

Effect of RTD Tea Drinks Selection Attributes on the Purchase Satisfaction and Repurchase Intention: Evidence in Korea

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Abstract

The purpose of this study is to identify RTD tea drinks selection attributes affecting purchase satisfaction and repurchase intention of RTD tea drinks, and ultimately to understand RTD tea drink users that can improve the long-term and stable business performance of RTD tea drinks in the beverage market. For this aim, a survey was made for the general public with buying experience of RTD tea drinks in metropolitan area and Cheongju. Empirical analysis results are as follows: Among RTD tea drinks selection attributes, sensory factors, health-related other factors and images factors had a significant effect on purchase satisfaction, which in turn had a significant effect on repurchase intention. Therefore, to ensure repurchase of RTD tea drinks in the beverage market, it would be desirable to perform product development, manufacturing, and marketing activities focused on sensory factors, health-related other factors and images factors.

Keywords: Purchase Satisfaction, Repurchase Intention, RTD (Ready to Drinks), Selection Attribute, Teas Drinks

1. Introduction

Beverage is one of the items with low barriers to entry and not affected by economy compared to other industries. Owing to the social and cultural changes, convenient RTD (Ready To Drinks) beverage has recorded steady revenue. According to the beverage industry, however, the beverage market has shown a steady growth since 2000 but began to show a slightly lower starting point from 2008. The industry named the reasons that no hit products have appeared on the market; sales had slowed by the market penetration of premium bottled water; the influence of western culture and lifestyle; and the plunge of recently popular coffee makers¹. Accordingly, it would be needed to identify the selection attributes affecting the purchase, thus ultimately establish the marketing strategy to improve long-term and reliable business performance of the RTD tea beverage in the rapidly changing

beverage market. Therefore, the purpose of the present study is to verify the impact of RTD tea drink selection attributes on the purchase satisfaction and repurchase intention.

2. Theoretical Background

2.1 Previous Research on the Beverage Selection Attributes

An attribute is a quality or feature that someone or something has or not. There have been consistent studies home and abroad on the attribute being evaluated when selecting beverage such as tea or wine. Consumer choice behavior will vary depending on how the customer perceives of the menu or service to purchase¹. Some of the previous research on beverage selection attributes is as follows.

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Lee² named the elements affecting customer satisfaction and repurchase intention on tea drinks as: demographic characteristics, BMI, beverage experience, consumer awareness on well-being, consumer awareness of diet, consumer knowledge and awareness on tea drinks, and use characteristics of tea drinks, in order to study the effects of the elements on customer satisfaction and repurchase intention. The attributes used to measure the customer satisfaction of people with experience in buying tea drink are: health, container, quality, taste, color, flavor, information provided by companies, help for health and diet after intake. Shin³ measure the determinants of the beverage selection with the factors: good for the stomach, good for health; purification of body, diet, body warming, fatigue recovery, diversion, relaxation, help for talking, quality assured, faith on the place of origin, hygienic, eco-friendly, refreshing taste, taste is thick, soft taste, price is cheap, familiar, habitual, good food chemistry, thirst quenching, and it is refreshing³. Kim⁴ investigated the relationship between a lifestyle, wine selection attributes, value, and customer satisfaction, using the wine selection attributes such as: intrinsic attributes including original taste, aroma and color, and external attributes including packaging, self-status and social image, product design, sociality and social intimacy, trademarks, and use. Jang⁵ measure the effect of the hotel beverage selection attributes on customer satisfaction, using five factors of: product price, advertising, facilities and atmosphere, kindness of employees and accessibility. Kim⁶ defined the green tea selection attribute as the degree to which customers consider important when making purchase decision; he considered 32 items for intrinsic attributes products have and external attributes added by the manufacturer and the seller: production area, sanitary production facility, harvesting time, processing method, safety, country, year of production, production method, price, convenience, being healthful, capacity, events, product design, packaging, advertising image, brand, retailer, awards, employee referrals, descriptive text, past buying experience, advertising copies, color, flavor, taste, harmony with desserts, family orientation, corporate image, manufacturer, caffeine and lingering. Lee and Liao⁷ studied the effects of Chinese tea drink preferences and perceptions of consumers on brand positioning strategy, using 8 product attributes of: thirst quench, price, brand recognition, taste, volume, ad impressions, packaging, quality and reliability.

