

The effects of selective attributes of a chicken soup meal kit on satisfaction and repurchase intention

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Abstract: This study aimed to examine consumer satisfaction and repurchase intention for a chicken soup meal kit. Thus, this study was conducted on 135 Korean adults in their twenties and older who purchased a chicken soup meal kit from August 1 to August 31, 2021. In this study, after excluding 7 questionnaires who responded insincerely, the questionnaires of 128 people were finally analysed. For the collected data, frequency analysis, reliability analysis, factor analysis, and correlation analysis were performed using the statistical package SPSS 20.0, and multiple regression analysis was performed to test the hypothesis. Convenience ($\beta = 0.442$) and price ($\beta = 0.337$) among the selection attributes of chicken soup meal kit products had a significant effect on satisfaction, while diversity ($\beta = 0.027$) and quality ($\beta = 0.047$) were not significant. Also, convenience ($\beta = 0.504$) and price ($\beta = 0.337$) affected repurchase intention among the purchasing attributes of the meal kit. However, diversity ($\beta = 0.101$) and quality ($\beta = 0.045$) did not exert any significant effects on repurchase intention. Finally, it was confirmed that satisfaction with the meal kit had a significant effect on the repurchase intention. Therefore, this study predicts that enhancing convenience and price competitiveness rather than quality or variety among chicken soup meal kit purchasing attributes will increase consumer satisfaction and repurchase intention.

Keywords: COVID-19; selection attributes; convenience; price; diversity; quality

The COVID-19 pandemic has resulted in unique foodservice sector practices and has significantly altered household food behaviours. Aside from health care, the food sector is one of the most affected industries (Nicola et al. 2020). People are searching for healthy foods and are adopting behaviours to prevent viral transmission during the COVID-19 era. The most noticeable changes in the food industry include the explosive increase in meal kit consumption, as well as online orders, home meal replacement, take-out, and drive-through in the era of COVID-19 (Lee and Ham 2021). Because COVID-19 is spread by droplets, aerosols, and direct contact, wearing masks and washing hands with disinfectants are the most ef-

fective preventative measures. The COVID-19 virus can also be transmitted by human behaviours such as breathing, speaking, coughing, and sneezing (Guan et al. 2020). Because droplets are a significant mode of COVID-19 transmission, human contact should be avoided to minimise infection. Furthermore, eating meals together should be avoided since droplets might spread the COVID-19 virus (Pressman et al. 2020). As a result, foodservice operations have been a major source of COVID-19 transmission. People are looking for nutritious diets and are adopting practices to avoid viral transmission during the COVID-19 pandemic.

Chicken soup has traditionally been used to treat symptoms of upper respiratory tract infections (Rennard

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et al. 2000). Many individuals are seeking chicken soup during the COVID-19 outbreak because of this notion (Rennard et al. 2020). Meal kit delivery services have also become increasingly popular in developed countries, complementing busy lifestyles by delivering pre-measured ingredients and recipe instructions to the home. These meal kits have the potential to affect consumer diets and public health by encouraging health-promoting diet behaviours such as consuming vegetables and enabling home cooking (Moore et al. 2021).

However, there are few studies on customer satisfaction or repurchase intention of chicken soup meal kits. Therefore, this study examines consumer satisfaction and repurchase intention for chicken soup meal kits.

MATERIAL AND METHODS

Research design

This study is a descriptive research study to examine the satisfaction and repurchase intention of adult consumers of chicken soup meal kits during the COVID-19 pandemic. This study established the following hypotheses based on previous studies:

- H_1 : The selection attribute of a chicken soup meal kit product shall have a significant positive (+) effect on customer satisfaction.
- H_2 : The selection attribute of a chicken soup meal kit product shall have a significant positive (+) effect on repurchase intention.
- H_3 : The customer satisfaction level with a chicken soup meal kit product shall have a significant effect on repurchase intention.

Research subject

This study was conducted on 135 Korean adults who purchased a chicken soup meal kit (Chumyori, Cookbase, South Korea) from August 1 to August 31, 2021. The subjects of this study were male and female adults

in their twenties or older residing in Korea, who voluntarily agreed to participate after hearing a sufficient explanation of the purpose of this study. A significance level of 0.05, a power of 0.95, and an effect size of 0.30 were set on the basis of previous studies on satisfaction and repurchase intention for the meal kit attribute. In this study, the number of samples was calculated using G*power 3.1.9.2, and the minimum sample size was 122 people. Therefore, this study was conducted with 135 adults, considering the 10% dropout probability, and, after excluding 7 questionnaires who responded insincerely, the questionnaire was finally analysed based on 128 people (Faul et al. 2007).

