신규 스마트폰 구매에 영향을 미치는 혁신과 비교정보 지각에 관한 연구

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The Effects of Innovation and Comparison Information Perceptions on Smart-phone Purchase

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[요   약]

본 연구는 스마트폰 사용자의 개인적 및 사회적 요인이 신규 스마트폰 구매에 미치는 영향을 밝히고자 하였다. 연구결과, 사용자의 연령이 많을수록 기존 제품에 대한 애착이 강하게 나타났다. 또한 사회적 소외감은 애착에 유의한 영향을 미치지 않는 것으로 나타났으며, 사회적 소외감은 혁신저항에 정(+)의 유의한 영향을 미치는 것으로 나타났다. 준거집단의 정체성은 사회적 비교정보에 대한 관심에 정(+)의 유의한 영향을 미치지 않는 것으로 나타났으나 준거집단의 영향은 사회적 비교정보에 대한 관심에 유의한 영향을 미치는 것으로 나타났다. 다음으로 애착이 혁신저항에 유의한 영향을 미치지 않는 것으로 나타났다. 또한 애착은 신규 스마트폰 구매의사를 낮추는 것으로 나타났으나 혁신저항은 신규 스마트폰 구매의사에 유의한 영향을 미치지 않는 것으로 나타났다. 마지막으로 사회적 비교정보에 대한 관심은 신규 스마트폰 구매의사를 높이는 것으로 나타나 기존 스마트폰에 대한 애착이 강할수록 새로운 제품에 대한 필요성이 낮아지고 있음을 알 수 있다.

[Abstract]

The current study found that the older a user was, the stronger attachment the user showed to his or her current phone. Feeling of social isolation did not show a significant effect on attachment, but significantly affected innovation resistance. The identity of the reference group did not significantly affect interest in social comparison information, but the influence of the reference group did. Next, attachment did not show a significant effect on innovation resistance. In addition, attachment significantly affected purchase intention of a new smart phone, but innovation resistance did not. Lastly, interest in social comparison information was found to enhance purchase intention of a new smart-phone.

색인어 : 사회적 소외감, 준거집단의 정체성, 애착, 혁신저항, 사회적 비교정보에 대한 관심, 신규 스마트폰 구매의사

Key word : Social Isolation Perception, Identity of Reference Group, Attachment, Interest in Social Comparison Information, Purchase Intention of a New Smart-phone

Ⅰ. Introduction

Previous research was mostly focused on the effect of the quality or fees of telecommunication on the outcome of the telecommunication companies, on the effect of user characteristics on purchase behavior, and on the factors of smart-phone choices, rather than on interests in smart-phones[1, 2]. However, for a consumer who wants to change his or her phone with a new smart-phone, his or her purchase intention is likely to be affected by his or her attachment to the current phone. New and upcoming phones are equipped with more convenient and diverse functions using the cutting-edge technology. Nevertheless, a number of people still hesitate to purchase a new smart-phone. The current study was conducted in an attempt to investigate the factors that affect a smart-phone user's purchase intention of a new smart-phone. To this end, the study first examined the effects of personal factors on attachment and innovation resistant and the effects of social factors on interest in social comparison information. Subsequently, their effect on purchase intention of a new smart-phone was looked into.

Ⅱ. Theoretical Background

2-1 User's personal factors and smart-phone purchase behavior

User age is an important variable that makes a difference in consumer behavior. A number of previous studies have reported that as consumer's age gets older, attachment becomes stronger[3, 4, 5]. Since young consumers have strong interest and curiosity in new products, they are likely to accept an innovative product very quickly. On the other hand, older consumers tend to perceive innovative products to be inconvenient due to the necessary time to get adjusted, which will lead to stronger attachment to the current products and greater resistance to new products. In addition, as a psychological structure, an individual feels secured by approaching or maintaining contact with an attached object[6]. In this sense, attachment, with a long-term view, means mutual interaction resulting in give and take relationship[7]. Actually, when a consumer is strongly attached to his or her phone, he or she cannot easily change it to a new phone on the market. The probability to purchase a new smart-phone becomes lower with loyalty and sentimental value with the current phone formed.

