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主 論 文 題 名 : The Impacts of Health Claim Regulatory Systems on Consumer Evaluation of Food Products in Japan				
(内容の要旨) Purpose of the Dissertation <p>Packages of food products—like those of all other products—usually include messages regarding ingredients, features, and value proposition of the products. The value of food products can be related not only to primary wants for relieving hunger and thirst but also to high-order needs concerning nutrient intake and health promotion. When consumers are exposed to a health claim, such as “this food product will contribute to nutrient intake and the promotion for health,” they may be more likely to purchase the product—providing that they consider the message to be credible. It is important that health claims and nutrient information on food packages are credible. False or exaggerated claims may have serious consequences for consumers and may results in damage to the manufacturers’ brand equity. However, because nutrient intake and health promotion are “credence attributes” of food products (Nelson, 1970, 1974; Brunsø, Fjord, and Grunert, 2002), it is difficult for ordinary consumers to evaluate them, in contrast to “search attributes” and “experience attributes”.</p> <p>To solve this problem, in 1990, the U.S. government instituted the Nutritional Labeling and Education Act (NLEA) to regulate voluntary health claims and food labeling. Japan followed suit in 1991, implementing the Foods for Specified Health Uses (FoSHU) system. While the NLEA prohibits inaccurate claims that reference a specific disease, FoSHU is an individual product approval system that regulates product-specific health claims.</p> <p>The FoSHU system in Japan focuses on adjustment of the physical condition as the “tertiary function” of ordinary foods. Similar to drugs and functional foods, FoSHU foods are designated as having specified health-related uses, and are permitted to include one or more approved health claims on packages and in advertisements.</p> <p>It should be noted that, unlike foreign governments, the Japanese government allows FoSHU brands to utilize not only the approved health claims, but also the FoSHU Logo—a symbolic logo designed for FoSHU brands. In addition to general health-related information, such as ingredients and expiration dates, food brand managers are permitted to include these two items of information on the packages and in the advertisements for their FoSHU brands. Because there are no symbolic logos associated with foreign regulatory systems, no research has been conducted to examine regulated logos, such as the FoSHU Logo in Japan, on food brand packages.</p>				

Therefore, the first research question that should be answered in this dissertation was: While it has been found that U.S. consumers' perceptions of food healthiness are not affected by approved health claims, are Japanese consumers' perceptions of food healthiness affected by approved health claims when they were displayed alongside a symbolic logo? To answer the research question, the author conducts two studies in Chapter 3, and investigates empirically the influence of this unique regulatory system on consumer evaluation of food healthiness in Japan.

However, in 2015, after the author finished conducting the research that will mention in Chapter 3, Japan loosened the regulations and implemented a new health claim regulatory system named the Foods with Function Claims (FFC) system. The new system is not a licensing system, but rather a notification system regulating health claims on food products. Therefore, the FFC notification system seems to be beneficial for food manufacturers, because it makes approval easier, shortens product development time, and reduces the introduction period of a product, compared with the FoSHU approval system. In addition, there is another important difference between the two systems. No such logo or marking as FoSHU system has been introduced for FFC-approved products.

Therefore, the second research question that should be answered in this dissertation was: While it has been found that Japanese consumers' perceptions of food healthiness not affected by approved health claims before the introduction of the new system without a logo, are they affected by approved health claims in the current dual health claim regulatory system era? To answer the research question, the author conducts two more studies in Chapter 4, and investigates empirically the influence of the dual health claim regulatory system on consumer evaluation of food healthiness in Japan. Despite the existence of two health claim systems, there have been no studies on the effect of the FoSHU approval system on consumer perception since FFC implementation. In addition, the efficacy of the two systems has not been compared. Therefore, there is a need to examine and analyze the dual regulatory system currently in place in Japan to determine comparative effectiveness.

After discussing various effects of the health claims and the symbolic logo on consumer perception of food healthiness in Japan, the author will focus on the marketing impacts of health claims based on the current discussion regarding the regulatory focus theory. What is the most effective way to conduct the marketing communication for managers who have already decided to launch a functional food brand? To answer the research questions, the author examines the effects of health claim framing and individual difference in "regulatory focus" to explore how these factors affect consumer evaluation.

Finally, the dissertation ends with the overall discussion, implications, and limitations and future research.

