A Study on Intention of Customers to Switch Brands under the Brand Crisis of Smart Phone: from the PPM Perspective

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Abstract

Background/Objectives: This study intended to examine psychological mechanism on whether consumers switch their brands to other brands when they face a brand crisis like smart phone explosion using the PPM model.

Methods/Statistical Analysis: This study created the questionnaire using Samsung smart phone and Apple smart phone as stimuli. The questionnaire has two types of experimental scenarios (the brand crisis of Samsung phone and switching intention to Apple phone vs the brand crisis of Apple phone and switching intention to Samsung phone). Among the 305 copies of the questionnaire, this study used 270 copies in the analysis, excluding 35 answered.

Findings: 1) Among push factors, boredom was found to have negative (-) effect on customer satisfaction. But perceived severity of crisis was found not to have effect on customer satisfaction, unlike the expectation. 2) All the moving factors, commitment, switching cost, and resistance to innovation were found to have positive (+) effects on customer satisfaction. 3) Among the pull factors, attractiveness of the alternative was found to have negative (-) effect on customer satisfaction. But, unlike expectation, Perceived...
market competition and Social Climate of Transition were found not to have effects. 4) Customer satisfaction was found to have strong negative effect on switching intention. Finally, 5) among independent Variables, commitment and attractiveness of the alternative were partially mediated by Customer satisfaction to affect the dependent Variable.

Such findings shows that, given a brand crisis of the existing brand, high values of the mooring factors, that is, commitment, switching cost, and resistance to innovation can maintain customer satisfaction, or have positive (+) effect on the existing brand, affecting negatively switching intention.

Improvements/Applications: Marketers should prepare for unexpected brand crises by creating commitment of customers with the formation of relationship between customers and brand, and strengthening high-tech functional differentiation and resistance to innovation.

Key Words : Brand Crisis, PPM Model, Customer Satisfaction, Switching Intention, High-Tech Products.

1 Introduction

Today, with the development of social networks which have developed as fast as the speed of human thinking, consumers can easily get information not only on products and services they use but on the companies providing such products and services. Thus, consumers, to choose products and services suitable to their social, economic situations and life patterns, keep switching brands of such products and services. Accordingly, companies providing such products and services make their best to secure loyal to them and minimize leaving of customers. High loyalty of customers contributes to the creation of high competitive profits and boosting of company morale and productivity. Despite their efforts to build brand assets, companies face brand crises caused by unexpected scandals. Furthermore, in this global economic environment, as scandals have far-reaching effects across the world, companies can face unimaginable crises. For example, the explosion accident of smart phone of a global company is a typical brand crisis by becoming an issue in Korea and overseas. Such brand crisis causes
physical and mental damage to the company by obstructing normal business of the company, and generating negative image of the company. In particular, when we add its effect on potential customers of the company caused by deterioration of the relationship with the public, such a brand crisis is directly related with the survival of the company [1, 2]. But, unfortunately, there is no company safe from such a brand crisis, and it is difficult to anticipate such a crisis. Therefore, all the companies are always exposed to potential crises by which they can lose trust of customers and their brand assets can be severely damaged. Then, what kinds of countermeasures and strategies should companies have in relation to such brand crisis? There have been a number of studies dealing with such problems. They are on positive and negative effects (positive < negative), and social [3] and other effects of such crises. There have also been studies in the respect of attribution theory [4], and studies on strategic effects of responding time and methods in the respect of countermeasure [1, 5], even if such studies are not many. But, such studies focus on brands in crisis caused by negative accidents, and ignore crisis not caused by factors caused by negative accidents, but by competitive brands. In other words, there have been not sufficient researches including effects of competitive brands, in the respect of analysis of environment to establish countermeasure or strategy to brand crisis (3C: Company, Competitor, and Consumer). Consequently, this study will try to find out satisfaction (un-satisfaction) of customers in the context of a brand in crisis and its competitive brand which can gain benefits from the crisis, and customers’ intention to switch their brand preference. By doing that, this study intends to suggest a realistic and practical hint. Especially, this study will choose a high-tech product (smart phone) to examine customers’ intention to switch their brands. In conclusion, this study, in the basis of brand crisis in the global scale such as battery explosion of the smart phone which became an global issue, examine psychological mechanism on the customers’ switching intentions using the PPM (Push-Pull-Mooring) model. That is, this study examines the preceding factors crucially affecting switching intentions with the view of the PPM model. The findings of this study will identify factors affecting satisfaction (un-satisfaction) of customers and their switching intentions in brand crisis of a high-tech product like smart phone, and will offer theoretical and practical hints on
how to respond to such a crisis to those working in marketing parts of such companies.