2-2 User's social factors and interest in social comparison information

Identity of reference group is related with values and goals pursued by the group or community. That is it is related with what ultimate values or goals are aimed. In other words, the values and goals of the entire community influence not only materialistic value distribution but also the community's internal structure, constructing new group identity. The group members will pay heed to the changing environment in order to maintain their own secure identity by paying greater attention to and caring for various social information[8]. Moreover, due to the influence of the group they belong to, they will compare with others or show interest in related information. Each individuals want to belong to the reference group and other people who are important to them. They have relative perception and evaluation about their own positions and possessions by comparing with those of the reference group. The information selected by the reference group is considered particularly important in social life. Therefore, the current study generated the following hypotheses.

Hypothesis 1-1: The older the user is, the stronger the attachment to his or her smart-phone will be.

Hypothesis 1-2: The older the user is, the stronger his or her innovation resistance will be toward a new product..

Hypothesis 2-1: The stronger the user's feeling of social isolation is, the stronger the attachment to his or her smart-phone will be.

Hypothesis 2-2: The stronger the user's feeling of social isolation is, the stronger his or her innovation resistance will be toward a new product.

Hypothesis 3: The stronger the identity of the reference group is, the greater interest in social comparison information will be.

Hypothesis 4: The greater the influence of the reference group is, the greater interest in social comparison information will be.

Hypothesis 5: The more strongly a user is attached to his or her smart-phone, the stronger his or her innovation resistance will be toward a new product.

Hypothesis 6: The more strongly a user is attached to his or her smart-phone, the weaker his or her purchase intention of a new one will be.

Hypothesis 7: The stronger his or her innovation resistance is, the weaker his or her purchase intention of a new one will be.

Hypothesis 8: The greater interest in social comparison information is, the stronger his or her purchase intention of a new one will be.

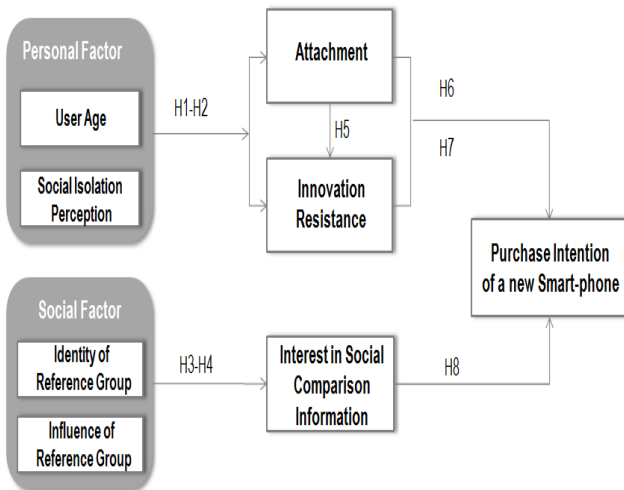# Ⅲ. Research Methodology

3-1 Research Model

Fig. 1. Research Model

3-2 Sample of the Study and Data Collection

The current study was conducted with ordinary users of smartphones for approximately one month. A survey was conducted with field researchers visiting the users and having them answer the questionnaires. Of 275 questionnaires that were answered and collected, 264 questionnaires were used in the final analysis excluding 6 incomplete ones.

3-3 Sample Characteristics

First, the respondent group consisted of 110 males (41.7%) and 154 females (58.3%), showing more female than male respondents. Next, 21 respondents were in their teens (8.0%), 20s 63 in their 20s (23.9%), 65 in their 30s (24.6%), 66 in their 40s (25.0%), and 49 in their 50s and above (18.6%), showing more or less even distribution in 5 age groups. By occupation, of the total 264 respondents, the largest group, 91 (34.5%), was civil servants, followed by students, 62(23.5%), company empl -oyees, 37(14.0%), housewives, 21(8.0%), self-employed, 17(6.4%), others, 17(6.4%), professionals, 12(4.5%), teac -hers and professors, 6(2.3%), and artist, 1(0.4%), showing that respondents of the study was engaged in diverse jobs.

3-4 Measurement of Variables

The variables were properly modified for the study. A 5-point Likert-type scale was used to measure the variables, 5 being "Strongly Agree" and 1 being "Strongly Disagree."

