yet difficult policy concern. Data that allows similar assessments in previously unexplored product markets would aide future research.