2 Theoretical backgrounds and setting of hypotheses

2.1 Brand crisis

Brand can be described as means and way which allow customers to know the origin and maker of a product, and to whom they can ask responsibility of the product if a problem happens to the product. So, it simplifies decision-making of customers regarding the product. Consequently, brand crisis can be described as the situation where faulty, wrong, unproved fact and even actual accident regarding the brand can damage the brand, and have negative effect on it, and where positive and favorable attitudes of customers to the brand can be damaged [4]. The recent smart phone explosion accident of S Electronics, the cause of which has not been identified, not only changes positive and favorable image of customers on the company and the brand into negative one, causing enormous monetary loss to the company, and weakening the trust of the company and the product [6].

2.2 PPM model

In conceptual aspect, there is a certain degree of similarity between human moving from one place to another place and brand switching of customers. For instance, if the concept of migration means human flow from a specific geographic location to another one, the concept of switching between products or services (providers) means the movement of users from a specific product or service (provider) to another one. The PPM model is to explain principle factors consisting of ‘push’ factor, ‘pull’ factor, and ‘mooring’ factor. First, as factors driving people to move from one place to another, there are push factor, negative one driving residents to leave the original residential place, and pull factor of the attractive factor of the new place. Lastly, the mooring, the personal and social factor in the original residential place, either make people
to keep staying there, or stimulate them to leave it. As showed above, the PPM (Push-Pull-Mooring) model which has been used to explain cultural geographical movement of people can be used a useful theoretical framework to explain factors of brand switching among customers regarding their online offline products and services (providers) [7, 8]. For example, customers unsatisfied with existing products or services intend to switch to other products or services (providers), and there are some researches explaining them with the push factor, and other researches [9] suggesting the charm of the alternative as the pull factor. The reason why customers intend to keep using current products or services is explained that there is not sufficient number of alternatives or there is no charming alternative. An important mooring factor is switching cost. Researches show that even if customers are not satisfied with current products and services, they do not switch to other ones if switching costs are too high [6, 10].

2.2.1 Push factor and customer satisfaction

Push factor, negative factor of the original residential place which drives people to move to other place [11], can be defined as follows. The push factor in brand switch can be said to be the negative factor which reduces customer satisfaction, and, ultimately, induces brand switch. As such negative factors, we can think of boredom and perceived severity of the crisis. First, boredom is a psychological process where one has unpleasant temporary emotional condition in which one has almost lost interest in what one is doing, and has difficulty focusing on it [12]. In general, interest one feels to a certain stimulus has an inverted U letter-type the relationship with familiarity with it. That is, at the beginning, interest has positive (+) relationship with familiarity. But, as interest goes over the peak, it begins to have negative (−) relationship with it by boredom. As such, if a stimulus is repeated over the peak of interest, one feels bored of it, and losing the feeling of charm. Such a phenomenon can be found in the cases where, even if there are no problems in the products customers use, they switch to other products. In particular, high-tech products like smart phone have very short life-cycle. One year is too long for new models to be released. In such a situation, customers can fee bored more easily.
In such a situation, if brand crisis takes place due to a negative accident in the brand one owns, it is likely that one may quickly lose satisfaction with the brand. Consumers are more sensitive to negative information than to positive one, and such sensitivity can work as weight in their attitude on brands [13, 14]. Accordingly, negative information related with brand crisis has greater negative (-) effect on consumers who are bored of the product [15], rapidly reducing customer satisfaction with the product. Next, perceived severity of the crisis can work as part of the push factor. The consciousness of consumers on severity of a crisis is formed through very subjective cognitive process. That is, if a negative accident related with a certain brand occurs, consumers become aware of disparity between the situation before the accident and expected value, and such severity is perceived as value of possible loss, probability of loss, and time pressure, etc. [16]. Therefore, the same brand crisis can be perceived differently by consumers [1]. In the perceiving process on the negative accident of a specific brand, the higher consumers perceive the crisis, the higher they perceive the value of possible loss and probability of loss, inevitably reducing customer satisfaction. By combining all the above, this study set the following hypotheses.

