

The Roles of Brand Loyalty and Switching Costs in the Purchase of a New Smartphone*

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I. Introduction

As a result of fierce competition in the smartphone market, recent years have witnessed a sharp decrease in the smartphone release cycle to less than a year (Ferreira, 2011; Mariano, 2012; Ziegler, 2011), forcing many users to make frequent decisions on the purchase of new models (Lee, 2014a). In most cases, such decisions imply changing incumbent smartphone brands to new ones in addition to purchasing the new models. According to the status quo bias (SQB) perspective (Samuelson & Zeckhauser, 1988),

people tend to maintain incumbent actions instead of switching to new ones, and this view provides a theoretical explanation for understanding switching behaviors in the context of information systems (Polites & Karahanna, 2012). In the same manner, smartphone users may be inclined to continue using incumbent smartphone brands instead of switching to new brands.

One major determinant of inclinations toward incumbent smartphone brands is brand loyalty, which represents a favorable attitude toward a brand and deep commitment to the same brand resulting in the consistent purchase

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of the brand over time (Assael, 1998). Because brand loyalty develops from repetitive use based on satisfaction with a particular brand, it is closely related to habitual behaviors (Assael, 1998), which are controlled by a sequence of actions without consciousness instead of explicit cognition (Kim, 2009; Lee, 2014b). Therefore, users with strong loyalty toward a brand tend to maintain the same brand even when there are more advanced and favorable alternatives.

The switching cost, the cost of switching a product, influences inclinations toward a specific branded product. According to classical network economy theories, the switching cost is inevitable in the use of information and communication technology (ICT) (Shapiro & Varian, 1999), which have been shown by recent studies (Bhattacharjee & Park, 2014; Kim & Kankanhalli, 2009; Polite & Karahanna, 2012). Smartphone, which represent portable computers with communications capability (Dvorak, 2012), would have some switching cost in the use of incumbent smartphones, and this may influence the purchase of new smartphones.

Based on the above discussion, the following research question is proposed:

What roles do brand loyalty and switching costs in incumbent smartphone play in the purchase of new smartphones?

To address this research question, this study proposes a framework for explaining purchase intentions toward new smartphones considering brand loyalty and switching costs in incumbent smartphones. The research model is empirically tested for purchase intentions toward G4, an LG smartphone brand, through a survey of university students in Korea.

II . Literature Review

Most studies for explaining the purchase of smartphone have adopted frameworks in ICT acceptance theories such as the technology acceptance model (TAM) (Davis, 1989; Davis et al., 1989) and the unified theory of acceptance and usage technology (UTAUT) (Venkatesh et al., 2002) and their extended versions. For example, Kim (2008) showed the effects of job relevance and experience in the context of smartphone adoption, which is based on the extended TAM. Chen et al. (2009) compared and analyzed the TAM and other theories such as innovation diffusion theory and the theory of self-efficacy have been compared and integrated. Shin et al (2011) theoretically suggested and empirically tested the research model of the adoption of smartphones as ubiquitous learning tools by integrating the UTAUT with expectation confirmation theory (Bhattacharjee, 2001). Using a design theory based on the three-level

processing model in Norman (2004) and Goffman’s (1959) self-presentation theory, the effects of aesthetics, including usefulness and playfulness, were analyzed (Lee, 2014a), which is also based on the TAM.

Although these previous studies have provided important implications, few have considered incumbent smartphones, particularly brand loyalty and switching cost. In spite of little attention in smartphone purchase, switching cost is one of the important research issues in recent ICT acceptance studies (e.g. Bhattacharjee & Park, 2014; Lee, 2012; Polites & Karahanna, 2012), which showed switching costs would negatively influence the acceptance of new system. However, unlike switching costs, brand loyalty, which is supposed to be a major factor influencing the perception of an incumbent system, has received little theoretical attention in not only smartphone but

also even ICT acceptance studies. While some studies have adopted brand loyalty as a variable in the context of ICT communities, their focuses were not on effects of brand loyalty on the acceptance or use of ICT applications but on the role of outcomes, which can be a proxy for ICT use (e.g., Casalo et al., 2010; Chen and Moon, 2015; Chiu et al., 2013; Deng et al., 2010; Lee and Park, 2014; Lee et al., 2104; Lin & Wang, 2006).

