

How is the Japanese Food Image Influenced by the Radioactive Contamination: Using Structural Equation Modeling

Saeran Doh (Miyagi University)

This paper examines the relationship between Japan's food image and purchase intentions among the Korean consumers after the Great Earthquake Disaster in East Japan which occurred on March 11, 2011. What Koreans think of Japanese foods and how they are affected by the radioactive contamination resulting from the nuclear accident is the objective of this research. Based on the framework of the country-of-origin (COO, Nagashima 1970,1977) concept and the method of covariance structure analysis (AMOS), this paper examines the influence of perceived psychological, social and economic risks (Bauer 1960, Cox 1967, Jacoby and Kaplan 1972) of Japanese foods on purchase intentions.

1. Introduction

Very few research on how consumers' perceived risks (psychological, social, and economic risk) caused by the radioactive contamination influence consumers' purchasing intentions has been conducted yet. However, the nuclear power plant accident in Fukushima Japan in 2011 suddenly created this unhappy problem among Asian countries which had been importing Japanese foods and products. Now some countries have reduced their imports of Japanese foods or have temporarily stopped them. Examining the consumers' perceived risks of Japanese foods and their impact on purchase intentions among the Korean consumers is thought to be a very relevant research subject.

2. Study objectives and Hypotheses

The study objectives are as indicated below:

- 1) to investigate and analyze the relationship between perceived risks on Japanese food products and services after the March 11 disaster and purchase intentions .
- 2) to establish the direct relationship between the country-of-origin (Bilkey and Nes 1982, Samli 1995, Al-Sulaiti and Baker 1998) and the purchase intentions of consumers.
- 3) to develop programs and policies to cope with the ill-effects of the March 11 disaster

Accordingly, we developed the following hypotheses.

- Hypothesis 1 : Perceived risk on food influences its food image negatively.
 Hypothesis 2 : Food image influences purchase intentions positively.
 Hypothesis 3 : Perceived risk on food influences COO positively.
 Hypothesis 4 : Negative COO influences the purchase intentions negatively.
 Hypothesis 5 : Perceived risk on food influences purchase intentions negatively.

3. Method

In this research, we conducted an online survey from 264 Koreans who lives in Seoul, Korea. The research was conducted online with 131 male and 133 female respondents ages 20 to 60 all residing in Seoul during the period of March 5-9, 2012. We used AMOS 21 to test the relationships between each constructs. Each variable was measured by using 7 point Likert scale. The reliability and validity of the variables were examined prior to the testing of hypotheses. Reliability is the degree of consistency in the measured scores. Validity is directly assessing whether or not the concept is measured correctly. We have 4 constructs in this research: Japanese food image, perceived risk, country of origin, and purchase intentions.

4. Results

Each construct reliability is as follows: perceived risk is 0.862, Japanese food image is 0.884,

country of origin is 0.716, purchase intentions is 0.897. Each construct's reliability is above 0.7. Average Variance Extracted for each construct is as follows: perceived risk 0.676, Japanese food image; 0.657, country of origin: 0.557, purchase intentions, 0.813. Validity is also at an acceptable level since they are all more than 0.5. The model's overall fitness is also good: GFI :0.954, AGFI:0.922, CFI: 0.926, RMSEA :0.052. All hypotheses are supported at 1% significance level as shown in the table below:

Table 1: Results

| | Hypothesis | Results |
|----|---|----------|
| H1 | Perceived risk on food influences its food image negatively. | -0.24*** |
| H2 | Food image influences purchase intentions positively. | 0.43*** |
| H3 | Perceived risk on food influences COO positively. | 0.49*** |
| H4 | Negative COO influences the purchase intentions negatively. | -0.26*** |
| H5 | Perceived risk on food influences purchase intentions negatively. | -0.38*** |

5. Implications

To reduce the perceived risk (psychologically, socially, economically) for consumers is so important to recover the Japanese food image. In this light, constant information about radioactive contamination which is reliable is necessary to inform the consumers of their safety psychologically, socially and economically. Information on radioactive contamination that could affect how consumers perceive Japan's food image should be shared to domestic as well as foreign consumers. Based on the country-of-origin theory, made-in-Japan's food image should be developed more than before the disaster is one of the biggest issues in the Japanese agricultural business.

References

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