The Impact of the Selection Factors of HMR on the Attitude and Trust of Consumers: Focusing on the Consumers of 50 or Older

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Abstract: In this study, the researcher took note of the rapid growth of HMR, which is leading the dining industry due to the social changes, while the researcher verified the impact of the selection factors of HMRs upon the attitude and trust of the consumers. The findings of this study were as follows; First, the sub-factors of the HMRs, i.e. convenience, price, quality of the menu, and brand reputation. Of these, convenience and brand reputation had a significantly positive impact on the attitude of the target consumers of this study. Second, the researcher verified the mediating effect of consumer attitude in the influential relationship on the factors of HMR choices upon trust among consumers of 50 years or older. The findings were analyzed using the three-stage regression equation by Baron & Kenny (1986). It was shown that Stage 1 mediated the influential relationship from HMR choice factors upon trust. In Stage 2, convenience and brand reputation had a significant impact on trust, which was a dependent variable, while the third stage, to which the mediating variable (consumer attitude) was put, only one factor, that is, brand reputation, had a significant impact, while consumer attitude had a partial mediating effect in the influential relationship of brand reputation, which is one of the HMR choice factors, upon trust, while the mediating effect was full in the influential relationship between convenience, which was another HMR choice factors, upon trust. In the end, analyses showed that consumer attitude had a mediating effect in the relationship between HMR choice factors and trust.

Keywords: HMR Selection Factors, Consumer Attitude and Trust, Consumers Who Are 50 or Older

1. Introduction

Consumers today now desire a new food culture. At present, their demands can no longer be quenched with westernized diets or by dining out alone. Also, with the changes in the purchasing roles of men and women and the tendency of present-day consumers who wish to spend more time at work or in entertainment, the interest in a food culture that could provide a healthy diet and convenience at the same time has increased, and can be said to have resulted in the demands for home meal replacements [10].

The HMR has been a leading force in the dining industry, and has grown at a considerable rate with a large variety of available products. Now, they are expanding their scope of products to silver food and care food for seniors, along with high-quality and premium products. The interest in and growth of HMR is not limited to the South Korean market. The same trend can be observed in other markets around the world, making it a global one. The world market volume is expected to grow to 199 billion dollars by 2022 (KRW 232 trillion and 213.1 billion won) (Korea Agro-Fisheries and Food Trade Corporation, 2019). The tendency that can be observed today indicates that the dietary habits of today's consumers differ from what they were in the past. Amid social changes, the quality of life has increased with higher income. Korea Agro-Fisheries and Food Trade Corporation (2019) reported in its report, 'The Current Status of the Vertical Segments of Processed Food Products in 2019 -

Ready-to-Eat Products,' the key factors behind the growth of HMR included the enhanced technologies of manufacturers and the changes in the lifestyles of consumers. These new products provided enhanced tastes and quality. These ready-to-cook meals reproduced the tastes of dine-in restaurant foods with a minimal requirement in terms of time and tools, which increased the satisfaction level of HMR significantly. According to Future Population Estimation by Statistics Korea (2019) about 14.9% of the total population of South Korea was 65 years old or older in 2019, officially making South Korea an aged society. It is expected that the percentage would rise to 20.3%, approximately, by the year of 2025, making it an ultra-aged society. This means that the elderly will become a significant part of the total population, and, for the HMR industry, a major consumer group. As a result, many research efforts are in progress concerning the selection factors of HMR consumption among the elderly in order to develop elderly-relevant products. "Yoonjeong Jang reported that, as the selection factors of the elderly, hygiene, nutrition, and safety of additives [9]", while MiRyeong An·HyunSook Jang suggested several selection factors regarding dietary behavior patterns, such as taste-seeking, trend-seeking, and health-oriented tendencies [3]".

"Okkyung Ahn·SookEung Kim identified a group of selection factors regarding lifestyles, such as looking for good foods even if they come with a higher price, good company reputation, classy shop interior, and parking convenience, in addition to convenience and taste [5]".