III. Research Model

As shown in <Figure 1>, this study proposes a research model consisting of switching cost, brand loyalty, perceived aesthetics, price value, and relative advantage. The operational definitions of the variables adopted in the research model are shown in <Table 1>.

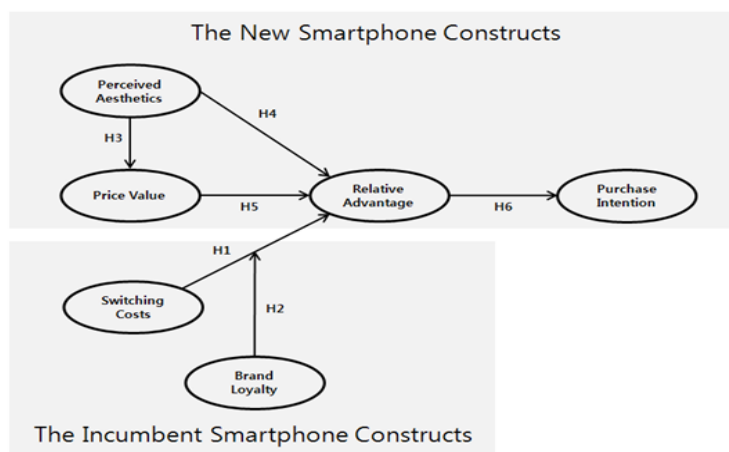


Figure 1 Research Model

<Table 1> Operational Definitions of Variables

Variable	Definition
Switching cost	The perceived cost of switching a smartphone
Brand loyalty	The level of commitment to the same brand resulting in the repeat purchase of the brand over time
Perceived aesthetics	The extent to which an individual perceives a given smartphone to be visually beautiful and attractive beyond any performance outcomes
Price value	The recognition of a trade-off between perceived benefits and monetary costs of buying a new smartphone
Relative advantage	The extent to which a product is perceived to be superior to those before it

People have a strong tendency to maintain the status quo (Samuelson & Zeckhauser, 1988). One reason behind the status quo bias is rational decision making in which individuals consider the cost (real or perceived) of switching from the status quo to a new position (Polites & Karahanna, 2012). In view of rational decision making, the cost of uncertainty as a type of switching cost represents a psychological risk related to a new smartphone. The status quo bias resulting from uncertainty over a new alternative induces individuals to perceive the disadvantages of leaving an incumbent option more than its advantages (Kahneman et al., 1991). In the same vein, the cost of uncertainty motivates consumers to deem the relative advantage of a new smartphone to be smaller (even when larger) than the incumbent one.

Hypothesis 1: The switching cost of an incumbent smartphone has a negative

effect on the relative advantage of a new smartphone.

A high level of loyalty toward a brand means strong inclinations toward the brand as well as strong avoidance intentions toward a new brand. Therefore, consumers who have strong loyalty to a brand are more likely to perceive a high level of uncertainty when purchasing a new brand (Kaplan & Garrick, 1981; Assael, 1998). This implies that brand loyalty influences beliefs about new smartphones through the switching cost. Therefore, the effects of the switching cost on the relative advantage of a new smartphone may strengthen in combination with loyalty toward the incumbent smartphone brand. The higher the level of brand loyalty, the more sensitive the effect of the switching cost on relative advantage. Individuals with strong brand loyalty toward incumbent smartphone brands are more likely to undervalue benefits

of new brands, whereas those with weak brand loyalty toward incumbent smartphones are more likely to make an objective assessment of advantages of new brands.

Hypothesis 2: The brand loyalty of an incumbent smartphone has a positive moderating effect on the relationship between the switching cost of the incumbent smartphone and the relative advantage of a new smartphone.

Perceived aesthetics refer to the extent to which an individual perceives a given smartphone to be visually beautiful and attractive beyond any performance consequences (Lee, 2014). Users evaluate various attributes of products or systems, including their aesthetics, usefulness, and ease of use (Tractinsky, 2004). An aesthetic evaluation of a certain object is known to take place immediately and influence successive cognitive processes for the object (Norman, 2004). For example, given a new smartphone, its visual appearance (aesthetics) is immediately evaluated even when there is no information on it, which influences any subsequent evaluation of the smartphone, including its advantages and price (Lee, 2014a). In addition, previous studies (Tractinsky et al., 2000; Hassenzahl, 2004; Lee, 2014a) have demonstrated a strong relationship between aesthetics and the overall use judgment and suggested that the aesthetic

perception of an object influences other perceived attributes of the same object. In this regard, if a particular smartphone brand is perceived to be more beautiful than others, then its price and relative advantage are likely to be perceived as more valid.