Research tools

Chicken soup meal kit. A commercial chicken soup meal kit (Chumyori, Cookbase, South Korea) was used for this study (Figure 1), consisting of 65 g of rice flour, 45 g of sweet pumpkin, 90 g of vegetable broth, and 45 g of chicken meat. The product weighs 245 g and provides 300 kcal of total calories. According to the nutritional information of the product, it contains 55 g of carbohydrates, 15 g of protein, 2.1 g of fat, 25 mg of sodium, and 25 mg of cholesterol.

Survey. The survey tool used in this study consisted of 6 questions on general characteristics, 17 questions on the selection attribute of the meal kit product, 3 questions on satisfaction, and 4 questions on repurchase intention. The questionnaire consisted of a total of 30 items, and each item was measured using a Likert 5-point scale.

General characteristics. Variables for the general characteristics of subjects consisted of 6 items, including gender, age, marital status, and occupation.

Meal kit product selection attributes. This study defined the selection attributes of meal kit products as a comprehensive concept that includes both objective attributes and subjective attributes that consumers want



Figure 1. Composition of chicken soup meal kit

as product characteristics that customers basically consider when selecting meal kit products. According to the results of previous studies, 4 variables, 'convenience' (4 items), 'diversity' (4 items), 'quality' (5 items), and 'price' (4 items), were measured as selection attributes (Cha and Lee 2020).

Consumer satisfaction. This study defined consumer satisfaction as the degree of positive emotions that consumers feel toward the product after purchasing and using the product and to what extent the function of the product satisfies the expectations before purchase. In this study, a total of 3 items were selected as satisfaction measurement items based on previous studies (Chung and Kim 2020).

Repurchase intent. In this study, repurchase intention was defined as the consumer's intention to repurchase through consumer satisfaction with the meal kit product. In this study, a total of 4 items were selected as measures of repurchase intention based on previous studies (Park et al. 2019).

Data collection and data analysis methods

This study conducted a convenience sampling of male and female adult consumers who had experience in purchasing and eating chicken soup meal kits among adults in their twenties living in Korea. In this study, the purpose and method of this study were explained to the study subjects and, after obtaining written consent, data were collected using a structured questionnaire. In this study, personal information leakage was prevented by excluding the subject's personal information from computer analysis data. A total of 128 questionnaires were used for data analysis, and statistical significance was analysed using the SPSS/WIN 22.0 program. In this study, frequency analysis, reliability analysis, factor analysis, and correlation analysis were performed, and multiple regression analysis was performed to verify the hypothesis.

RESULTS AND DISCUSSION

Subject characteristics

Table 1 shows the demographic characteristics of the survey subjects, including the information that 28 (22%) were males and 100 (78%) were females, 90 (87%) were unmarried, 38 (13%) were married, and 78 (61%) were in their thirties.

In Table 2, an exploratory factor analysis was performed to analyse the reliability and validity of the measurement tool, and Cronbach's alpha value was extracted through the reliability analysis. In the factor analysis, the

Table 1. Demographic characteristics of the respondents

Category	Variable	Numbers	Percentage (%)
Gender	male	28	21.8
	female	100	78.2
Marital status	married	38	29.7
	single	90	70.3
Age	20s	40	31.3
	30s	78	60.9
	≥ 40s	10	7.8
Academic background	graduated from high school or less	30	23.4
	college	28	21.9
	graduated from college	15	11.8
	graduate school	25	19.5
	graduated from graduate school or higher	30	23.4
	sales/service jobs	15	11.7
Occupation	office worker/manager	15	11.7
	profession	14	10.9
	self-employment	20	15.6
	housewife	16	12.5
	student	44	34.5
	others	4	3.1
Family size	one person	61	47.6
	two persons	30	23.4
	three persons	29	22.7
	four persons	7	5.5
	five persons or more	1	0.8
Total		128	100.0

principal component method was selected for estimating the factor loading, and the varimax method was selected for the rotation method. According to the results, convenience, diversity, quality, and price factors all showed a loading value of 0.7 or more for each questionnaire item, and the eigenvalue of each factor was 1.0 or more. To verify the reliability, all Cronbach's alpha values were 0.7 or higher, indicating high reliability.