In this study, the researcher intends to examine the impact of HMR selection factors upon consumer attitudes and trust among consumers age 50 or older, in preparation for an aged society, with a view to suggesting a desirable option for the elderly market, as the silver market will become the foundation for gigantic industries of the future. Thus, it is the purpose of this study to examine the impact of selection factors for HMR among the senior consumer group age 50 or older, namely convenience, price, quality, and brand reputation, upon their consumer attitudes and trust, by means of exploring the dining consumption behaviors of the said consumer group. The detailed objectives of this study are as follows:

First, to suggest the HMR selection factors preferred by consumers in the process of the HMR selection factors impacting the consumers' attitude and the factors that impact the selection of HMR by consumers;

Second, to examine the mutual causal relationship and marketing strategies by focusing on HMR selection factors and analyzing the valid influential relationship that impacts consumer attitudes and trust;

Third, to confirm the structural changes and highlight the importance of the consumers who are 50 years old or older, for each factor identified through the overall evaluation and analysis of consumers;

Fourth, to provide a conclusion and implications as a result of this study, facilitating the development of HMR products that address the needs of the consumers age 50 or older and developing a differentiated marketing method, with an understanding of the consumer behaviors of the said consumer group, eventually contributing to the development of the HMR retail industry and supporting the adjustment to a rapidly changing business environment.

Especially, this study highlights the fact that the consumers who are 50 or older increasingly consume based on the HMR selection factors, and it is expected that this trend will continue to proliferate. However, the number of existing studies on HMR selection factors involving consumers who are 50 or older is scarce.

Therefore, in this study, it is intended to examine the impact of HMR selection factors, which are convenience, price, quality of the menu, and brand reputation, upon the attitude and trust of the consumers who are 50 or older.

2. Theoretical Background

2.1. HMR (Home Meal Replacement)

HRM is defined as the top tier classification of the ready-to-cook convenience food market, and refers to the type of products that can be prepared and served hot at home or other off-premise locations [18]. Also, these products are served in a single-serving-sized containers as the main meal. It can be said that these products can replace the real, home-prepared meals in terms of nutrition, while taking much less time [17]. HMR literally translates into a 'replacement for a home-prepared meal' in Korean language. They refer to food products that can be consumed without any preparations or a simple, convenient heating process at home, which is the widely accepted definition of HMRs. They are semi-cooked or just reheated at home, and some can even be consumed without any preparations after purchasing [6].

In this study, HMRs are defined as food products that can be prepared with minimal efforts and consumed at home or in other places quickly. Based on the information on HMRs provided, the researchers examined the impact of HMR selection factors upon consumer attitudes and trust. The HMR selection factors are defined as shown in Table 1.

Table 1. HMR selection attribute definition.

Existing researcher	Selection attributes
Kwon Wonrim (2018)	Convenience, price, trend, food quality
Ahn Okkyung (2017)	Service factors, convenience factors, brand factors, product quality factors, and accessibility factors
Jeon Hayun (2017)	Taste of food, convenience factors, economic factors, and health pursuit.
Kim Choonghwan (2013)	Food convenience, food brand, food friendliness, food purchase, food quality
Jeong Rana et al. (2007)	The taste of the product, the description of the product, the hygienic quality, the freshness of the product, the appearance of the product, the discount product
Heo Sun-gwi (2007)	Price, appearance and packaging, convenience, positive experience, hygiene and quality of food
Data: Based on previous studies, researchers reorganize	

2.2. HMR Selection Factors

1) Convenience

In dictionaries, convenience is defined as the ease in using a product, making it readily accessible and appreciable. The concept of convenience emerged in product marketing research. It is a concept that is related to the amount of effort and time invested in purchasing the product, and rather refers to the general meaning of convenience related to the goods and services that are easily accessible to a person or an organization than the attributes or characteristics of a product. In addition, food industries explain convenience as the reduction or removal of the need for labor that is related to the preparation of food [15].

With more women continuing their careers after marriage, the food culture is shifting gradually, entailing significant changes in leisure activities, values, and dietary culture in general [4]. Therefore, a trend to seek convenience has settled in the dining culture, which became a new, growing trend in the food industries [12]. Convenience has shown to have a positive impact when HMRs are chosen. Analyzed that HMRs are chosen because of their convenience in consumption. Another study "Cassano, J. showed that the most important factors for consumers in choosing an HMR were convenience (50%) and the type of food (31%) [16]".

2) Price

Price is defined as the sum of the exchanged values for utilities obtained by owning and using a product or a service and refers to the monetary compensations issued in order to serve the needs and desires when a consumer purchases a product. In addition, consumers value the rationality of their choice, rather than seeking simply low prices regarding the values they seek in products, and they compare a candidate with similar products and depend on external information sources to evaluate the amount of utility in a product, and calculate a reasonable price.

The rationality of a price affects purchase behavior and serves as a factor to evaluate a product, making it an important factor in purchasing behaviors. As such, consumers' evaluation of prices differs based on their individual criteria, and their attitudes toward products also vary. They respond to a price based on the idea of reasonable prices, in consideration of their subjective price criteria [2].