Hypothesis 3: Perceived aesthetics have a positive effect on price value.

Hypothesis 4: Perceived aesthetics have a positive effect on relative advantage.

When consumers have no sufficient information on product quality, they are likely to use price as an indication of quality (Assael, 1998). In general, the price of several smartphones is widely known to many people. Therefore, consumers can easily guess a smartphone's quality based on its price. The positive relationship between price value and product quality has been demonstrated not only in marketing contexts (e.g., Rao & Monroe, 1988; Dodd et al., 1991) but also in information system contexts in recent years (e.g., Venkatesh et al., 2012). When switching from an incumbent smartphone to a new one, individuals may evaluate the relative advantage of the new smartphone based on its price value. In this regard, the following hypothesis is proposed:

Hypothesis 5: Price value has a positive effect on relative advantage.

Relative advantage refers to the extent to which a product is perceived to be superior to those preceding it, and it is expected to have a greater effect on purchase intentions toward a new product than other factors (Holak & Lehmann, 1990; Polites & Karahanna, 2012).

Hypothesis 6: Relative advantage has a positive effect on purchase intentions.

IV. Research Method

To validate the research model, G4, a smartphone brand from LG, was adopted as the target smartphone. The participants were university students in Korea, and all had non-LG smartphones. Many Korean users' decision on purchasing a smartphone may be dependent on network service provider(NSP) promotion rather than device itself. In order to exclude this effect, participants were limited to the customers who subscribed SKC, a NSP in Korea, and did not have any intention of changing NSP. These students were considered to have sufficient knowledge to evaluate G4 because its launch was already announced and its advertisements were frequently observed through the mass media, including TV and the Internet.

A survey was conducted twice before the launch of G4. In the first survey, two variables, namely the switching cost and brand loyalty

with respect to the incumbent smartphone, were measured for a total of 293 respondents. Two weeks later, the second survey was conducted. Before the survey, G4's features including its visual appearance and functional performance were introduced to the participants for about 30 minutes. After this introduction, perceived aesthetics, price value, relative advantage, and purchase intentions were measured for G4. As a result, a total of 177 complete responses across all measurement points were collected. <Table 2> shows the participant profile.

The measurement items for the constructs were adapted from previous studies. For the switching cost, the concept of uncertainty costs was selected among vendor-related costs. Uncertainty costs arise when actual value of new vendor's smartphone is less than expected (Ray et al., 2012). In addition to uncertainty, there are other vendor-related cost such as benefit-loss costs and brand-relationship costs. However, these costs are conceptually related with the other constructs in our research model. For example, benefit-loss costs, which refer to losing benefits due to switching smartphone, are related with relative advantage, and brand-relationship costs are related with brand loyalty. In addition, the measurement items for brand loyalty included two dimensions from the marketing literature: behavioral and attitudinal. The questionnaire was translated from English into Korean, and

<Table 2> Participant Profile

Variable	Value	Frequency	Percentage
Gender	Male	124	70.06 %
	Female	53	29.94 %
	Sum	177	100 %
Number of smartphone purchases	Once	39	22.03 %
	Twice	72	40.68 %
	Three times	38	21.47 %
	More than four times	28	15.82 %
	Sum	177	100 %
The incumbent smartphone	Galaxy	120	67.80 %
	iPhone	40	22.60 %
	Vega	15	8.47 %
	Other	2	1.13 %
	Sum	177	100 %

all items were measured using a seven-point Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (7). <Table 3> shows the measurement items.

<Table 3> Measurement Items

Construct	Item	Scale	References
Switching costs	SC1	I worry that LG4 may not be as good as expected.	Ray et al. (2012)
	SC2	LG4 may be worse than the current one.	
	SC3	If I should change my smartphone, the LG4 may be less useful than the current one.	
	SC4	I am not sure about the usefulness of LG4 if I switch to it.	
Brand loyalty	BL1	I will buy the same smartphone brand the next time.	Chaudhuri & Holbrook (2001)
	BL2	I intend to keep purchasing the same smartphone brand.	
	BL3	I am deeply involved in the current smartphone brand.	
	BL4	I will pay more for the current smartphone brand.	
Perceived aesthetics	PA1	LG4 looks beautiful.	Tzou & Lu (2009)
	PA2	LG4 looks outstanding.	
	PA3	LG4 looks charming.	