Lee⁸ performed factorial design in his study on the attribute groups and market structure that affect the consumer selection of products through a combination of each attribute of carbonated beverage: price, taste, benefits, container, and advertising image. In their study on the market segmentation according to tea consumers' purchase selection attributes, Kim and Han⁹ presented consumers' purchase selection attributes such as: harvest time, degree of fermentation, method of manufacture, color, taste, flavor, brand, price, production area and packaging.

You¹⁰ has performed the factor analysis for green tea drinking status and drinking expansion, asking the reason of drinking using 16 attributes of: tastes good, switches feeling, good for taking while resting, healthy, thirst quenching, want to feel free, clear-headed (study / work), good for fatigue recovery, for skin beauty, sweet, served at conference / meeting, for diet, meal replacement, after drinking alcohol, and good after workout. In their research on the suggestions for the development of the marketing mix in the tea drink market, Wu et al¹¹ classified the practical factors into 6 factors (sweetness and good flavor, freshness and refreshing, good for health, thirst quenching, easy to purchase, and price advantage), and performed factor analysis to derive: physical and mental health factors, qualitative factors, taste and flavor factors, fashion factors, and convenience and time-saving factors.

2.2 Previous Research on Repurchase Intention

Regarding the concept of repurchase, MacKenzie and Lutz¹² defined it as "repurchase intention is one's beliefs to purchase a product again based on the evaluation of past purchase and a future possibility to use the product repeatedly." Generally, repurchase intention has been recognized as a result of the satisfaction of customers; in order to encourage frequent repurchase, customer satisfaction is prerequisite, and customer satisfaction is believed to have a positive effect on the attitude of customers and their repurchase intention¹³. Customer satisfaction has a positive effect on customer attitude, which in turn has a positive impact on the purchase satisfaction, which has been proven in many studies. The followings are some previous studies on the impact factors affecting customer satisfaction and repurchase

decision; the studies have similar attributes to the sample of this study, beverage. In the study on the new generation consumer power and behavior after purchase of well-being products, Kim¹⁴ claimed that the purchase satisfaction showed significant difference between genders and monthly income, and that repurchase intention differed depending on age, occupation, education, and monthly income. In addition, the variables that influence the purchase satisfaction appeared to be in the order of the consumer attitudes and education; and the variables that influence the repurchase intention turned out to be in the order of purchase satisfaction and consumer attitude. In the research on the relationship between perceived qualities, customer satisfaction and repurchase intention, Cho¹⁵ argued that consumers generally satisfied with perceived product quality, product quality, and service quality have repurchase intention. In a study on food service industry, Koh¹⁶ has identified the relationship between customer satisfaction, switching costs, and repurchase intention; customer satisfaction appeared to directly affect repurchase intention, and significantly influence switching costs.

3. Research Design

3.1 Research Model

This study is to perform empirical research based on previous studies discussed in the theoretical background. A research model was presented as in Figure 1 to identify the impact of RTD tea drinks selection attributes on the purchase satisfaction and repurchase intention.

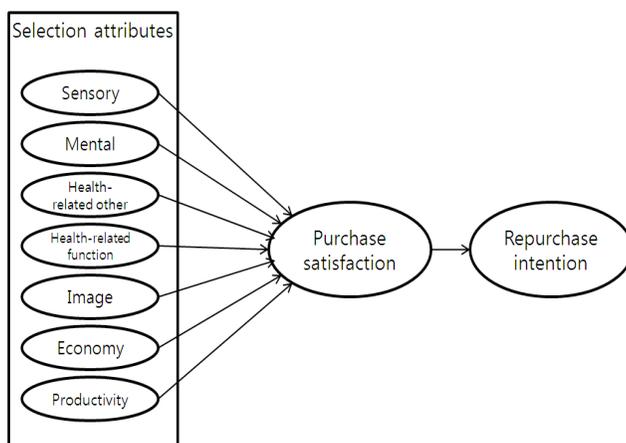


Figure 1. Conceptual research model.