Hypothesis 1: When a brand crisis of the existing brand takes place, push factor will have negative (-) effect on customer satisfaction.

1-1: When a brand crisis occurs in an existing brand, boredom of consumer on the brand will have negative (-) effect on customer satisfaction.

1-2: When a brand crisis occurs in an existing brand, high perception of customer on the crisis will have negative (-) effect on customer satisfaction.

2.2.2 Pull factor and customer satisfaction

Pull factors which attract, or make potential movers favorable to a new residential place are factors which existing products or services cannot provide. Such factors reduce satisfaction of customers with existing brands, causing them to switch to new brands [11]. In the perspective of existing brands, pull factors are external factors such as attractiveness of alternative, perceived market competition, and
Social Climate of Transition, etc. First, attractiveness of alternative is positive characteristics of competitive brand. High attractiveness of the alternative means low attractiveness of the existing brand. So, it reduces satisfaction with the existing brand, positively affecting consumers’ intention to switch to the alternative [9]. That is, high attractiveness of the alternative means it has something existing brand cannot provide, and, it will give consumers relative deprivation, reducing their satisfaction with the existing brand. Furthermore, if a negative accident happens to the existing brand, the attractiveness of the alternative will go up further, and customer satisfaction with the existing brand will go down further.

Next, perceived market competition can be said to be a negative external factor causing brand switch, in the perspective of existing brand. High market competition means the existence of various alternative brands satisfying needs of customers. In the perspective of consumers, it means there is a wide range of brands they can choose from [17]. Thus, consumer’s perception of high market competition means that it is possible for consumers to get the same satisfaction with the existing brand from different brand, which will reduce relative satisfaction with the existing brand. Furthermore, the occurrence of negative accident regarding the existing brand will reduce the competitiveness of it in the market, further reducing customer satisfaction with it. Third, Social Climate of Transition can be called a negative external factor which can bring about brand switch. Social Climate of Transition is the degree in which people exchange influences in social relations [18], and it works as perceived pressure people get to force them to act specific behavior [19]. While such a social atmosphere can appear as general mood by the working of individual psychological factors, it also can appear as synchronizing mood by riding the general social flow. In particular, to Korean customers who tend to have comprehensive thinking style rather than analytic one are likely to show strong assimilation behavior, the social atmosphere of brand switch caused by a negative accident on the existing is likely to brand reduce their satisfaction with it, accelerating the brand switch mood. In addition, popularity of social network service caused by development and spread of ICT technology can boost such a negative synchronizing behavior. By combining such characteristics, this study set the following hypotheses.
Hypothesis 2: When a brand crisis of the existing brand takes place, the pull factor will have negative effect on the existing brand.

2-1: When a brand crisis of the existing brand takes place, the attractiveness of alternative will have negative (-) effect on satisfaction with the existing brand.

2-2: When a brand crisis of the existing brand takes place, perceived market competition will have negative (-) effect on satisfaction with the existing brand.

2-3: Social Climate of Transition brought about by negative accident of the existing brand will have negative (-) effect on satisfaction with the existing brand.