3) Quality of the food

Quality refers to the nature of a product that satisfy the desires of consumers and the goals of consumption through the product, and indicates that the basic properties of a certain product is desirable [19]. "Won-gil Jo The concept of quality has expanded to include service life, durability, reliability, etc [11]".

For an HMR product to be more competitive than others, it would require an emotion-invoking brand and package design [8]. Based on the discussions so far, the quality of an HMR product could include not only functional factors, such as food menu, service, packaging, hygiene, safety, etc., but also other elements such as price, reliability, emotion, values,

aesthetics, etc., which are combined to constitute a general concept of quality based on personal, subjective attitudes. This can be a major factor in making an HMR product purchase choice.

4) Brand reputation

Brand reputation is defined as the collective belief of the consumers toward a company. In summary, it can be defined as a consumer's psychological construct that has been established due to a combination of various information factors related to a product, and the positive or negative feelings and emotions consumers have toward a brand of a certain company. For a company to become more competitive over others, differentiation can be a major factor. Specifically, securing differentiation through a brand can be one of the most potent strategies [6]. The brands of a business in recent times are serving not only as a means of identification from the products and services of its competitors, but also as an indicator of credibility of a product. As a result, brands have expanded to become a more specific and valuable concept [1].

Overall, a brand's credibility increases as customers become more satisfied with the brand. Therefore, a consumer who thinks that using a brand will give him/her values and benefits ends up with a benevolent relationship with the brand in question. Therefore, satisfaction, which is the maximum correspondence to the desires or expectations of a consumer, results in repurchasing of the products or services, thus maintaining the trust of the consumer in them [7].

As such, there have been studies in the dining industry as a result of the recognition of the importance of the relationship between consumers and brands and it is believed to be a major element that affects HMR selection factors.

3. Study Method

3.1. Study Model

In this study, the researcher examined consumers who are 50 or older based on the ideas from preceding studies mentioned above to determine the impact of HMR selection factors upon consumer attitudes and trust. The study model suggested herein is as shown in Figure 1 below.
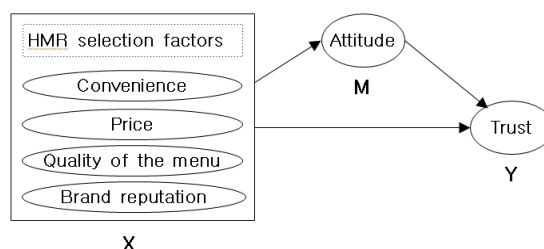

Figure 1. Research model.

3.2. Gathering of Data

This study was conducted with consumers who are 50 or older across the country for the purpose of examining the

influential relationship between HMR selection factors and consumer attitudes and trust. The study participants were selected among consumers age 50 or older who used an HMR product within the last three months. The questionnaire items were designed based on preceding studies, and presented as adjusted and supplemented to suit the purpose of this study. To review the relevance of the questionnaire items, a preliminary survey was conducted before the main survey via a specialized online survey company from October 1 through 6, 2020 (a period of six days.) After distributing and retrieving the questionnaires, incomplete or unreliable ones were excluded, leaving 368 questionnaires that were used in the final analyses.

In this study, the HMR selection factors were defined as the 'important properties applicable to the consumers' purchase decisions of HMR products.'

First, as for 'convenience,' it has been shown that, as the dietary culture moves toward convenience meals, the number of consumers who seek a variety in menus, rich tastes, reasonable prices, and other benefits increased, so that such products are expected to gain more popularity in the market and the factor of convenience has a positive impact on purchase [4].

Second, 'price' is a major selection factor for HMRs, and defined as an appropriate amount of product and costs [14]. This factor represents the rationality for values that can be expected from a product, rather than a simple amount of money to be paid.

Third, the 'quality of food' has been found as an important factor, as taste, freshness, and cleanliness of foods were important factors of satisfaction [13].