Price value	PV1	LG4 is reasonably priced.	Dodds et al. (1991)
	PV2	LG4 is a good value for money.	
	PV3	At the current price, LG4 provides good value.	
Relative advantage	RA1	Using LG4 instead of the current one may enhance my effectiveness.	Polites & Kanahanna (2012)
	RA2	Using LG4 instead of the current one may increase my productivity.	
	RA3	Using LG4 instead of the current one may improve my performance.	
Purchase intentions	INT1	I intend to purchase LG4.	
	INT2	I plan to purchase LG4.	

V. Data Analysis

The partial least squares (PLS) method was used to analyze the data. As shown in <Table 4>, the average variance extracted (AVE), composite reliability, and Cronbach’s alpha exceeded the recommended thresholds of 0.5, 0.7, and 0.7, respectively (Bearden et al.,

1993). The square root of the AVE for each construct exceeded the correlation between the construct and all others, as shown in <Table 4>. All items loaded on their proposed factors (Gefen & Straub, 2005), as shown in <Table 5>. These results indicate sufficient convergent and discriminant validity.

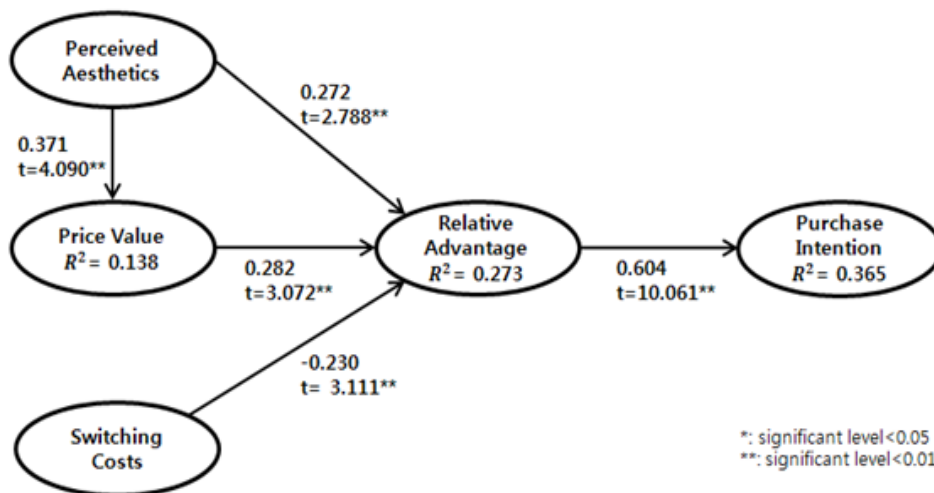
<Table 4> Composite Reliability, Cronbach’s alpha, Average Variance Extracted(AVE) and Correlations

Construct	composite reliability	Cronbach’s alpha	SC	BL	PA	PV	RA	INT
Switching costs (SC)	0.913	0.878	0.851					
Brand loyalty (BL)	0.914	0.881	0.290	0.851				
Perceived aesthetics (PA)	0.964	0.943	-0.093	-0.047	0.948			
Price value (PV)	0.934	0.900	0.018	-0.029	0.371	0.909		
Relative advantage (RA)	0.968	0.951	-0.250	-0.099	0.398	0.379	0.954	
Purchase intentions (INT)	0.960	0.917	-0.126	0.052	0.480	0.449	0.604	0.961