3.2 Research Hypotheses

Hypotheses used in this study are as follows:

H1: Satisfaction with RTD tea drink selection attributes will exert a significant impact on purchase satisfaction.

H1-1: Sensory factors of RTD tea drink will exert a significant impact on purchase satisfaction.

H1-2: Mental factors of RTD tea drink will exert a significant impact on purchase satisfaction.

H1-3: Health-related other factors of RTD tea drink will exert a significant impact on purchase satisfaction.

H1-4: Health-related function factors of RTD tea drink will exert a significant impact on purchase satisfaction.

H1-5: Image factors of RTD tea drink will exert a significant impact on purchase satisfaction.

H1-6: Economy factors of RTD tea drink will exert a significant impact on purchase satisfaction.

H1-7: Productivity factors of RTD tea drink will exert a significant impact on purchase satisfaction.

H2: Purchase satisfaction of RTD tea drink will exert a significant impact on purchase satisfaction.

3.3 Questionnaire Configuration

Questionnaire items in this study were designed as in Table 1 taking into the consideration of questions about attributes to consider when choosing a beverage, purchase satisfaction and repurchase intention from previous studies. All variables except for Demographic characteristics were measured by the Likert 5-point scale (1: strongly disagree, 5: strongly agree).

Table 1. Questionnaire configuration

Variable	No. of Questionnaire
selection attributes ^{2,3,5-11,14}	28
purchase satisfaction ^{8,14,16}	4
repurchase intention ^{15,16}	4

3.4 Survey Subjects and Data Collection

Questionnaires were distributed to the subjects with the RTD tea drink drinking experience on November 10-21 in Seoul and Cheongju, Republic of Korea. In a survey of approximately two weeks, a total of 360 questionnaires were distributed and 343 were recovered, of which 321 were used for the analysis except 22 insincere responses.

4. Empirical Analysis

4.1 Characteristics of the Samples

The general characteristics of the samples are shown in Table 2. Of the total 321 people, there were more women (54.2%) than men (45.8%); by age, 20's was the most (43.3%), followed by 30's (19.0%), and 10's (18.7%). By education, college graduates (or students) accounted for the most (46.4%), followed by high school graduates (or students) or less (30.2%). By average monthly income, less than 1 million won was the most common (48.0%),

followed by 1.01-2.00 M (22.7%) and 2.01-3.00 (14.3%). By career, students were most common (46.7%), followed by office workers (10.9%), etc. By marital status, the married (30.2%) were less than singles (69.8%). By residential area, Chungbuk (35.5%) was most, followed by Gyeonggi (21.5%) and Seoul (14.6%).

4.2 Validity and Reliability Tests

Prior to research hypothesis tests, validity and reliability checks were performed for the questions used in the questionnaire. To test the feasibility, exploratory factor analysis was conducted: the measured variables used

Table 2. Demographic characteristics of samples

Items		n	(%)
sex	men	147	45.8
	women	174	54.2
age	10's	60	18.7
	20's	139	43.3
	30's	61	19.0
	40's	34	10.6
	50's	24	7.5
	more than 60's	3	.9
education	High school graduates	97	30.2
	College graduates	57	17.8
	University graduates	149	46.4
	Graduates school	18	5.6
Marital status	singles	224	69.8
	married	97	30.2
career	Professional	23	7.2
	Public officials, soldiers	11	3.4
	Technical	16	5.0
	Office workers	35	10.9
	Sales, services	31	9.7
	Personal Business students	20	6.2
	homemaker	150	46.7
	other	22	6.9
		13	4
Average monthly income	less than 1million won	154	48.0
	1.01-2.00 M	73	22.7
	2.01-3.00 M	46	14.3
	3.01-4.00 M	29	9.0
	4.01-5.00 M	10	3.1
	more than 5.01 M	9	2.8
Residential area	Seoul	47	14.6
	Kyungki	69	21.5
	Chungnam	41	12.8
	Daejeon	12	3.7
	Chungbuk	114	35.5
	Kyungbuk	30	9.3
	other	8	2.5

principal component analysis to extract the configuration factor, and VARIMAX rotation method in order to secure the independence of factors. Factor loading of 0.5 or more, and the Eigen value of 1.0 or more were used as standard¹. Results of the exploratory factor analysis of selection attributes are shown in Table 3.