Fourth, 'brand reputation' can be summarized as a psychological construct of consumers, encompassing the positive and negative feelings consumers have along with other indirect factors that consumers have toward a certain company regarding the brand. Therefore, it has been argued that positive feelings or emotions on products can have an impact on sales, and become an important factor of differentiation in providing competitive advantages to consumers via emotional values. The study is based on four

different aspects of HMR selection factors, which include, respectively, 'convenience,' 'price,' 'quality of the menu,' and 'brand reputation.' The sub-evaluation items of HMR selection factors were based on Hayeon Kang (2014); Jinhee Kim and Yoojeong Jeon (2015); Misson Shim (2018); Keller (1993); Aaker (1997); Hangsoon Lee (2010), Pernugii & Bagozzi (2001); Taylor (2007); Hakjoon Song, Choonggi Lee, Jaeyoon Goh (2014); Seoyeon Choi (2017); Jasook Nam (2017); Hyunwoo Kim (2018); Fangin & Metzger (2000), as adjusted and supplemented to serve the purpose of this study. As a result, the researchers devised four items for convenience, three for price, three for the quality of food, and four for brand reputation, addressing each of the four HMR selection factors. The resultant questionnaire was composed of 14 questions on HMR selection factors, four for attitudes, and four for trust, totaling 22. All questionnaire items were to be answered in a five-point Likert scale, where 'Not at all' earned one point and 'Absolutely' five.

3.3. Analysis Method

The data gathered for this study were analyzed by using SPSS 20.0. The measurement items were identified through a review of existing studies, and a preliminary survey was conducted to adjust or supplement incorrect or less effective items to obtain relevance. Also, to gain demographic information of the samples, frequency analysis, descriptive statistical analysis, factor analysis, and multiple regression analysis were used to analyze the influential relationship between HMR selection factors and consumer attitudes/trust.

4. Empirical Analysis

4.1. The Demographics of the Samples

The general characteristics of the participants were analyzed in terms of their gender, marital status, age, profession, education, average income, and the types of HMR they mainly purchased, using frequency analysis.

Table 2. *Demographic characteristics of the sample (N=368).*

		N	(%)			N	(%)
Gender	Male	183	49.7		Graduates of high school	78	21.2
	Female	185	50.3	Education	Graduates of college	49	13.3
	Single	31	8.4		Graduates of University	191	51.9
Status	Married	322	87.5		Post graduates school	50	13.6
	Etc.	15	4.1		Less than 100 million won	24	6.5
Age	50~59	279	75.8		100-200 million won	37	10.1
	60~	89	24.2	House hold income	200-300 million won	62	16.8
	Student	0	0	(year)	300-400 million won	84	22.8
	Housewife	79	21.5		400-500 million won	62	16.8
	Profession	39	10.6		Above 500 million won	99	26.9
	Office/administrative positions	111	30.2		Ready to eat food	100	27.2
Job	Service and sales	22	6.0	Types of HMR products that are mainly purchased	Food eaten after heating	128	34.8
	Production and craftsmanship	31	8.4		Food eaten after simple cooking	128	34.8
	Public official	6	1.6		Food eaten after cooking	12	3.3
	Self-employment	36	9.8				
	Etc	44	12.0				
Total = 368 (100.0%)							

First, as for gender, 49.7% were male, while 50.3% were   female. Among the subjects, 87.5% were married,

outnumbering singles. Also, 75.8% of the participants were in their 50s. The largest professional group among the participants was 'office job workers,' accounting for 30.2%. As for level of education, 'university drop-outs or graduates' were of the largest proportion, accounting for 51.9%, while the key types of HMR products purchased were 'foods that are eaten after reheating' (34.8%) and 'foods that are eaten after simple preparation' (34.8%), indicating that the food products that require only heating or simple preparations were the most popular items. The result of the frequency analysis of the demographics was as shown in Table 2.

4.2. The Analysis of the Reliability and Validity of the Measurement Tools

The result of the descriptive analysis of HMR selection factors was 3.92, which surpassed the neutrality point of 3.0 in all items. The average value of the item, 'I check the expiry date of the product when buying foods' was the highest, marking 4.39. The skewness, meaning the slope of the distribution, was between -1.2 and .23, while the kurtosis, meaning the pointiness of the distribution, ranged from -.45 to 2.0. As they approach normal distribution when they are closer to 0, the measurement scales of HMR selection factors turned out to be relatively similar to a normal distribution in terms of slope and pointiness. Overall reliability was above normal, marking .79. In all items, there was a correlation between the items of .2 or higher and the total score.

In the descriptive statistical analysis of attitudes, the overall average was 3.31, surpassing the neutrality point of 3.0 in all items. The average of the item, 'It is a positive thing to purchase an HMR product' was 3.43, which was the highest. The skewness, meaning the gradients of the distribution, ranged from .06 to .21, while the kurtosis, meaning the pointiness of the distribution, ranged from -.15 to .25. As they approach normal distribution when they are closer to 0, the measurement scales of attitudes turned out to be relatively similar to a normal distribution in terms of slope and pointiness. The overall reliability was .85, surpassing the normal threshold. In all items, there was a correlation between the item and the total score at .49 or higher. The trust coefficient after removing the item also measured .85, which equaled the overall reliability coefficient.

