

Consumer Perceptions on Sustainable Practices Implemented in Foodservice Organizations in Korea

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ABSTRACT

Background/Objectives: Sustainable practices in foodservice organizations including commercial and noncommercial ones are critical to ensure the protection of the environment for the future. With the rapid growth of the foodservice industry, wiser usage of input sources such as food, utilities, and single use packaging should be reconsidered for future generations. Therefore, this study aims to investigate the customer's perceptions on sustainable practices and to identify the relationship among sustainable practices, social contribution and purchase intention.

Subjects/Methods: The study was conducted using content analyses by reviewing articles on sustainable food service practices published domestically and abroad. Thereafter, data were collected with a face-to-face survey using a questionnaire and analyzed with factor analyses and multiple regressions.

Results: Sustainable practices classified with factor analysis consisted of 6 dimensions of green food material procurement, sustainable food preparation, green packaging, preservation of energy, waste management, and public relations on green activity, with a total of 25 green activities in foodservice operations. Consumers were not very familiar with the green activities implemented in the foodservice unit, with the lowest awareness of "green food material procurement (2.46 out of 5 points)", and the highest awareness of "green packaging (3.74)" and "waste management (3.28)". The factors influencing the perception of social contribution by foodservice organizations among 6 sustainable practice dimensions were found to be public relations on green activity ($\beta = 0.154$), waste management ($\beta = 0.204$) and sustainable food preparation ($\beta = 0.183$). Green packaging ($\beta = 0.107$) and the social contribution of the foodservice organization ($\beta = 0.761$) had strong relationships with the image of the organization. The purchase intentions of customers was affected only by the foodservice image ($\beta = 0.775$).

Conclusions: The results of this study suggest that sustainable practices by foodservice organization present a good image to customers and increase the awareness of valuable contributions that benefit the customer as well as the community.

Keywords: Sustainable practices; Food service; Purchase intention; Image; Social contribution

INTRODUCTION

Recently, concerns about sustainable practices in foodservice have been on the rise. According to the National Restaurant Association in the United States, foodservice operations use enormous amounts of water, electronic, and gas energy [1]. With the large number of foodservice facilities in Korea, 796,384 foodservice business establishments and 43,557 foodservice institutions in 2013 according to the Ministry of Drug and Food Safety [2], its ripple effects on the economy are considerable. In the United States, the sales volume of the foodservice sector reached \$683.4 billion in 2014. In Korea, the sales volume of the non-commercial foodservice industry was reported to be approximately 18.9 trillion

won in 2012. While that of the commercial foodservice sector totalled about 68 trillion won [5]. Considering the sales volume of foodservice operations, it is expected that the quantity of input resources used for food productions (e.g., food material, packaging, energy, water) will continue to increase.

Given the steady growth of the foodservice industry, sustainable management in restaurants is expected to play a critical role in ensuring the protection of the environment for the future. Sustainability is defined as "the ability to meet the needs of today without compromising the ability of future generations to meet their needs. According to guidelines released by the U.S. Environment Protection Agency, sustainability efforts were suggested in the following four dimensions: (1) the built

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environment; (2) water, ecosystems, and agriculture; (3) energy and the environment; and (4) materials and toxins. With these guidelines, the National Restaurant Association (NRA) has set sustainable standards for restaurants. Sustainable management is a combination of sustainable development and corporate social responsibility. In the 1987 report titled "Our Common Future", sustainable development was described as the activities of an organization that promote corporate value by ensuring a competitive edge for the organization and generates continuous outcomes in terms of economic, environmental, and social perspectives [3]. Meanwhile, corporate social responsibility refers to the intention of business organizations that do the right things and contribute to the society beyond the requirements of legal and economic needs. In addition, green management, which is a term widely used alongside sustainability, is the effort by an organization to take social and ethical responsibility in conserving resources and energy and using them efficiently to minimize carbon dioxide gas emissions and environmental contamination. Since the declaration of the Kyoto Protocol, a series of research has been conducted to set the standards of sustainable practices and to investigate consumer norms and purchase intentions related to foodservice operations in Canada, EU (European Union), and the US. In Korea, research on setting and reviewing sustainable practices in foodservice operations has been limited. In addition, previous studies stated that customer education and the involvement of top management play critical roles in the accomplishment of sustainable practices within the foodservice sector. However, most foodservice organizations have given little attention to customer education and customer involvement in their sustainable practices. Therefore, this study aims to investigate the awareness of customers about the sustainable practices of the foodservice organizations they patronize and to identify the relationship between sustainable practices and customer purchase intention, foodservice image and social responsibility.