User age, a single item, was filled in by the respondents and then segmented for analysis. Feeling of social isolation was measured with 5 items including degrees of feeling isolated from others, feeling left alone, etc., employing Wang, Zhu and Shiv

(2012)[9]. Identity of reference of group was measured with 5 items including degrees of feeling proud of relationship with close friends and colleagues, using Berger and Heath(2007), Cramer(2000)[10, 11]. Influence of reference of group was measured with 2 items of degrees of support from the person who influence the decision of purchasing a new item most and degrees of following the person's opinion, using Shimp and Kavas(1984)[12]. Attachment was measure with 5 items including degrees of attachment to the currently using phone, employing Park et al.(2010)[13]. Innovation resistance was measured with 5 items including degrees of complaints with a newly released phone[14]. Interest in social comparison information was measured 5 items including a situation where the respondent does not know what to do, using Bearden and Rose(1990)[15], Martin, Suls, and Wheeler (2002)[16]. Purchase intention of a new smart-phone was measure with 4 items including intention to purchase a new smart-phone in near future, using Cannon and Homburg(2001)[17].

IV. Data Analysis

4-1 Data Analysis

1) Validity and Reliability Test

Confirmatory factory analysis was conducted to guarantee the validity and reliability of variable. The result showed the follow indexes χ2=272.87 df=203(p=.00), GFI=.92, AGFI=.89, NFI=.90, CFI=.96, RMSEA=.036, implying that all variable had convergent and discriminant validity[18]. Testing reliability with Cronbach's coefficients, all the coefficients were within the range of .662~.880. Showing the reliability of the construct variables. In addition, representativeness of the constructs was verified from the composite reliabilities ranging .760~.883 which were higher than the commonly accepted level of . 7[19].

Table 1. Result of Confirmatory Factor Analyses

Variables	Items	Standard Factor Loding	Measur−ement error	t−value	Composi−te Relia bility
age	AE1	1.00	−	−	−
social isolation	SI1	.91	.18	18.36	.883
	SI2	.83	.31	16.04	
	SI3	.82	.33	15.74	
	SI4	.66	.56	11.62	
Identity of reference group	IDRG1	.74	.45	12.64	.806
	IDRG2	.73	.47	12.37	
	IDRG3	.70	.51	10.71	
	IDRG4	.68	.53	11.06	
influence of reference group	INFRG1	.91	.17	13.95	.821
	INFRG2	.75	.43	11.74	
attachment	ATT1	.83	.30	15.98	.872
	ATT2	.63	.61	10.83	
	ATT3	.86	.26	16.69	
	ATT4	.84	.29	16.27	
Innovation resistance	INO1	.79	.38	10.18	.814
	INO2	.87	.25	10.78	
Interest in social comparison information	ISCI1	.75	.43	10.10	.760
	ISCI2	.71	.49	8.97	
	ISCI3	.68	.53	8.52	
purchase intention	PI1	.89	.21	17.23	.870
	PI2	.92	.16	17.96	
	PI3	.67	.55	11.91	
Degree of fitness		x^2=272.87df/203(p<.000) GFI=.92 AGFI=.89 NFI=.90 NNFI=.96 CFI=.97 RMSEA=.036 RMR=.052			

* Estimated values are statistically significant at the level of 0.001

4−2 Results of Discriminant Validity Analysis

Discriminant validity was assessed with the analysis of correlation matrix(Φmatrix) that checks the measured difference as among the theoretical different constructs. The results are shown in <Table 2> value of "1" [calculated with correlation ± (2×standard error)] out of range correlative coefficient among all the variables. Other method of testing discriminant validity was employed with average variance extract(AVE). The AVE's value was .513~.699, establishing the reliability at an acceptable level.