The result of the descriptive statistics on trust showed that the overall average was 3.28, surpassing the neutrality point of 3.0 in all items. The item with the highest average, 3.35, was 'I can trust HMR products.' The kurtosis, meaning the gradients of the distribution, ranged from .02 to .09, while the kurtosis, meaning the pointiness of the distribution, ranged from -.03 to .72. As they approach normal distribution when they are closer to 0, the measurement scales of satisfaction turned out to be similar to a normal distribution in terms of slope and pointiness. The overall reliability was .87, surpassing the normal threshold. In all items, there was a correlation between the item and the total score at .52 or higher. The trust coefficient after removing the item also measured less than .87 in all items, indicating their appropriateness to be used in the analysis (Table 3).

Table 3. Results of reliability analysis.

	Mean	S.D	Skewness	Kurtosis	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
HMR selection factors	3.92	.71				.79
I tend to eat simple breakfast.	3.76	.88	.62	.26	.28	.86
I once had a sandwich for a meal.	3.83	.84	-1.2	1.9	.29	.86
I have purchased cooked food at marts, department stores, and convenience stores.	3.95	.71	.82	1.6	.37	.85
I eat about one meal a day more simply than a meal.	3.80	.79	.64	.78	.36	.86
Always check the price when purchasing food.	4.01	.66	.76	2.0	.21	.86
I have used discount zones at marts and supermarkets.	4.00	.66	.56	1.0	.30	.86
If it is the same product, I tend to consider discounted products first.	4.07	.73	.66	.67	.29	.86
When purchasing food, check the expiration date of the product.	4.39	.63	.60	.24	.33	.86
When purchasing food, they tend to check the country of origin and ingredients of the contents.	3.86	.77	.23	.35	.35	.86
When purchasing food, check whether the product is fresh.	4.27	.61	.37	.17	.37	.85
The HMR product that I usually use is a familiar brand.	3.81	.63	.69	2.0	.52	.85
The HMR product I usually use is a reliable brand.	3.88	.68	.22	.32	.50	.85
The HMR product that I usually use is a brand that gives a good impression.	3.68	.67	.19	.45	.56	.85
HMR products that I usually use have history and tradition.	3.50	.66	.23	.21	.44	.85
Attitude	*3.31*	*.69*				*.85*
It is meaningful to purchase HMR products.	3.32	.65	.06	.20	.55	.85
It is wise to purchase HMR products.	3.27	.67	.15	.25	.49	.85
Purchasing HMR products is a positive behavior.	3.43	.70	.21	.15	.60	.85
I am confident that purchasing HMR products is the right choice.	3.22	.75	.17	.08	.56	.85
Trust	*3.28*	*.69*				*.87*
HMR products can be relieved.	3.31	.68	.04	.39	.53	.85
HMR products are reliable.	3.35	.67	.06	.48	.61	.85
I am confident about HMR products.	3.16	.69	.02	.72	.52	.85
HMR products always meet my expectations.	3.30	.73	.09	.03	.53	.85

A concept validation was conducted, and the factors were extracted by using key factor analyses, while the varimax method was used in factor rotation. As for the number of factors, the factors with an Eigen value of 1 or higher were extracted. The factor loading was .4 or higher, which was the normally accepted threshold.

The verification of the measurement tools for the HMR selection factors showed that the value of χ^2 was 1432.93 (df=91, p < .001). With KMO = .80, it was found to be valid when applying the factor analysis. The result of the analysis indicated that four factors of the minimum Eigen value of 1 or higher were extracted. The factor loading was .64 or higher, making them eligible to be considered as key factors. The distributed power for all factors was 61.69%. The identified factors were 'convenience' (4 questions, 10.70%), 'price' (3 questions, 9.17%), 'the quality of the menu' (3 questions, 13.86%), and 'brand reputation' (4 questions, 27.97%). The reliability coefficient for each of the factors ranged from .63 (convenience) to .83 (brand reputation),

while the reliability coefficient for each factor was .63 or higher, confirming reliability.

The result of the factor analysis of the measurement tools for attitudes showed that the KMO value was .82, and χ^2 614.60 (df=6, p < .001), indicating valid values. The factors were assigned to 'attitudes,' the Eigen value was 2.77, and the factor loading was at least .79 in all items. The distributed power of factors was 69.20%, which sufficed to show conceptual validity. The reliability coefficient was .85, which confirmed reliability.