not show a distinct loading values for one factor, the factor loading values of the extracted items were 0.6 or more for each variable, which means very high significance and convergent validity of study variable. A total of seven factors were derived through factor analysis; factor names were given as in Table 3 depending on the

Table 3. Factor and reliability analysis for selection attributes

Factor	Measurement items	Factor Loading	Cronbach's alpha
Purchase Satisfaction	Purchase Satisfaction 1	.908	.883
	Purchase Satisfaction 2	.889	
	Purchase Satisfaction 3	.849	
	Purchase Satisfaction 4	.799	
Repurchase Intention	Repurchase Intention 1	.887	.882
	Repurchase Intention 2	.886	
	Repurchase Intention 3	.851	
	Repurchase Intention 4	.820	

Table 4. Factor and reliability analysis for purchase satisfaction and repurchase intention

Factor	Measurement items	Factor Loading	Cronbach alpha
Repurchase Intention	Repurchase Intention 1	.819	.888
	Repurchase Intention 2	.800	
	Repurchase Intention 3	.781	
	Repurchase Intention 4	.776	
	Repurchase Intention 5	.759	
Purchase Satisfaction	Purchase Satisfaction 1	.827	.821
	Purchase Satisfaction 2	.792	
	Purchase Satisfaction 3	.756	
	Purchase Satisfaction 4	.539	
	Purchase Satisfaction 5	.537	

It was found that the variables to be measured in this study have single dimensionality. Selection attributes factor analysis showed similar factor loading value for 'harmony with dessert' and 'diet function', so they were removed. After the variables were excluded that did

nature of the items. Factor analysis conducted for the entire 7 factors, but they were presented except for the unloaded values, for convenience. The reliability of all the factors of selection attributes have been obtained because the measures of reliability (Cronach's alpha) values are above 0.60.

The factor analysis for purchase satisfaction and repurchase intention also demonstrated Cronbach' alpha values greater than 0.60, so it can be said that reliability was obtained as shown in Table 4. It is considered that the reliability of the purchase satisfaction and repurchase intention used in this study has been obtained.

4.3 Hypothesis Testing

Structural equation modeling using AMOS was employed to test the hypotheses. Structural equation modeling estimates multiple and interrelated dependence relationships, thus is an appropriate technique to test the hypotheses given the complex relationships among the latent variables. Research model in the following Figure 2 was analyzed by integrating each of the latent variables.