Correlation analysis

Table 3 shows the correlation analysis of variables. Convenience, variety, quality, and price, which were selection attributes of the chicken soup meal kit, were

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Table 2. Reliability and validity of variables

Factors	Details	Factor loading	Communality	Eigen-value	Variance (%)	Cronbach's α	KMO and Bartlett's test
Attributes							
Convenience	Meal kit products can be easily purchased and eaten.	0.798	0.667				
	Meal kit products are convenient when preparing meals.	0.881	0.796	2.987	17.651	0.873	
	Meal kit products are easy to cook.	0.856	0.406				
	Meal kit products are easy to store.	0.818	0.588				
Diversity	Each meal kit product has its own unique characteristics.	0.747	0.761				
	New meal kit products are released frequently.	0.847	0.686				
	Meal kit products have seasonal menus.	0.782	0.802	2.851	16.753	0.851	
	Meal kit products offer a variety of products.	0.886	0.725				
Quality	The hygienic quality of meal kit products is good.	0.839	0.672				
	Meal kit products are made from main ingredients that are good for health.	0.808	0.751				KMO = 0.811
	Quality control of the origin information on the ingredients used in the meal kit product is well done.	0.832	0.634	3.337	19.628	0.868	Bartlett = 4.178***
	Quality control for the distribution of meal kit products can be trusted by consumers.	0.738	0.577				
Price	The quality of the taste of the meal kit product is excellent.	0.729	0.704				
	Meal kit products can be purchased at reasonable prices.	0.754	0.784				
	The cost of purchasing a meal kit product is lower than that of cooking at home.	0.827	0.533				
	The cost of purchasing a meal kit product is cheaper than that of delivery food.	0.672	0.851	2.778	16.348	0.861	
Purchase behaviour	The cost of purchasing a meal kit product is cheaper than that of eating out.	0.873	0.747				
	I am willing to repurchase meal kit products.	0.918	0.845				
	I have plans to purchase meal kit products in the future.	0.865	0.746				KMO = 0.833
	I am willing to recommend the meal kit product to my acquaintances.	0.894	0.801	4.058	81.234	0.941	Bartlett = 1 401.08***
Satisfaction	I have a good feeling about the meal kit product.	0.894	0.803				
	I am generally satisfied with the meal kit product.	0.898	0.804				
	I am satisfied in terms of being able to enjoy a simple meal at a reasonable price as a meal kit product.	0.816	0.809	2.571	86.886	0.917	KMO = 0.709
	I am satisfied that I can eat delicious food with a meal kit product.	0.957	0.917				Bartlett = 671.661***
	I have a good feeling about the meal kit product.	0.924	0.853				

*** $P < 0.001$; KMO – Kaiser-Meyer-Olkin

Table 3. Correlation analysis

Division	Convenience	Diversity	Quality	Price	Customer satisfaction	Repurchase intention
Convenience	1.000	–	–	–	–	–
Diversity	0.059	1.000	–	–	–	–
Quality	0.181**	0.168**	1.000	–	–	–
Price	0.331**	0.376**	0.412**	1.000	–	–
Customer satisfaction	0.553**	0.187**	0.268**	0.508**	1.000	–
Repurchase intention	0.556**	0.182**	0.201**	0.342**	0.562**	1.000

** $P < 0.01$

found to have a statistically significant correlation with satisfaction and repurchase intention at a 99% confidence level.

Validation of the research hypothesis

H_1 hypothesis validation. The selection attribute of the meal kit product has the following correlation with satisfaction (Table 4). The total explanatory power (R^2) of the independent variable, the meal kit product selection attribute, was 42.8%, the F -value was 52.896, and the significance probability was 0.000. In particular, convenience ($\beta = 0.442$) and price ($\beta = 0.337$) among the selection attributes of meal kit products have a significant effect on satisfaction, but diversity ($\beta = 0.027$) and quality ($\beta = 0.047$) were found to have no significant effect. Therefore, hypothesis H_1 was partially accepted.

H_2 hypothesis test. Table 5 shows that the meal kit product selection attribute has the following correlation with repurchase intention. The total explanatory power (R^2) of the independent variable, the meal kit product selection attribute, was 34.8%, the F -value was 37.816, and the significance probability was 0.000. In particular, convenience ($\beta = 0.504$) and price

($\beta = 0.337$) among the selection attributes of meal kit products have a significant effect on satisfaction, but diversity ($\beta = 0.101$) and quality ($\beta = 0.045$) were found to have no significant effect. Therefore, hypothesis H_2 was partially accepted.

H_3 hypothesis validation. Table 6 shows that satisfaction has a significant positive effect on repurchase intention. The explanatory power of satisfaction with the dependent variable, repurchase intention, was 31.6%, the F -value was 131.809, and the significance probability was 0.000. That is, satisfaction with the meal kit ($\beta = 0.562$) was confirmed to have a significant effect on repurchase intention. Therefore, hypothesis H_3 was accepted.

The purpose of this study was to analyse the effects of chicken soup meal kit product attributes on the purchasing behaviour and satisfaction of adult consumers in their twenties or older in the era of COVID-19 and to examine the relationship between them. This study investigated and analysed the satisfaction and repurchase intention of a chicken soup meal kit among 128 adult males and females in their twenties and older.