The result of the factor analysis of the measurement tools for trust was that the KMO was .81 and χ^2 760.68 (df=6, p < .001), which indicated the validity of these values. The factors were assigned to 'trust,' the Eigen value was 2.91, and the factor loading was at least .79 in all items. The distributed power of factors was 72.72%, which sufficed to show conceptual validity. The reliability coefficient was .87, which confirmed reliability (Table 4).

Table 4. Results of factor analysis.

	Factor loadings	Eigen values	Explained variance	Cronbach's α
Convenience				
I once had a sandwich for a meal.	.72			
I tend to eat simple breakfast.	.66	1.50	10.70	.63
I eat about one meal a day more simply than a meal.	.65			
I have purchased cooked food at marts, department stores, and convenience stores.	.64			
Price				
If it is the same product, I tend to consider discounted products first.	.80			
Always check the price when purchasing food.	.80	1.28	9.17	.71
I have used discount zones at marts and supermarkets.	.73			
Quality of the menu				
When purchasing food, check the expiration date of the product.	.79			
When purchasing food, they tend to check the country of origin and ingredients of the contents.	.77	1.94	13.86	.75
When purchasing food, check whether the product is fresh.	.76			
Brand reputation				
The HMR product that I usually use is a brand that gives a good impression.	.82			
HMR products that I usually use have history and tradition.	.82	3.92	27.97	.83
The HMR product I usually use is a reliable brand.	.79			
The HMR product that I usually use is a familiar brand.	.74			
Total variance explained=61.69%, KMO=.80, Bartlett's χ^2=1432.93 (df=91, p<.001)				
Attitude				
Purchasing HMR products is a positive behavior.	.86			
I am confident that purchasing HMR products is the right choice.	.84	2.77	69.20	.85
It is wise to purchase HMR products.	.84			
It is meaningful to purchase HMR products.	.79			
Total variance explained=69.20%, KMO=.82, Bartlett's χ^2=614.60 (df=6, p<.001)				
Trust				
HMR products are reliable.	.89			
I am confident about HMR products.	.88	2.91	72.72	.87
HMR products can be relieved.	.86			
HMR products always meet my expectations.	.79			
Total variance explained=72.72%, KMO=.81, Bartlett's χ^2=760.68 (df=6, p<.001)				

4.3. The Relationship Between HMR Selection Factors and Consumer Attitudes/Trust

Using the three-stage regression equation of Baron & Kenny (1986), the researcher verified the mediating effect of HMR selection factors in the relationship between consumer

attitudes and trust. In the first stage, the independent variable and mediating variables are in a significant relationship. In the second stage, the independent variable and dependent variables are in a significant relationship, while in the third, the mediating variables and dependent variables are in a significant relationship. The effect of independent variables

must be higher in the 2nd stage of regression analysis than in the third. In the third stage, the independent variable and mediating variables are applied, with the mediating variable being controlled. Here, if the mediating variables are significant while the impact of independent variables is gone, only the mediating variables will be affecting the independent variables, allowing a perfect mediating effect to exist. In the meantime, if the impact of the independent variables decreases compared to the 2nd stage while the impact of independent variable and mediating variables is significant, it will have a partial mediating effect, with an impact from the independent variables upon dependent variables and the indirect effect from mediating effects.

As shown in Table 5, the 1st stage of the analysis showed that convenience and brand reputation among HMR selection factors had a significant impact on attitudes, which was a mediating variable. In the 2nd stage, convenience and brand reputations had a significant impact on trust, which was a dependent variable. In the 3rd stage, attitudes, which were mediating variables, had a significant impact upon trust, a dependent variable, while the HMR selection factors, which were independent variables, were controlled. At the same time, brand reputation, which was an independent variable, had a significant impact on trust, a dependent variable. Therefore, it can be concluded that attitudes may mediate the impact of HMR selection factors upon trust. Additionally, in the 2nd stage, convenience and brand reputation were influencing trust, which was a dependent variable. In the 3rd stage where a mediating variable (attitudes) was applied, brand reputation had a significant impact, indicating that

attitudes had a partial mediating effect in the influential relationship between brand reputation (a HMR selection factor) upon trust, while having a perfect mediating effect in the influential relationship between convenience (HMR selection factor) and trust.

The Sobel test and z-value for verifying the significance of the indirect effect due to the mediating variable, convenience, and brand reputation, which were HMR selection factors, showed statistical significance at $p<0.01$. In the relationship between HMR selection factors and trust, attitudes turned out to have a mediating effect (Table 6).

