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# The Effect of Brand Trust of Home Meal Replacement on Repurchasing in Online Shopping

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## Abstract

**Purpose** - This study aims to investigate the effect of brand image and trust of a home meal replacement (HMR) industry on customer satisfaction and repurchase during online shopping.

**Research design, data, and methodology** – With 217 questionnaires, this study was conducted by AMOS 20.0, and the Structural Equation Model (SEM) as statistical method was used for examining the hypotheses in this study. Factors such as brand image and brand trust in customer shopping for HMR products online were tested, and relationships between satisfaction and repurchase were studied.

**Results** – Brand image and brand trust in terms of online shopping for HMR were found to affect satisfaction significantly; in addition, the path where satisfaction leads to repurchase was found to be significant. However, brand image and brand trust for HMR in online shopping differed depending on customer age groups. The path-coefficients from brand image of HMR in online shopping to satisfaction were more significant in the older age group; meanwhile, the path-coefficient from brand trust to satisfaction was significant in the younger age group.

**Conclusions** – Results of the study suggested the importance of the attributes for buying HMR products online and provided meaningful implications of difference between age groups when they choose the products.

**Keywords:** Home Meal Replacement, Online shopping, Brand image, Brand trust, Age group.

**JEL Classifications:** D11, D12, L66, L81.

## 1. Introduction

The size of the home meal replacement (HMR) food market is about 1.7 trillion South Korean won, which has grown 51% over the past five years (Ministry of Agriculture, Food and Rural Affairs, 2017). The reason for the rapid growth of HMR foods is as follows: single households, single consumers who eat meals or drink alcohol alone, increased number of women who participate in economic activities, leisure activities in the five-day work system, and

increase in population. In addition, increase in elderly population, increase in economic levels, and increase in quality of the residential culture in apartment buildings all contribute to the rapid growth of HMR foods as consumers are trying to get convenient satisfaction during their busy daily life by utilizing a service culture where one can order HMR products online and enjoy delivered foods. Consumer needs have increased the demand for HMR foods (Seo, Choi, & Lee, 2011), as customers will take more time to enjoy leisure while improving their value of life, especially recognizing that the time and effort necessary to cook food is not efficient. As such, the demand for HMR food that is fast, convenient, and guaranteed to be nutritious continues to increase.

Due to the development of Internet technology, the life pattern of consumers has changed rapidly in recent years, and there has been a big change in purchasing behavior. Through the Internet, customers no longer have time and space restrictions, allowing them to easily purchase products, and the scope of acquisition of large-scale product

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information and purchase of products has been expanded. Along with this, consumer behavior and consciousness structures are rapidly changing, and consumption patterns are pursuing individuality, diversification, and simplification. According to National Statistical Office in 2016, the total online shopping transaction amount was about 5.2 trillion, an increase of 22.3% over the same period the previous year. Thus, despite the growth of online shopping, the current transaction amount of edibles is 4.9 trillion won in online shopping, accounting only for about 10% of the total transaction amount, with agricultural and livestock products amounting to 1.1 trillion won, accounting for 2.3% of the total amount of transactions. As such, the proportion of foods purchased in the online shopping market is still relatively low.

According to the Korea Rural Economic Research Institute Food Consumption Behavior Survey (2015), the percentage of households that purchase food online is 19%, while 81% purchase food offline. Contrary to the overall scale of the rapidly growing online market, the proportion of the online food market might still be small and recognition of food customers shopping online would not be positive (Wolfenbarger & Gilly, 2001).

HMR has become increasingly popular with consumers who pursue convenience, and the number of Internet shopping malls offering such products is growing. Given the sustainable growth of Internet shopping, the importance of the web cannot be overlooked as a distribution channel for HMR foods. It is expected that rapid growth will continue piggybacking on changes in the lives of contemporary people pursuing convenience (Cho & Han, 2004). When purchasing a product, a consumer indicates a pattern of making purchase decisions based on the brand image in their memory rather than making decisions based on the primary attributes and product characteristics of the product itself. Recently, many companies have begun to emphasize the importance of corporate brand image by shifting to brand competition by offering products that compete with themselves. Therefore, companies must demonstrate the identity of their products and manage corporate branding with the highest priority, beyond producing and supplying high quality products. The development of communication facilities, logistics systems, and online shopping is growing rapidly, and online HMR foods have the advantage of being able to quickly and easily receive orders, further expanding the online channel (Yang & Cho, 2015). In this way, as the rapid growth of the HMR market and the scale of the online shopping market expand, it is judged that the online HMR commodity market is very likely to grow, but the need for research on HMR products has increased as the existing research is inadequate. Therefore, based on previous research, directions for sales strategies and suggestions for

online management companies of HMR products will be made in this research by analyzing the influence of brand image and reliability of HMR companies in the online market based on the degree of re-purchase.