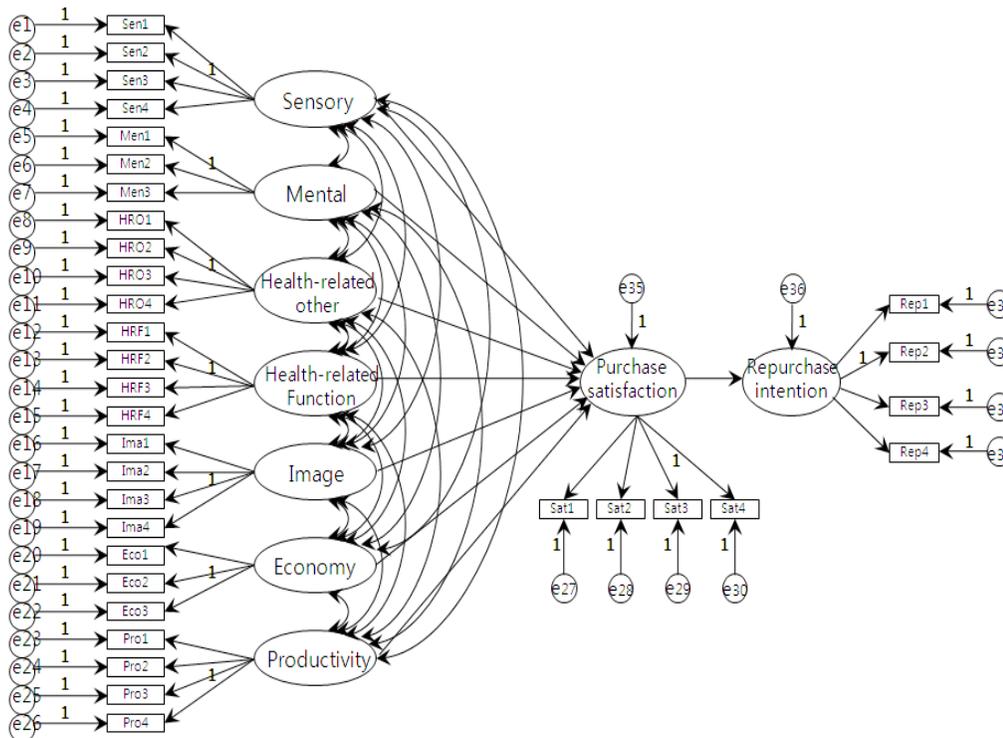


Figure 2. Research Model.

The structural equation model analysis for the first research model showed low model fit indices except for CFI, IFI and RMSEA; so the model was modified by excluding the mental, health-related functional, economy and production related factors whose statistically significant are less than ± 1.96 among the latent variables used in the basic structure model.

Then, the model was modified additionally by deleting questions based on SMC values. After removing "Health A2" and "Image 4", the analysis result showed p values of 0.000 but /d.f.2.754 and RMR 0.049, which has met the criteria. In addition, GFI, AGFI and NFI showed close to the reference value or unsuitable, but IFI, TLI, CFI and RMSEA values appeared to fit the standard value, which implies that the overall model fit can be evaluated as an acceptable level. Thus, the revised model appeared to be suitable, so the path coefficients were examined as in the Table 6 below in order to perform specific hypothesis testing.

5. Conclusion

The purpose of this study is to identify the RTD tea drink selection attributes of the factors affecting the purchase

satisfaction and repurchase intention, thereby to present the selection attributes to be prioritized in the development, manufacture and marketing of more effective products. Hypothesis testing was verified by a structural equation model; three (sensory, health-related other, image) out of a total seven factors of selection attributes had significant impacts on the purchase satisfaction, which was

As a result of the analysis of the research model, model fit indices are shown in the following Table 5.

Table 5. Model fit

Fit Indexes	Research Model	Revised Model
χ^2	1104.407	352.470
P	.000	.000
d.f.	498	128
$\chi^2/d.f.$	2.218	2.754
RMR	0.061	.049
GFI	0.827	.882
AGFI	0.793	.843
NFI	0.847	.899
IFI	0.910	.933
TLI	0.897	.920
CFI	0.909	.933
RMSEA	0.062	.074

Table 6. Path coefficient

	path	B	β	t	p
	sensory → purchase satisfaction	.336	.286	4.138	.000
	health-related other → purchase satisfaction	.152	.196	3.056	.002
	image → purchase satisfaction	.247	.23	3.482	.000
	purchase satisfaction → repurchase intention	1.09	.893	13.41	.000

The test results for the research model can be expressed as the following Figure 3.