Table 2. Correlation Matrix of Research Constructs (Φ matrix)

Vari−ab−les	AE	SI	IDRG	INFRG	ATT	INO	ISCI	PI
AE	−	.001	.048	.000	.002	.020	.048	.014
SI	.01 (.06)	**.655**	.144	.004	.004	.130	.020	.023
IDRG	−.22 *** (.07)	−.38 *** (.06)	**.509**	.152	.068	.032	.040	.008
INFRG	−.01 (.07)	.06 (.07)	.39 *** (.07)	**.699**	.096	.001	.168	.020
ATT	.04 (.07)	−.06 (.07)	.26 *** (.07)	.31 (.07)	**.634**	.000	.003	.084
INO	.14* (.07)	.36 *** (.06)	−.18 ** (.07)	−.03 (.07)	.01 (.07)	**.687**	.005	.000
ISCI	−.22 ** (.07)	.14 * (.08)	.20 * (.08)	.41 *** (.07)	.05 (.08)	.07 (.08)	**.513**	.078
PI	−.12 * (.06)	.15* (.07)	.09 (.07)	.14 * (.07)	−.29 *** (.07)	.01 (.06)	.28 *** (.07)	**.694**

* AE : Age, SI : Social Isolation, IDRG : Identity of Reference Group, INFRG : Influence Of Reference Group, ATT : Attachment, INO : Innovation Resistance, ISCI : Interest In Social Comparison Information, PI : Purchase Intention

**1. The numbers along the diagonal line represent Average Variance Extract(AVE). Below the diagonal line are correlations between construct definitions. The numbers in parentheses represent the standard errors. Above the diagonal line are squared correlations between construct definitions.
2. * p<.05, ** p<.01, *** p<.001

4-3 Results of Hypotheses Testing

The analysis of the goodness of fit indexes of the research model showed χ2= x2=317.91, df=215(p=.000),

GFI=.90, AGFI=.88, NFI=.89, CFI=.95 RMSEA=.043 suggesting the superiority of the research model. The results of the analysis of causal relationships among the variables are shown in <Table 3>.

Table 3. Results of Analyses on the Research Model

Hypot-hesis	Path			Coeffi-cient	t-value
H1-1 (-)	age	→	attachment	1.96	2.34^*
H1-2 (-)	age	→	Innovation resistance	.18	$.46^{n/s}$
H2-1 (+)	social isolation	→	attachment	-.02	$-.17^{n/s}$
H2-2 (+)	social isolation	→	Innovation resistance	.36	4.78^{***}
H3(+)	Identity of reference group	→	Interest in social comparison information	.04	$.43^{n/s}$
H4(+)	influence of reference group	→	Interest in social comparison information	.43	4.47^{***}
H5(+)	attachment	→	Innovation resistance	.03	$.41^{n/s}$
H6(-)	attachment	→	purchase intention	-.31	-4.32^{***}
H7(-)	Innovation resistance	→	purchase intention	.01	$.10^{n/s}$
H8(+)	Interest in social comparison information	→	purchase intention	.32	4.06^{***}
Degre-e of fitnes s	x^2=317.91df/215(p<.000) GFI=.90 AGFI=.88 NFI=.89 NNFI=.95 CFI=.96 RMSEA=.043				

* p<.05, ** p<.01, *** p<.001

Ⅴ. CONCLUSION AND IMPLICATIONS

5-1 Summary of Findings and Implications

The summary of findings in this study and their implications are as follows: First, the older a user was, the stronger attachment the user showed to his or her current phone. Older users seem to have used their phones longer, through which their attachment could get stronger. However, age was not found to significantly affect innovation resistance. Second, feeling of social isolation did not significantly affect attachment, but showed a significant effect on innovation resistance. The results strongly imply that less social interaction causes less information exchanges with other people and less information about new products, which leads to strong innovation resistance. Third, the identity of the reference group did not significantly affect interest in social comparison information, but the influence of the reference group did. Fourth, attachment did not show a significant effect on innovation resistance. Fifth, attachment significantly affected purchase intention of a new smart-phone, but innovation resistance did not. Interest in social comparison information was also found to enhance purchase intention of a new smart.

5-2 Summary of Findings and Implications

This research adopted individual factor and social factor as an antecedent variable. However, it has the limitation that individual consumer's psychological aspect includes restricted factors as a variable resistance. Therefore, future research must introduce the individual consumer's various psychological factors to look deep into the consumer's inner factors. It could be contributed to finding out consumer's behavior, which uses existing products for a long time rather than buying new products. This research is deeply affected by an age group. Therefore, the future research focusing on an old age group will be contributed to research the old age group's consumer behavior.

Acknowledge

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