## 2. Theoretical Background

### 2.1. HMR and Online Shopping

HMR is defined as "the concept that is located at the highest level in the system of readiness convenience food so that it can be eaten by eating homemade forms outside the store," and the Restaurant & Institution of the United States defines HMR as, "Food completely cooked, food that can substitute a meal with food requiring heating" (Gibson, 1999). Lee, Jung, and Yang (2005) through the Delphi survey, defines HMR as a "household dietary substitute meal" and more definitely as "a food that is sold outside the home and purchased fully cooked or semi-cooked foods cooked easily at home to eat." Kim and Ko (2016) defines it as a new sales method that enables online and commercial transactions that were only possible in the real world to enable added value to be created in the virtual world. Hoffman and Novak (1996) showed that Internet shopping is carried out via product exhibition, advertisement, and the Internet for commerce and contains price, characteristic data on products, and a collection of online retailers offering various products. Customers' purchasing behavior differed between online and offline shopping when they chose a product (Cha & Park, 2017; Cha & Lee, 2018; Cha & Noh, 2018).

### 2.2. Brand Image

Brand refers to a symbol, name, design, or a total combination thereof used to discriminate a service or product that a company sells from a competitor's brand. In addition, the brand has functions such as quality assurance, source display, and advertisement publicity (Cravens & Piercy, 2006). Brand image is created by combining brand-related associations with consumer's beliefs, which is defined as recognition expressed by a customer's brand association (Keller, 1998). Brand awareness plays a role instilling consumer confidence in companies and products. The fact that consumers recognize brands indicates the confidence and characteristics of the product as well as what the consumer is aware of when the product is put on the market. This indicates industrial material endurance for goods, and it has a very important meaning. The brand image forms the familiarity of trademarks, enabling

customers to select brands with strong power, increase possibilities for brands, increase affinity, and enable a high market share. When consumers are exposed to the same stimuli repeatedly, they feel affinity for the stimulus and have positive feelings without special evaluation of the products. Based on the preceding research, we will present the following hypothesis.

**H1:** The brand image of an HMR product in an online shopping mall would have a significant impact on satisfaction.

### 2.3. Brand Trust

Trust is defined in various ways based on previous research, but reliability is a very important concept in the field of marketing and has a positive impact on satisfaction (Goldsmith, Lafferty, & Newell, 2000). Brand trust is a social phenomenon occurring in complex and diverse relationships among people. Lee, Park, and Cho (2011) believes that consumer confidence in a brand means faith in the function of its products and services, and furthermore, consumer confidence is the trust that a customer has in the ability of the brand to continuously provide actual functions. Brand trust is an important element of the relationship between consumers and businesses as customers tend to make better use of trusted brands (Xie & Peng, 2011). Kim, Han, and Kim (2002) define the extent to which customers believe the corporation will act to give customers the best value as the brand's trust. Chaudhuri and Holbrook (2001) define brand trust as customers believing that the brand has the ability to carry out its functions. Brand trust is formed from the brand image recognized by customers and acts as an intermediary to induce customers' future buying behavior (Esch, Langner, Schmitt, & Geus, 2006). That is, when customers feel that a brand builds existing brands and other images, consuming these brands will provide consumers with a special experience, and they will trust the brand (Ahn, Lee, & Min, 2005). Together with the definition from previous research, brand trust is an expression of a strong will that can show the constant reliability of the product when the consumer intends to purchase the brand.

**H2:** The brand trust of HMR products in an online shopping mall would have a significant impact on satisfaction.

### 2.4. Satisfaction and Repurchase Intention

Oliver (1980) found that when satisfied with a product purchased, consumer attitudes were affected after purchase,

and these patterns influenced the intent of repurchasing. In relation to satisfaction and repurchase intention, most prior studies show an active relationship (Cha & Park, 2014; Cha & Seo, 2018).