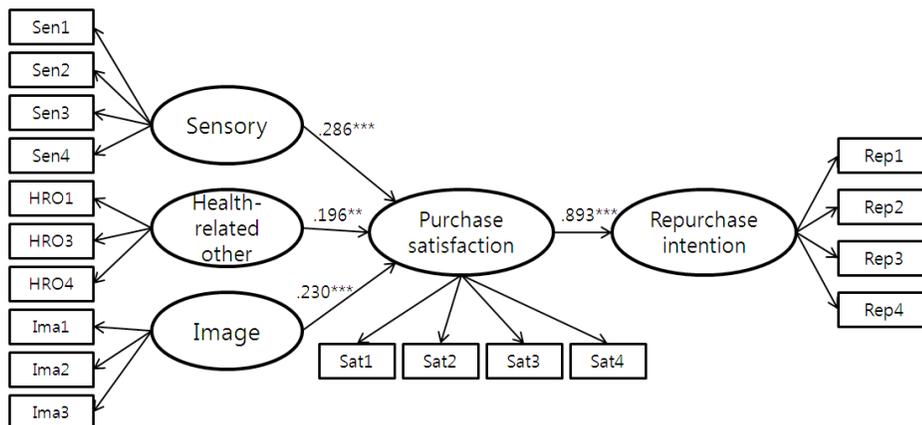


Figure 3. Revised Model.

found to have significant impact on the repurchase intention. The following are some suggestions Based on the findings. In order to improve long-term and stable business performance of RTD tea drinks in a rapidly changing beverage market, manufacturing enterprises are, first of all, required to develop RTD tea drinks to meet the taste of customers with the development, manufacture and promotion of products that fulfill the sensory factors (flavor, taste, color, lingering after drinking), image factors

design and packing container), and health-related other factors (thirst quench, healthy, skin care). The enhancement of the satisfaction with the proposed attributes would lead to the purchase satisfaction of products, which results in the repurchase intention, and ultimately in the positive impact on business performance.

6. References

1. Korea Food Information Institute. Beverage Market Report. 2010.
2. Lee CW. The factors influencing on consumers' satisfaction and repurchase intention for tea drinks [M.S. Thesis]. Graduate School of Konkuk University; 2009.
3. Shin HR. Consumer attitude survey: beverage purchasing behaviors and preferences [M.S. Thesis]. Graduate School of Sejong University; 2009.
4. Kim JY. Causal relationships among lifestyles, wine selections, attributes, values and customer satisfaction [PhD Thesis]. Graduate School of Keimyung University; 2008.
5. Jang ST. A study on the effect of hotel beverage choice factors on customer satisfaction and revisit intention. *Journal of Kyungmin University Research*. 1999; 12(1):257–69.
6. Kim KH. Structural relationships among the selection attributes, satisfaction, and loyalty of green tea consumers: the moderating effect of involvement [PhD Dissertation]. Graduate School of Sungshin Women's University; 2011.
7. Lee CW, Liao CS. The effects of consumer preferences and perceptions of Chinese tea beverages on brand positioning strategies. *Br Food J*. 2009; 111(1):80–96.
8. Lee YH. Attributes to affect consumer's product choice and market structure analysis [M.S. Thesis]. Graduate School of Ewha Women's University; 2002.
9. Kim KH, Han YS. A study on market segmentation by selection attributes of tea consumers. *Journal of Korean Tea Society*. 2010; 16(2):1–12.
10. You JO. A study on usage pattern of green tea and analysis for its expansion factor [M.S. Thesis]. Graduate School of Sungkyunkwan University; 2010.
11. Wu C, Wu SI. A proposed method for the development of marketing mix of the tea drink market. *Asia Pac J Market Logist*. 2008; 10(1):3–21.
12. MacKenzie SB, Lutz RJ. An empirical examination of the structural antecedents of attitude toward the Ad in an advertising pretesting context. *J Market Res*. 1989; 53:48–65.
13. Oliver RL. A cognitive model of the antecedents and consequences of satisfaction decisions. *J Market Res*. 1980; 17(11):460–468.
14. Kim YJ. Study on the well-being applicances consumer competency and postpurchase behavior of new generation consumers [M.S. Thesis]. Graduate School of Kyungsoong University; 2007.
15. Cho SY. A study of relations among perceived quality, customer satisfaction and repurchase intentions [M.S. Thesis]. Graduate school of Hankuk University of Foreign Studies; 2008.
16. Koh SD. The effect of switching cost and customer satisfaction on repurchasing intention in the foodservice industry. *Tourism Research*. 2002; 16:113–39.