Table 4. Effect of meal kit product selection attributes on customer satisfaction

Variable	Customer satisfaction				
	unstandardised coefficient (B)	standard error (SE)	standardised coefficient (β)	t -value	P -value
(Constant)	−0.692	0.287	–	−2.441	0.014
Convenience	0.448	0.051	0.442	8.784**	0.000
Diversity	0.033	0.064	0.027	0.531	0.591
Price	0.486	0.079	0.337	6.139**	0.000
Quality	0.057	0.062	0.047	0.918	0.364

$R^2 = 0.428$; adjusted $R^2 = 0.422$; F -value = 52.896; P -value = 0.000***

, * $P < 0.01$ and $P < 0.001$, respectively

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Table 5. Effect of meal kit product selection attributes on repurchase intention

Variable	Customer satisfaction				
	unstandardised coefficient (<i>B</i>)	standard error (<i>SE</i>)	standardised coefficient (β)	<i>t</i> -value	<i>P</i> -value
(Constant)	−0.133	0.298	–	−0.446	0.654
Convenience	0.517	0.052	0.504	9.942**	0.000
Diversity	0.131	0.066	0.101	1.981	0.056
Price	0.486	0.079	0.337	6.139**	0.042
Quality	0.053	0.063	0.045	0.841	0.401

$R^2 = 0.348$; adjusted $R^2 = 0.341$; F -value = 37.816; P -value = 0.000***

, * $P < 0.01$ and $P < 0.001$, respectively

A chicken soup meal kit is a product that can easily be prepared by simply following the recipe by providing trimmed ingredients and seasonings. A chicken soup meal kit is distributed in a way that the prepared ingredients and the quantity of seasoning are subdivided into an unprocessed state, and the recipe described in pictures or text is provided to consumers together.

Convenience (51%) was the most common factor to consider when purchasing a meal kit, followed by price (37%), taste (34%), and variety (27%). The reason consumers purchase a chicken soup meal kit is that they can easily cook fresh ingredients for a healthy meal, and it is economical compared to eating out. In particular, meal kits were gaining popularity among households with one or two people. In Korea, where the COVID-19 pandemic, an environment where social distancing and eating out is restricted, has continued for more than a year, the growth of meal kits has been steep. In this study, convenience ($\beta = 0.442$) and price ($\beta = 0.337$) among the selection attributes of chicken soup meal kit products had a significant effect on satisfaction, but diversity ($\beta = 0.027$) and quality ($\beta = 0.047$) were not significant. Also, it was confirmed that convenience ($\beta = 0.504$) and price ($\beta = 0.337$) affected repurchase intention among the purchasing attributes of a product. However, it was found that diversity ($\beta = 0.101$)

and quality ($\beta = 0.045$) did not give a significant effect on repurchase intention. Meal kits are known to focus on providing great 'convenience' by eliminating the need to plan meals, find recipes, travel and shop for groceries, and then prepare ingredients (Cho et al. 2020).

Thus, it is reported that the convenience of cooking was the main reason for the purchase of meal kits (Lee et al. 2021), which is consistent with the results of this study that convenience increases customer satisfaction and repurchases intention for meal kits. Foodservice companies now offer to consumers an opportunity to purchase an average of USD 10 a meal on a monthly subscription basis. Pre-packaged ingredients, recipes, and cooking tips are delivered to the designated address, so home-cooked meals are prepared very easily and quickly, and it takes an average of 30 min from the start of cooking to the completion of meals (Mialki et al. 2020).

The chicken soup kit used in this study was also sold for USD 5 to USD 10 and took about 10 min to 20 min to cook. Finally, it was confirmed that satisfaction with the meal kit had a significant effect on the repurchase intention. Therefore, this study predicts that, among the purchasing attributes of a chicken soup meal kit, enhancing convenience and price competitiveness will increase consumers' satisfaction and repurchase intention rather than quality or variety.

Table 6. Effect of meal kit satisfaction on repurchase intention

Variable	Repurchase intention				
	unstandardised coefficient (<i>B</i>)	standard error (<i>SE</i>)	standardised coefficient (β)	<i>t</i> -value	<i>P</i> -value
(Constant)	1.062	0.133	–	7.985	0.000
Customer satisfaction	0.556	0.049	0.562	11.347**	0.000

$R^2 = 0.316$; adjusted $R^2 = 0.311$; F -value = 131.809; P -value = 0.000***

, * $P < 0.01$ and $P < 0.001$, respectively

CONCLUSION

This study shows that consumers' purchasing behaviour and satisfaction are affected by the convenient recipe and price selection attributes of a meal kit. The practical implication of this study is that the chicken soup kit will have a marketing effect as a product that reflects consumers' needs if it has price competitiveness while emphasizing short cooking time and simple recipes along with the trend of pursuing a premium food culture. This study is meaningful in providing practical basic data on the development, distribution, and consumption stages of meal kit products.

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