*Shaded diagonals: The square root of the AVE for each constructs

<Table 5> Loadings and Cross Loadings

	Switching costs	Brand loyalty	Perceived aesthetics	Price value	Relative advantage	Purchase intentions
SC1	0.836	0.294	-0.111	-0.067	-0.169	-0.133
SC2	0.821	0.215	-0.084	0.054	-0.150	-0.118
SC3	0.877	0.265	-0.068	0.092	-0.207	-0.054
SC4	0.868	0.225	-0.068	-0.011	-0.280	-0.127
BL1	0.267	0.911	-0.041	-0.056	-0.091	0.046
BL2	0.267	0.896	-0.036	-0.032	-0.075	0.040
BL3	0.326	0.801	-0.009	0.015	-0.028	0.047
BL4	0.197	0.797	-0.052	-0.004	-0.101	0.045
PA1	-0.107	-0.009	0.928	0.317	0.350	0.406
PA2	-0.082	-0.082	0.954	0.381	0.403	0.478
PA3	-0.079	-0.037	0.961	0.354	0.375	0.476
PV1	0.056	-0.015	0.178	0.812	0.185	0.241
PV2	0.024	-0.009	0.350	0.956	0.348	0.405
PV3	-0.006	-0.048	0.412	0.952	0.425	0.501
RA1	-0.218	-0.091	0.354	0.371	0.955	0.584
RA2	-0.227	-0.093	0.397	0.350	0.947	0.563
RA3	-0.269	-0.098	0.389	0.363	0.961	0.582
INT1	-0.145	0.052	0.501	0.459	0.636	0.969
INT2	-0.092	0.047	0.413	0.397	0.513	0.952



<Figure 2> Path Analysis

As shown in Figure 2, the R² values for price value, relative advantage, and purchase intentions were 0.138, 0.273, and 0.365, respectively. All these values exceeded the critical value of 0.1 (Falk & Miller, 1992). After the estimation of path coefficients by using the whole sample, the PLS technique was employed using bootstrapping to obtain corresponding t-values. The path coefficient from the switching cost to relative advantage was -0.230(t-value=3.111), providing support for H1 at 0.01. The path coefficients from perceived aesthetics to price value and relative advantage were 0.371(t-value=4.090) and 0.272(t-value=2.788), respectively, providing support for H3 and H4, respectively, at 0.01. In addition, the path coefficient from price value to relative advantage was 0.282(t-value=3.072), providing support for H5 at 0.01, and the path coefficient from relative advantage was 0.604(t-value=10.061), providing support for H5 at 0.01.

H2, which addressed the moderating effect of brand loyalty on the relationship between the switching cost and relative advantage, was tested by two ways: a moderated multiple regression (MMR) analysis (Carte & Russell, 2003) and a comparison of beta coefficients. For applying MMR, R² values as shown in Table 6 are calculated. With two independent variables, namely the switching cost and brand loyalty, the R² value for purchase intentions,

that is, R_a², was calculated (0.064). In addition to these two variables, including their product scale, the R² value for purchase intentions, that is, R_m², was calculated (0.086). Finally, ΔR², the difference between two values, R_a² and R_m² was tested at 0.01, as shown in Table 6.

<Table 6> Moderating Effects Analysis by MMR

Variable	Value
R _m ²	0.086
R _a ²	0.064
ΔR ² (=R _m ² - R _a ²)	0.022
df _m	3
df _a	2
N	177
F-value	4.164 *

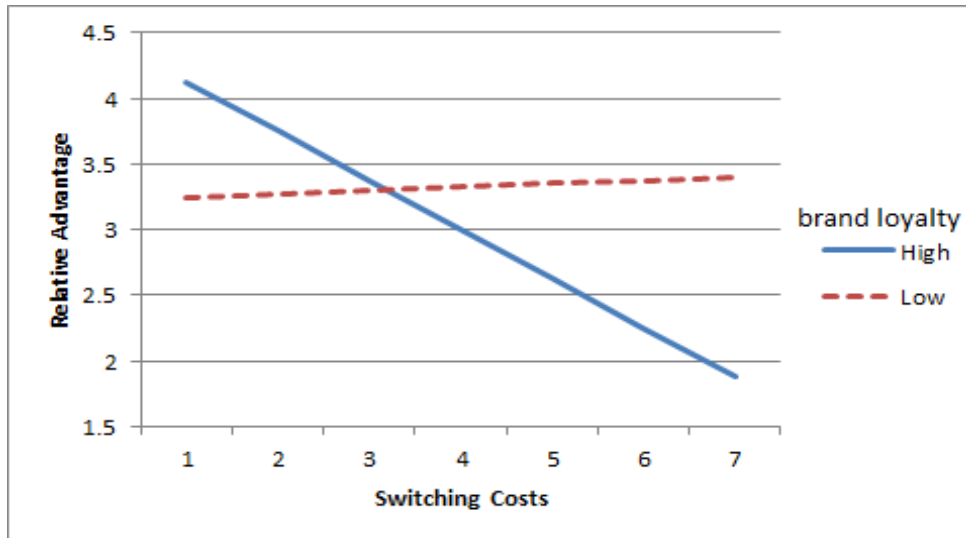
$$F_{(df_m - df_a, N - df_m - 2)} = \frac{\Delta R^2 / (df_m - df_a)}{(1 - R_m^2) / (N - df_m - 2)}$$