SUBJECTS AND METHODS

Study design and subject

Face-to-face surveys were used to collect data. Convenience sampling was used to select the foodservice facilities and customers. Investigators visited the foodservice institutions of managers willing to participate in the survey. The foodservice facilities included schools, universities and offices in Seoul and Gyeonggi province. One foodservice organization in office operated with a complex format including contracted franchises or independent outlets in addition to the foodservice operation. The questionnaire was administered through face-to-face surveys with consumers who were willing to participate voluntarily and the questionnaire was collected immediately after the survey was completed. Data from a total of 262 respondents were used for the analysis. The study was approved by the University's Institutional Review Board.

Contents of questionnaire

The survey was conducted from August 20, 2014 to March 10, 2015 with a 38-item self-administered questionnaire. Based on the literature review, the questionnaire was designed to contain 3 sections: demographic variables (5 items), the perception of customers regarding sustainable practices (25 items), and contributions and image of the foodservice organization that implemented sustainable practices including the purchase intention of consumers (8 items). The questions on sustainable practices in

the foodservice industry were adopted from the Green Restaurant Association (GRA) [9], the study by Wang et al. [2] in Taiwan, and the NRA guidelines on sustainable practices in the United States. Sustainable practices, consumers' beliefs in the foodservice organization's sustainable practices, and the purchase intentions of consumers regarding organizations that implemented sustainable practices were adopted from previous studies. The respondents rated their perceptions of organizations' sustainable practices, contributions, and image as well as their purchase intention with a 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the section for the customer's perception of sustainable practices provided by the organization, an option for no idea about sustainable activities was included but was assigned no score.

Statistics analysis

Data were analyzed with the Statistical Package for Social Science (SPSS version 15.0, SPSS Inc. Chicago, IL). Factor analysis, mean, standard deviation and multiple regressions were calculated for the analyses. Factor analysis was conducted with varimax rotation methods.

RESULTS

Demographic profile of the respondents

A total of 262 out of 265 participants completed the questionnaire. It shows the general characteristics of the respondents. Most of the respondents were in their twenties were classified into 6 dimensions: green food material procurement, sustainable food preparation, green packaging, and preservation of energy, waste management, and public relations on green activity. Even though the criteria for "disposable food service items for bio-based materials" and "occupancy sensors-restrooms, office and storage closets" under the preservation of energy dimension and "reuse office materials and waste reduction" under the waste management dimension showed lower factor loading values, they were not removed because previous studies [7,8,18] provided evidence for those criteria. Consumers assigned lower scores to the dimensions of "green food material procurement" (2.46 out of 5 points) and "public relations on green activities" (2.70). In contrast, they assigned higher scores to "green packaging" (3.74) and "waste management" (3.28) by the University's Institutional Review Board.

Benefits and foodservice image of the sustainable practices of foodservice organizations

From the factor analysis, 7 items were grouped into two dimensions named social contributions of foodservice industry and image of foodservice industry. Purchase intention was rated with one question item. Customers rated the sustainable practices of foodservice organizations at somewhat lower than the average level of their social contribution (2.99 ± 0.87) as well as image (2.91 ± 1.06). Customers believed that their foodservice providers implemented an average level of sustainable practice, were concerned about the average level of customer health and viewed their foodservice providers as contributing less to the environment and community development. They also rated their foodservice provider's image, confidence and work performance as average. Lastly, they reported average levels of purchase intention for the meals provided by the foodservice organizations (3.09 points).

The effects of sustainable practices by foodservice organizations on purchase intention, foodservice image, and contribution

To identify the relationship between sustainable practices by foodservice organizations and the contributions, image and purchase intentions for the foodservice provider, multiple regressions were analyzed using the stepwise method (Table 5). First, social contributions to the environment, customer health or to the community by the foodservice organization received a fairly low score. Among the 6 dimensions of sustainable practices, the factors influencing the social contributions of the foodservice organization were public relations on green activity ($\beta = 0.154$), waste management ($\beta = 0.204$) and sustainable food preparation ($\beta = 0.183$). Namely, green food material procurement, green packaging, and preservation of energy had no influence on the perception of social contributions by foodservice organizations. Secondly, customers of foodservice operations rated the image of the organizations at 2.91 out of 5 points, which is similar to previous studies. Only two factors, green packaging ($\beta = 0.107$) and the foodservice organization's social responsibility ($\beta = 0.761$), had strong relationships with the image of the organization. Lastly, our study showed that the purchase intention of the customers was affected by the image of the foodservice organization ($\beta = 0.775$). Benefits and foodservice image of the sustainable practices of foodservice organizations.