The Impacts of the FoSHU System on Food Evaluation: 2004 and Before

Study 1-1: Internal effects of health claims and the symbolic logo on perceived healthiness of FoSHU food brands in Japan

In Study 1-1, the author examines Hypotheses 1-1a, 1-1b, and 1-1c regarding the internal effects of the two factors: qualified health claims and the symbolic logo. Internal effects indicate that the information on the healthiness provided by a FoSHU brand positively affects consumer evaluation of the brand directly. In this context, the author investigates the different roles of health claims and the symbolic logo. A 2 (presence/absence of the symbolic logo) x 2 (presence/absence of the health claim) between-subjects factorial design was used for this study.

H1-1a: The FoSHU logo has a main effect on food healthiness perceptions of the FoSHU brand.

H1-1b: Health claims have no or less main effects (or relatively small effects) on food healthiness perceptions of the FoSHU brand than health claims.

H1-1c: The FoSHU logo and health claims have an interaction effect on food healthiness perceptions of the FoSHU brand.

Study 1-2: External effects of health claims on the perceived healthiness of non-FoSHU food brands in Japan

In Study 1-2, the author examines Hypotheses 1-2a and 1-2b regarding the external effects of health claims. External effects suggest that the information on the healthiness provided by a FoSHU brand positively affects consumer evaluation of other brands in the same product category and, in turn, consumer preference of the brand-in-question indirectly. In this context, the author investigate a role of health claims, as well as the similarities between the packaging of FoSHU and other non-FoSHU brands. A 2 (presence/absence of the FoSHU food) x 2 (Non-FoSHU food with a similar package or Non-FoSHU food with a dissimilar package) between-subjects factorial design was used for this study.

H1-2a: Health claims of FoSHU brands have external effects on food healthiness perception of non-FoSHU brands in the same category.

H1-2b: The external effects of FoSHU brands on non-FoSHU brands are stronger when they are similar in packaging.

The Impacts of the Dual Health Claim Regulatory Systems in Japan on Food Evaluation: 2005 and After

Study 2-1: Internal effects of health claims and the symbolic logo on the perceived healthiness of FoSHU food brands in Japan • II

In Study 2-1, to examine Hypotheses 2-1a, 2-1b, and 2-1c, the author utilized a 2 (presence/absence of the symbolic logo) x 2 (presence/absence of the health claim) between-subjects factorial design like the previous chapter. The presence/absence of the symbolic logo is related to two health claim regulatory systems in Japan: the FoSHU system

(presence of the symbolic logo) and the FFC system (absence of the symbolic logo). The presence or absence of a health claim is related to the type of approval for the food brand (FoSHU or FFC brand) compared to unapproved brands in the same category.

H2-1: The influence of health claims and the FoSHU logo have not changed since the implementation of the FFC regulatory system.

- (a) The FoSHU logo has the greater effect on the healthiness perception of the food products than health claims.
- (b) Health claims have little effect on the healthiness perception of the food products.
- (c) The FoSHU logo and health claims interact to affect the healthiness perception of the food products.

Study 2-2: External effects of health claims on the perceived healthiness of non-FoSHU food brands in Japan • II

In Study 2-2, to investigate Hypothesis 2-2a and 2-2b, the author utilized a 2 (function attribute: brand/category) x 2 (evaluation target: functional/non-functional food) mixed factorial design.

H2-2a: Health claims affect consumer perceptions of competing food brands with similar packaging when the health benefits are attributed to the product category.

H2-2b: Health claims do not affect consumer perceptions of competing food brands with similar packaging when the health benefit is attributed to the brand.

Exploring the Effective Health Claims

Study 3

In Study 3, to examine Hypotheses 3-1, 3-2a, and 3-2b, multivariate analyses are conducted. First of all, an exploratory factor analysis is conducted to extract some factors from twenty-six items of “functional foods and health consciousness”. Then, using the factor scores as a dataset, a cluster analysis is conducted to classify 1,258 respondents into some clusters to identify promotion- and prevention-focused customer clusters. Finally, the two kinds of customer clusters are compared in terms of which type of marketing message (aspire vs. vigilant message) is preferred.

H3-1: There are promotion- and prevention-focused potential customers of functional foods.

H3-2a: Promotion-focused potential customers evaluate functional foods more favorably if the functional foods are advertised with aspire marketing messages.