*significant level<0

As well as MMR, for testing H2, interaction effects of two groups' beta coefficients were compared; the one group, 'high group', of which brand loyalty is higher than the average, 4.6414, and the other group, 'low group', which has lower brand loyalty than the average. In result, high group's beta value, -0.1727 (t-value =-0.6827) is significantly different from low groups value (beta = 0.0259, t-value =0.2280) as shown in Table 7. Relative advantage is more strongly related with switching costs with high brand loyalty, which can be also shown in Figure 3.

<Table 7> Moderating Effects Analysis by Beta Coefficient Comparison

Brand loyalty*	Beta	t-value	R2	N
High Group	-0.3738	-3.5606	0.1095	90
Low Group	0.0259	0.2280	0.0005	87



<Figure 3> Moderation Effect of Brand Loyalty

VI. Conclusion

This study examines the effects of switching costs and brand loyalty on purchase intentions toward new smartphone brands based on a research model with six hypotheses. To validate the model, a sample of 177 university students in Korea was employed. The data were analyzed using the PLS technique. The results provide support for all hypotheses.

The findings and their implications can be summarized as follows: First, brand loyalty

and switching costs, which are related with incumbent smartphone, are major determinants for the purchase of new smartphones as well as the perception of new smartphone. Only a few studies have focused on incumbent systems, even in traditional information system studies (e.g., Bhattecharjee & Park, 2014; Polite & Karahanna, 2012). However, incumbent systems can explain the purchase of new smartphone because the use of smartphones inherently influences determinants of inclinations toward incumbent brands, including brand loyalty and switching costs.

The results clearly demonstrate the effects of brand loyalty and switching costs on the purchase of smartphones.

Second, brand loyalty was found to play the role of moderator in the purchase of new smartphone. Unlike previous studies of brand loyalty, which have focused mainly on single products or systems (e.g., Casalo et al., 2010; Chiu et al., 2013; Deng et al., 2010; Lin & Wang, 2006), this study demonstrates the moderating effect of brand loyalty on the relationship between switching costs and relative advantage in the context of new smartphone brands. Noteworthy is that brand loyalty influenced the purchase of new smartphone as well as incumbent ones. In addition, although most studies have adopted brand loyalty as an outcome variable, this study adopts it as an antecedent and demonstrates its effects.

Third, perceived aesthetics and price value had considerable influence on the purchase of smartphone brands. Recent studies of ICT acceptance have paid close attention to the importance of the visual appearance and monetary value of offerings (e.g., Lee, 2014a; Tractinsky 2004; Venkatesh et al., 2012). Previous studies have demonstrated the effects of aesthetics on the perception of ICT use, including usability (Tractinsky et al., 2000; Hassenzahl, 2004) and usefulness (Lee, 2014a). However, this study finds the effects of perceived aesthetics on price value. That is,

perceived aesthetics in ICT contexts influence not only usability and usefulness but also monetary value, which provides important implications.

Practically, this study re-emphasized the importance of brand loyalty on an incumbent smartphone, which would reinforce the negative influences of switching costs on the brand-new smartphone's relative advantage. This implies that smartphone vendors should enhance brand loyalty in order to keep customers in their brand. More customized and individualized services, as well as more attractive performance and aesthetics, would contribute to develop brand loyalty.

This study has some limitations. First, the analysis employed no real purchase data. Although the framework of ICT acceptance can address behavioral intentions as a predictor of actual behaviors (David, 1989; Davis et al., 1989), this relationship is not always valid. Therefore, external validity can be enhanced by measuring actual behaviors, as in Venkatesh and Davis (2000).

Second, the sample was limited to university students. Although these individuals represent one of the most important user groups, results may vary according to the type of respondent. For example, when purchasing new smartphones, older individuals may tend to focus more on smartphone brands. In the case of these individuals, brand loyalty may play a clearer moderating role. In this regard, future

research should consider a wider range of respondents.