Parasuraman, Zeithaml, and Berry (1994) said consumer satisfaction is the state where customer trust continues as brands repeat products and services in response to consumer desires and expectations. Kotler (2000) said that satisfaction can be displayed by comparing consumer expectations with the performance they receive from goods. In other words, consumers enjoyed satisfaction when the result of the purchase exceeds the expected level; whereas, they are not satisfied unless the results of the purchase reach their expectations. Homburg, Koschate, and Hoyer (2005) stated that satisfaction is an assessment after consumption compared to the quality of goods the consumer expected before consuming. Oliver (1993) presents satisfaction as a predictor of repurchase intent in research related to repurchase intention. As a result of these previous studies, we found that customer satisfaction has an important influence on repurchase intention.

**H3:** Consumer satisfaction in online shopping mall HMR purchases will have a significant impact on repurchase intention.

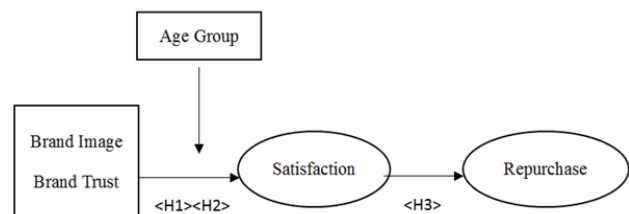


Figure 1: Research Model

## 3. Methodology

The selection of questionnaire was reviewed with reference used in previous research data, revised, and supplemented in accordance with the present study. The questionnaire was conducted to verify the hypothesis of the research model. The questionnaire from former studies were revised for the purpose of the study. From October 1 to 25, 2018, the questionnaires were administered using on-line survey methods. A total of 217 questionnaires were collected, and after excluding 7 unreliable or incomplete responses, a total of 210 questionnaires were used for empirical analysis. The study was performed with the following analysis. First, exploratory factor analysis was conducted using Amos 22.0, among the measured variables,

to investigate the convergence and discriminant validity. Then non-compliant factors were eliminated, and the confirmatory factor analysis was conducted again using Amos 22.0. Thereafter, covariance structure model analysis was performed for the study. Of the total 210 respondents, 95 (45.2%) were males and 115 (54.8%) were females. Many respondents were in their 30s and 40s (46.2%); most of them were housewives (35.2%) and workers (26.7%).

## 4. Results

### 4.1. Evaluation

First, reliability analysis and validity analysis were performed in multiple items (Churchill, 1979). Exploratory factor analysis was performed to evaluate reliability and validity, and Cronbach's alpha was examined. Based on Eigenvalue 1, factors were extracted. The VARIMAX method was applied to the factor rotation method. Tables 1 shows the results of the analysis.

**Table 1:** Exploratory factor analysis

	Variables			
	Brand Image	Brand Trust	Satisfaction	Repurchase
ima01	.873			
ima02	.853			
ima03	.874			
ima04	.859			
tru01		.825		
tru02		.880		
tru03		.888		
tru04		.880		
sat01			.884	
sat02			.855	
sat03			.830	
sat04			.874	
rep01				.830
rep02				.870
rep03				.866
rep04				.840
Variance (%): Total 89.62%	24.00	23.43	22.18	20.00
Cronbach's Alpha	.946	.952	.969	.964

As shown in Table 1, Cronbach's alpha coefficients are all over 0.7, which confirms reliability (Nunnally & Bernstein, 1978). Exploratory factor analysis confirmed discriminant validity and convergence validity.

As shown in Table 2, the Average Variance Extracted and Composite Reliability satisfied the criteria proposed by Bagozzi and Yi (1988) (above 0.5 for AVE, above 0.6 for CR), and the factor loadings were statistically significant ( $p < 0.01$ ). The convergent validity was confirmed.

**Table 2:** Confirmatory factor analysis result

Variables	Measure	Standardized Regression Coefficient	CR	AVE
Brand Image	ima01	.965	0.948	0.819
	ima02	.903		
	ima03	.882		
	ima04	.867		
Brand Trust	tru01	.944	0.951	0.828
	tru02	.912		
	tru03	.909		
	tru04	.874		
Satisfaction	sat01	.904	0.970	0.890
	sat02	.948		
	sat03	.948		
	sat04	.972		
Repurchase	rep01	.978	0.964	0.870
	rep02	.971		
	rep03	.847		
	rep04	.929		

Table 3 shows the discriminant validity through correlation analysis. As shown in Table 3, the value of square root of AVE is larger than the correlation value outside the diagonal line in the related row and column, as a result. Then, the validity of the discrimination has been verified between the different constitutional concepts.