H3-2b: Prevention-focused potential customers evaluate functional foods more favorably if the functional foods are advertised with vigilant marketing messages.

Overall Discussion

First of all, with the FoSHU system, Japanese government had controlled all health claims on packages of food products for the first time in the world since 1991. Studies 1-1 and 1-2 regarding the effects of the FoSHU system on healthiness perception was conducted with data collected in 2014, before Japanese government loosened the regulations and implemented a new health claim regulatory system. The author examined various effects of two licensing factors—health claims and “FoSHU logo”, which can be appeared on packages only with permission under the FoSHU system.

The results showed that food evaluations are affected by the FoSHU logo, indicating that, with the symbolic logo, FoSHU foods can be successfully differentiated from non-FoSHU foods. In contrast, food evaluations are not affected by health claims—health claims have external effects on evaluations of non-FoSHU products in the category if both FoSHU and non-FoSHU products have a similar package.

Currently, there are two health claim regulatory systems in Japan: the Foods for Specified Health Uses (FoSHU) approval system implemented in 1991 and the Foods with Function Claims (FFC) notification system implemented in 2015. Thus, the author conducted two more studies, Study 2-1 and Study 2-2, and investigated the impacts of the dual systems in Japan on consumer perceptions of healthiness.

The results showed that health claims have stronger impacts on healthiness perception if the health benefits of the food brand are attributed to the brand itself, rather than to the product type. For products where this is true, the new FFC system is preferred by the decision makers and brand managers. However, if consumers attribute health claims to a product category have little effect on healthiness perception of the food brand. Therefore, the FoSHU system is more useful, as it can help consumers easily differentiate healthy foods from foods with few health benefits.

Finally, the author conducted an additional study, Study 3, and investigated consumer preferences of marketing messages on functional foods. The results showed that functional food consumers can be divided into two clusters, promotion- and prevention-focused customers, and that the former prefers aspire messages, while the latter prefers vigilant messages.

Implication

Although there are many studies regarding the impacts of health claims on food evaluations, they have assumed only foreign regulatory systems and, therefore, have not examined the effects of licensing logos. Also, because Japanese approval system is dissimilar to any foreign regulatory systems, the effects of health claims in Japan are different from those in any other countries. By analyzing various effects of Japanese health claim regulatory systems on consumer evaluation of food healthiness, the dissertation contributes to a better understanding of the impacts of the public policy and food marketing on consumer behavior.

For managers of food brands approved for a specified health use, the findings of the dissertation imply that they should place great emphasis on the symbolic logo that indicates that the brand is approved for a health use. Health claims can be effective if they associated with the FoSHU logo. Brand managers should consider product differentiation in terms of licensing factors as well as package as a whole.

Regarding the attribution of the specific health claim, the findings of the dissertation imply that if consumers attribute a specific health claim to the product category rather than the specific brand, using health claims as a form of sales promotion may actually boost consumer evaluation of competing brands. Therefore, it is better for the brand to obtain FoSHU approval to take advantage of the highly recognized logo. In contrast, if the health benefit is attributed to a specific brand, the food company do not need to spend large amounts of money gaining FoSHU approval, but should use the FFC notification system instead.

Finally, managers should carefully choose their marketing messages of functional food brands. Even if health claims are same (e.g., “reducing body fat”), marketing messages can vary. Aspire messages (e.g., “Best for persons who want to live a healthy life!”) fit promotion-focused customers’ needs, whereas vigilant messages (e.g., “Best for persons who are anxious for their help!”) fit prevention-focused customers’ needs. Managers should investigate the type of regulatory focus possessed by their customers to provide a proper marketing message.

For food policy makers, the findings of the dissertation indicate that even when they precisely regulate health claims of food brands by the law, health claims may not always lead to the desired consumer behavior concerning nutrient intake and health promotion. A symbolic logo should be used together with health claims to add credence to the claims.

Policy makers should also note that one of the reasons why health claims are not effective may be the fact that not all high-quality food brands in terms of the nutrient intake and health promotion functions are approved as foods for specified health uses. Policy makers should encourage manufacturers to apply for approval by reducing the cost of the process.

Finally, policy makers should also encourage functional food manufacturers to reexamine their marketing communication strategy if their current strategy is not successful. By letting manufacturers choose proper marketing messages, policy makers are able to achieve their goal, i.e., the diffusion of functional foods and, in turn, public health.