The total effect of HMR selection factors, that is, convenience, price, the quality of the menu, and brand reputation, upon trust can be calculated as the sum of the direct effect upon trust with attitudes controlled and the indirect effect upon trust by mediating attitudes [15]. The indirect effect from 'convenience,' 'price,' 'quality of the menu,' and 'brand reputation' upon 'trust' is calculated as the standardization regression coefficient of 'convenience,' 'price,' 'quality of menu,' and 'brand reputation' for the mediating variable (attitude) multiplied by the standardization regression coefficient of the attitude for 'trust'. Therefore, the indirect impact upon trust from convenience, a HMR selection factor, was -.150, the indirect effect from price upon trust was .032, the one from the quality of the menu upon trust -.003, and the one from brand reputation upon trust was .221. As a result, the total effect upon trust was .137 from convenience, .033 from price, -.006 from the quality of the menu, and .403 from brand reputation.

Table 5. *Results of multiple regression analysis.*

		B	SE	β	t	p	F	R²
Step 1. X→M	(Constant)	.000	.047		.000	1.000		
	Convenience	.240	.047	.240	5.078	.000		
	Price	.051	.047	.051	1.072	.284	20.826***	.187
	Quality of the menu	.005	.047	.005	.112	.911		
	Brand reputation	.355	.047	.355	7.507	.000		
Step 2. X→Y	(Constant)	.000	.047		.000	1.000		
	Convenience	.137	.047	.137	2.888	.004		
	Price	.033	.047	.033	.695	.487	20.197***	.182
	Quality of the menu	.006	.047	.006	.129	.897		
	Brand reputation	.403	.047	.403	8.482	.000		
Step 3. XM→Y	(Constant)	.000	.037		.000	1.000		
	Convenience	.013	.039	.013	.329	.742		
	Price	.001	.037	.001	.037	.970		
	Quality of the menu	.003	.037	.003	.076	.940	71.780***	.498
	Brand reputation	.181	.040	.181	4.527	.000		
	Attitude	.623	.041	.623	15.089	.000		
***p < .001								

Table 6. *Results of mediating effects.*

	Sobel test z-value	Mediating effect	Total effect	Direct effect	Indirect effect	p
Convenience→Attitude→Trust	4.840	Perfect	.137	.013	.150	0.000
Price→Attitude→Trust		N.A	.033	.001	.032	
Quality of the menu→Attitude→Trust		N.A	.006	.003	.003	
Brand reputation→Attitude→Trust	6.764	Partial	.403	.181	.221	0.000
*** p < .001						

5. Conclusion and Implications

5.1. Conclusions

With the rapidly changing modern society, the market for HMRs, which can be prepared and consumed conveniently, grew at an astonishing rate. And, with the recent social changes and social distancing measures due to COVID-19 caused more consumers to try various types of food products at home. Under these circumstances, the consumption of HMRs, which can be consumed with minimal efforts, has been increasing.

In line with this development, the researchers studied the impact of HMR selection factors upon consumer attitudes and trust based on various existing studies on HMRs. To understand the impacts of HMR selection factors upon consumer attitudes and trust, the researchers identified convenience, price, the quality of the menu, and brand reputation as sub-factors of HMR selection factors, and analyzed their influence upon attitudes and trust.

First, the verification result of the hypothesis that convenience, price, the quality of the menu, and brand reputation would have a significant impact by using factor analysis on HMR selection factors showed that convenience and brand reputation had an impact on attitudes. This indicates that convenience and brand reputation, which are HMR selection factors, may impact the behaviors of consumers, with convenience and brand reputation among HMR selection factors becoming a factor. Convenience, which was one of the HMR selection factors, means 'having an experience of eating instant food and eating a sandwich for a meal,' 'having purchased a ready-to-eat food from a grocery store, department store, or convenience store,' and 'eating simple meals instead of a regular meal once a day,' making convenience the most significant characteristic of HMR selection factors. Brand reputation, which is one of the selection factors at work when purchasing an HMR product, means that the HMR product I mainly use is of 'a familiar brand,' 'a brand that can be trusted,' 'a brand with a good impression,' and 'a brand with a history and tradition.' Such brand reputation is found to be one of the selection factors at work when purchasing an HMR product.