Third, because of G4's relatively weak brand power, the results may not be generalizable to more popular brands. In particular, it may not be excluded that negative preconceptions on G4 would influence our survey. For example, the iPhone or the Galaxy may enhance the representativeness of smartphone users' behaviors. In addition, popular brands may better show the relationship underlying switching from incumbent smartphone brands to new ones.

Fourth, the controls for preventing biases may not be enough. For example, the switching costs perceived by iPhone users may be different from Android users. The perception of price value by the users of low priced phones such as Xiaomi and Huawei may be significantly different from others, which may be also causes of bias.

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이웅규(Woong-Kyu Lee)



저자는 현재 대구대학교 경영학과 교수로 재직 중이다. 연세대학교 경영학과를 졸업하고 KAIST에서 경영과학 석사와 경영공학 박사학위를 받았으며 KT에서 선임연구원으로 재직하였다. 정보시스템 연구 편집위원장, ISR 편집위원장, 정보시스템 학회 회장 등을 역임하였다. 정보기술의 진유, 정보기술 수용과 설득 경로, 정보기술 사용의 내재적 동기, 정보기술의 지속적 사용 등과 같이 온라인 사용자 행태에 관심을 가지고 있다. 최근에는 브랜드 충성도 및 전환 비용과 관련된 스마트폰 사용과 정보기술 비사용에도 많은 관심을 가지고 있다.

박진훈(Jin-Hoon Park)



저자는 대구대학교 경영학과를 졸업하고 경영학과 석사과정 재학 중에 있다. 정보기술 수용, 전환비용 등과 같이 정보기술 사용자의 다양한 행태에 관심을 가지고 있다.

<Abstract>

The roles of brand loyalty and switching costs in the purchase of a new smartphone

Lee, Woong-Kyu · Park, Jin-Hoon

Purpose

Although many users change their smartphone, most may be inclined to continue using incumbent smartphone series instead of switching to new brands. Brand loyalty and switching costs are major determinants of inclinations toward incumbent smartphones. This study addresses the research question, “what roles brand loyalty and switching costs play in the purchase of new smartphones?”.

Design/methodology/approach

A research model consisting of six hypotheses for explaining purchase intentions toward new smartphone was proposed considering inclinations toward incumbent brands. The research model was empirically tested based on purchase intentions toward the LG smartphone brand G4, employing a sample of 177 university students in Korea. The data were analyzed using the PLS technique. The results provide support for all hypotheses.

Findings

First, perceived inclinations toward incumbent smartphone, brand loyalty and switching costs, explained the purchase of new smartphones as well as the perception of new smartphone. Second, brand loyalty was found to play the role of moderator between switching costs and relative advantage in the purchase of new smartphone. Third, perceived aesthetics and price value had considerable influence on the purchase of brand-new smartphone.

Keywords: smartphone, brand loyalty, switching costs, aesthetics, relative advantage, price value

<국문초록>

스마트폰 신제품 구매에서 브랜드 충성도와 전환비용의 역할

이 응 규 · 박 진 훈

목적

많은 사용자들이 스마트폰을 바꾸고 있지만 대부분의 경우 새로운 스마트폰으로 바꾸는 대신 기존에 가지고 있는 스마트폰을 계속 사용하려는 경향이 있다. 브랜드 충성도와 전환비용은 기존의 스마트폰을 계속 사용하는 경향을 결정하는 요인이다. 다음과 같은 연구문제를 제기한다. “새로운 스마트폰을 구매하는데 있어서 브랜드 충성도와 전환비용의 역할은 무엇인가?”

방법론

기존 브랜드를 계속 사용하려는 경향을 고려하여 새로운 스마트폰 구매의도를 설명하기 위한 여섯 개의 가설을 제안했다. 연구모형은 177명의 대학생을 대상으로 LG의 G4 스마트폰을 구매의도에 대해 실증적 검증을 하였다. PLS에 의해 자료 분석을 한 결과 모든 가설이 통계적으로 지지받았다.

결과

첫째, 기존 스마트폰에 대한 브랜드 충성도와 전환비용은 새로운 스마트폰 구매에 영향을 미친다. 둘째, 브랜드 충성도는 전환비용과 상대적 이점의 관계에서 조절변수 역할을 한다. 셋째, 지각된 심미성과 가격 가치도 스마트폰 구매에 영향을 미친다.

키워드: 스마트폰, 브랜드 충성도, 전환비용, 심미성, 상대적 이점, 가격

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