DISCUSSION

Since the announcement of the Kyoto Protocol in 2005, sustainable development has been a keyword worldwide and has served as an important principle for managing organizations abroad. In Korea, limited studies have been conducted to study sustainable practices in the foodservice sector. Moreover, few studies have been conducted to set the criteria for evaluating sustainable practices in the foodservice sector, despite the large market in Korea. Thus, this study attempts to propose the criteria for sustainable practices by foodservice organizations, to assess the perception of customers regarding sustainable practices by the foodservice organization, and to identify the relationships among food service image, social contribution and sustainable practices. Following literature reviews, sustainable practices of the foodservice sector were categorized into 25 standards with 9 dimensions: sustainable food ingredients, sustainable preparation of food, recycling food service items, water efficiency, energy efficiency, lighting, waste reduction, chemical reduction, and public relations on green activities in foodservice operations. One study of 'going green' practices implemented in the hospital food services sector identified these practices as focusing on buildings and equipment, waste management, food and non-food suppliers, procurement, and energy-saving practices. The GRA, which is a non-profit organization in the United State that provides certification for restaurants to become more environmentally responsible, suggested standards categorized into 7 dimensions: energy efficiency, water efficiency, waste, recycled and bio-based disposables, sustainable furnishings & building materials, sustainable food, and chemical and pollution reduction. In Taiwan, green management standards for food service were developed with the application of green chain management. Three dimensions were included in the standards: (1) green foods, (2) green environment and green equipment, and (3) green management and social responsibility. Nine sub-dimensions and a total of 76 standards were set for existing restaurants and 81 criteria for new facilities. "Mitheyou" is a policy implemented domestically. It is somewhat different from the sustainable certification criteria abroad but is partially linked with sustainable management in the foodservice sector. was developed by the Chungcheongnam-do government

and is one of the local food policies aimed at accomplishing the Local Circulating Agriculture and Food System [24]. The criteria consist of taste (25 points), purchasing volume and price of local produce (40 points), employee service (15 points), facility sanitation and environment (20 points), and miscellanea (5 points). Through factor analysis, our study identified sustainable practices in 6 dimensions: (1) green food material procurement, (2) sustainable preparation of food, (3) green packaging, (4) preservation of energy, (5) waste management, and (6) public relations on green activity. Consumers were not very familiar with the sustainable practices deployed by foodservice operations, especially in the dimension of "green food material procurement" and "public relations on green activity". "Green packaging" and "waste management" received higher scores but still needed improvement. These results were attributed to the low promotion of sustainable practices by foodservice facilities. Therefore, it is necessary to set the standards for sustainable practices in the foodservice sector and to develop action plans for participation by the entire industry as well as consumer participation. Our study determined that the dimension with the lowest score was the public relations on green activity. However, this dimension was the determining factor affecting the perception of the social contribution by the foodservice organization. Thus, it is important for managers in charge of marketing for commercial and non-commercial environment-friendly foodservice providers to develop active plans for potential customers to engender a positive attitude toward sustainable foodservice organizations. Consumer attitudes regarding commitment to sustainable practices as well as their awareness of sustainable practices are important factors for successful implementation. Thus, foodservice organizations should educate employees and promote their on-going sustainability efforts to their customers. Options to practice sustainable management internally are as follows: (1) purchase of local foods or sustainable foods (2) Energy audits through tracking and assessing the use of energy and water (3) Installing light sensors in storage areas and other areas with limited activities (4) use of smart kitchens and energy conservation by replacing outdated equipment, and (5) use of green packaging. On the other hand, options to activate sustainable practices externally include providing information on sustainable practices to customers and encouraging them to participate [4]. For example, through an education bulletin in the dining area, managers can provide hands-on education for customers to obtain useful information on and to take part in sustainable activities. Contrary to our expectations, this study did not indicate that the purchase intention of customers is affected by sustainable practices by the foodservice provider. Only the foodservice image was found to have an effect on purchase intention. This result was not consistent with previous studies reporting that consumers' perceptions of sustainable practices by foodservice organizations was a powerful driver affecting their intentions to revisit a restaurant, especially for environmentally conscious consumers. In the research predicting consumer intention regarding eco-friendly restaurants with an extended theory of reasonable behaviors, attitudes, subjective norms, environmental consciousness and past behavior were highlighted as precedent factors affecting the consumer's purchase intentions [6]. The study revealed that the extended reasonable behavior model would be useful for estimating consumers' intentions given a choice of environmentally friendly restaurants. Another study suggested that sustainable behaviors related to recycling, environmental preservation, and environmental purchasing had a positive effect on consumer purchase intentions.

In conclusion, due to the resources used in the foodservice sector, the activities of foodservice organizations have a strong effect on environmental protection efforts. Therefore, foodservice managers in commercial as well as non-commercial foodservices organizations should emphasize sustainable practices, from purchasing to meals service. In addition, active plans to save energy and the global environment by foodservice organizations should be developed to enable consumers to participate and experience these activities including green purchasing activity, waste reduction methods, etc. This study found that consumers had little awareness of sustainable practices deployed by foodservice operations. The dimensions of public relations on green activity, waste management and sustainable preparation of food influenced the perception of social contributions by the organization. Green packaging and social contributions by foodservice organizations had strong relationships with the image of the organization. Thus, foodservice facilities should actively promote programs related to social responsibilities and develop action plans for the entire organization as well as for consumer participation. Now is the right time for multipronged efforts providing proper information on suitable sustainable practices by foodservice organizations.

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