Second, the researchers verified the mediating effect of consumer attitudes in the influential relationship between HMR selection factors and trust among consumers who are 50 years old or older. This analysis was conducted by using the three-stage regression equation of Baron & Kenny (1986). In the first stage, consumer attitudes turned out to have a mediating effect in the way HMR selection factors impacted trust. In the second stage, convenience and brand reputation had a significant impact on trust, which was a dependent variable. Then, in the third stage where the mediating variable (consumer attitudes) was applied, only one of the HMR selection factors, that is, brand reputation, had a significant impact. Consumer attitudes had a partial mediating effect upon the influential relationship between brand reputation and trust, and a perfect mediating effect in the influential relationship between convenience, a HMR

selection factor, and trust. In conclusion, consumer attitudes were found to have a mediating effect in the relationships between HMR selection factors and trust. This indicates that an improvement in consumer attitudes can contribute to connecting HMR selection factors with trust. To enhance trust, brand reputation and convenience, which are some of the HMR selection factors, would have to be emphasized. Further, this is also because an improvement of differentiated brand reputation and convenience among the HMR selection factors can maximize consumer attitudes toward HMR selection factors. In other words, consumer attitudes play an important role in connecting consumption with trust. Therefore, an improvement in consumer attitudes could help in building trust. Thus, it could be concluded that HMR products that are designed to be relevant to consumers who are 50 years old or older would make it possible to manufacture HMR products that are better trusted by consumers, in the context of the current social distancing measures and the pandemic, which boosted the consumption of HMR products.

5.2. Theoretical Implications

With almost no existing studies that focus on the consumers who are 50 years old or older to examine the impact of HMR selection factors upon consumer attitudes and trust, the implication of this study identified the impact of HMR selection factors upon consumer attitudes and trust, thus building a foundation for the discussion of HMR selection factors from different angles. The elements of the impact of HMR selection factors upon consumers who are 50 years old or older were identified as convenience and brand reputation. These two selection factors turned out to have a significant impact on consumer attitudes and trust, which was followed by an empirical verification. While there were existing studies on HMR selection factors, they did not include consumers who are 50 years old or older. At a time when more in-depth studies for HMRs are needed, it is expected that this study could serve as the basis for further studies on HMRs involving consumers who are 50 years old or older.

With the spread of contactless dining culture due to COVID-19, the sales of HMR products grew rapidly (newsis, 2020.12.02) and, since it has been noted that a change in the dietary culture among consumers may have an impact on the purchase of HMR products, it is believed that this study, covering the attitudes and trust of the consumers who are 50 years old or older, could be utilized as base data for studies in other fields, as well as those in the field of HMR, in the future.

With a flurry of changes in social environments, the dietary behaviors of the people are going through a rapid change. Due to the COVID-19 pandemic and resultant social changes, the market volume of convenient HMRs is going through quantitative expansion. Social distancing measures as a result of COVID-19 became a factor behind the expansion of the HMR market. It has been observed that the cumbersome preparation process, from the preparation of

ingredients to cooking, is leading the demands for HMR, and, "recently, senior households are showing a dietary behavior that resembles that of 1 or 2-person households. An increasing number of senior households can be translated into an influx of new customers into the HMR market, suggesting further continuation of the growing trend of the market (newsis, 2020.12.02)." Among such convenient food products, HMR is growing fast in terms of its consumption. Then, the implication of this study is that an actual study was conducted on consumers who are 50 years old or older regarding the impact of HMR selection factors upon consumer attitudes and trust. Lessons can be learned for practical advantages, so that, of the HMR selection factors, convenience and brand reputation could contribute to positive consumer attitudes and trust. It is expected that maximizing convenience and improving brand reputation would help in forming a more positive consumer attitude.

5.3. Practical Implications

To enhance the level of trust, the mentality of consumers would have to be improved in a positive direction in general, so that trust can lead to positive intent. The findings of this study are expected to be of use as base data in analyzing behaviors regarding the impact of HMR selection factors upon the attitudes and trust of the consumers who are 50 years old or older. Also in this study, the researchers conducted an online survey with consumers who are 50 years old or older and had a purchasing experience of HMR products. This survey revealed their place of purchase, items purchased, number of purchases, purchasing cost, purpose of purchase, and use of the products. With the cost of purchase, it would be possible to update the HMR menus and number of servings more efficiently. Likewise, with the replies on the use of products, it would be possible to understand the needs of the customers, making it easier to develop menus of higher qualities.

In this study, the researchers studied the impact of HMR selection factors upon consumer attitudes and trust. By examining not only the consumer attitudes in connection with HMR selection factors but also the characteristics of the purchasers of HMR, the study yielded findings in which HMR selection factors could have a practical and positive impacts on the HMR market. It is the hope of the authors that the conclusions and implications of this study could contribute to a positive improvement of consumer attitudes and trust in a macroscopic perspective of the HMR market for consumers who are 50 years old or older.

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