**Table 3:** Discriminant validity through correlation analysis

	REP	IMA	TRU	SAT
REP	0.933*			
IMA	0.749	0.905*		
TRU	0.865	0.736	0.910*	
SAT	0.813	0.736	0.772	0.943*

\*the square root of AVE

### 4.2. Research Hypothesis Verification

Using Amos 22.0, the research hypotheses were tested. Table 4 shows the results of hypotheses for the effects from Hypothesis 1 to Hypothesis 3. In conclusion, the hypothesis test on the main effect, brand image, and brand trust showed a significant influence on satisfaction. And satisfaction affects repurchase intention significantly. The results are shown in Fig. 2.

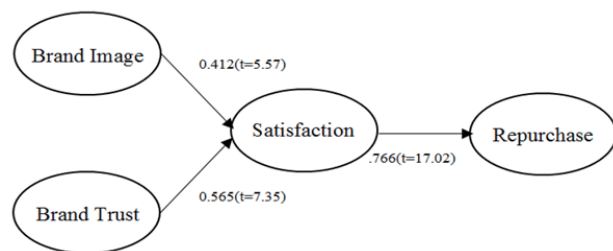


Figure 2: Results of research hypothesis

Table 4: Results of research hypothesis

Hypothesis	Paths	Path Coefficient	t value	Results
H1	Brand Image → Sat	.412	5.572***	Support
H2	Brand Trust → Sat	.565	7.349***	Support
H3	Satisfaction → Rep	.766	17.021***	Support

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001

### 4.3. Verifying the Moderating Role of Age Value

To examine the effect of age group on the satisfaction, the total sample (n=210) was first divided into the older age group of over 40's and the younger age group of under 30's, and the path coefficients were compared. After all, consumers whose ages are over 40's are more influenced by the brand image of HMR in online shopping, while consumers under 30's are more influenced by the brand trust of HMR in online shopping. This implies that older age group is more sensitive to the effect of brand image and younger age group is more sensitive to the effect of brand trust on consumer satisfaction. The results show that brand image and brand trust all have statistically significant effect on satisfaction in Table 5.

Table 5: Comparison of age groups (young and old)

	Standardized Regression Coefficient		Comparison Results	Chi-square increment	p-value
	Young	Old			
Brand Image → Satisfaction	0.279	0.622	young < old	4.812 (d.f.=1)	0.028*
Brand Trust → Satisfaction	0.844	0.372	young > old	5.326 (d.f.=1)	0.021*

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001

## 5. Conclusions

Although HMR products and online shopping markets are rapidly growing, it is true that the current proportion of HMR products is very low in online shopping markets. In this

research, we tested the hypothesis on the assumption that the brand image and reliability when purchasing HMR food online are satisfying and influence intention to repurchase. Therefore, to clarify the influence of brand image and brand trust on purchasing HMR foods and to understand satisfaction after purchase and the main purpose of repurchase intention, this study focused on consumers who use online shopping. As a result, the study is summarized as follows. First, it was found that the brand image of HMR food in online shopping malls has a significant positive influence on consumer satisfaction. Secondly, the reliability of the brand was found to have a positive effect on consumer satisfaction significantly when consumers purchase HMR food in online shopping malls. Third, consumers' satisfaction with purchasing HMR food in an online shopping mall proved to have a significant positive influence on repurchase intention. Fourth, the higher the age of consumers, the more important brand image is. The lower the age of consumers, the more important brand reliability is. Satisfaction levels were high when purchasing HMR foods online.

In order to activate HMR online sales, enterprises should be aware of corporate brand image and reliability based on age group, as well as specific publicity and marketing of enterprise foods. In order to further activate HMR online sales, it is necessary to prepare specific publicity and marketing methods of enterprise foods. In addition, companies must seek methods based on age group to be able to build corporate brand image and reliability. Consumers pursue convenience and save time according to changing lifestyle. Therefore, online purchasing of HMR products satisfies these two at the same time and is judged to have further growth potential. In this research, we had several limitations. Further study is necessary for the adjustment effect of age depending on the value of other consumption and the characteristics of purchasing behavior.

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