2.2.3 Mooring factor and customer satisfaction

Mooring factor may lead people to keep staying in current residential place. In decision-making process regarding brands, such mooring factors can play the role of limiting brand switch. High mooring factor suppress brand switch. That is, mooring factors have negative (-) relationship with switch to new brands. Thus, even if negative accident regarding the existing brand triggers strong push and pull factors, if mooring factors are stronger than those factors, they will serve as defensive mechanism blocking negative effects caused by push and pull factors, maintaining customer satisfaction with the existing brand, or rather increasing it. Mooring factors are positive factors of customers toward the existing brand, and they include switching cost, resistance to innovation, and commitment, etc. First, switching cost is the amount consumer spends in time, cost, and psychological elements when he or she intends to change brands. And, if the switching cost is big, consumer tries to reduce it [9]. Consequently, if the brand switching cost is big, consumer, to solve the internal conflicts caused by cognitive dissonance, will try not to switch brands by maintaining customer satisfaction with the existing brand, or increasing the satisfaction through selective cognition of merits of the existing brand. That is, even if a negative accident regarding the existing brand boosts the push and pull factors, if the switching cost is big, it will increase customer’s satisfaction with the existing brand, blocking him or her from switching to other brand. Next, resistance to innovation can also work as a mooring factor. In general, as innovation de-
mands change to the user, it causes resistance from the user. That is, resistance can be called resistance to change, that is, a certain behavior to maintain former condition from the pressure supposed to change the former condition [20, 21]. Such a resistance to innovation occurs when someone tries to avoid additional cost or efforts which can arise when he or she chooses an alternative deserting the familiarity of existing brand. For example, when consumer chooses an alternative different from the existing brand, he or she should invest additional time and efforts to become familiar with the alternative. If the consumer wants to avoid such investment, he or she is reluctant to switch to it. Also, suspicion, uncertainty, or unexpected disadvantage regarding a new alternative can cause resistance to change. Such a resistance to innovation occurs more frequently for the users of high-tech products containing specific functions which are protected as intellectual property rights like patent rights. As described above, if resistance to innovation is big, the push and pull factors do not work well, and the customer satisfaction with the existing brand will increase, ultimately suppressing the desire to switch to other brand. Commitment, orientation of consumer toward long-term and continuous relationship, can be said to be another mooring factor. Henning-Thurau and Klee (1997) [22] argues that high-level commitment, an important element of customer retention, includes an affective bond as well as a rational bond. That is, commitment is concept including affective aspect, which is emotional ties in relationship, and cognitive aspect which is the conviction that maintaining relationship will give the customer more benefits than cutting it [23]. In conclusion, as commitment means commitment on relationship, commitment of relationship with a specific brand makes it difficult to compare with other brands. Even if consumer experiences negative feeling toward the specific brand with which he or she has built commitment, it is not easy to switch to other alternative [24]. Accordingly, given the push and pull factors caused by a negative accident of a specific brand, high commitment with the existing brand can work to suppress brand switch by maintaining or increasing customer satisfaction through cognitive defense against the negative accident. Based on the above discussion, this study set the following hypotheses.

Hypothesis 3: When brand crisis occurs in an existing brand, the mooring factor will have positive (+) effect on the existing brand.
3-1: When brand crisis occurs in an existing brand, switching cost to a new brand will have positive (+) effect on customer satisfaction.

3-2: When brand crisis occurs in an existing brand, resistance to innovation will have positive (+) effect on customer satisfaction.

3-3: When brand crisis occurs in an existing brand, commitment to the existing brand will have positive (+) effect on customer satisfaction.

2.3 Customer satisfaction and switching intention

In general, approach to customer satisfaction can be explained in the perspective of expectation-performance disparity paradigm which is based on the assumption that it is derived from the perception on disparity between expectation of consumer on the product performance and real performance of it after the customer procures it. The American Marketing Association (AMA) explains that customer satisfaction is generated when the product fulfills or exceeds the expectation generated from needs and demands of customers, and that customer dissatisfaction occurs when it fails to fulfill the expectation. Based on the above discussion, we can define customer satisfaction as the customer evaluation derived from the difference between previous expectation on a product or service and performance of it one perceives while using it. In conclusion, if consumer is satisfied with the existing brand after such an evaluation, he or she will intend to maintain the existing brand, or procure the upgraded version of it. But, the consumer is dissatisfied with the brand, he or she will complain, and pursue to switch to a new brand [25]. Accordingly, customer satisfaction has negative (-) relationship with intention to switch brand. Thus, this study set the following hypothesis.

Hypothesis 4: customer satisfaction with the existing brand will have negative (-) relationship with intention to switch brand.

Based on the above discussion, Relation of antecedent factor of customer satisfaction and switching intention is mediated by customer satisfaction. Thus, this study set the following hypothesis.

Hypothesis 5: antecedent factors of customer satisfaction are partially mediated by Customer satisfaction to affect switching in-
2.4 Research model

Based on the theoretical and previous works, we show the research model, as shown in Figure 1, which consists of antecedent variables (separated from the PPM perspective) such as boredom, perceived severity of crisis, commitment, switching cost, resistance to innovation, attractiveness of alternatives, perceived market competition and social climate of transition, customer satisfaction, and switching intention. The relationship between the antecedent variables and switching intention is expected to be mediated by customer satisfaction.

3 Empirical analysis

3.1 Survey objects and experimental design

The objects of this survey are residents, college students, and graduate school students in Daegu and Gumi. Two types of questionnaires on Samsung and Apple smart phones were distributed to them. Excluding 35 copies of them where respondents were not sincere in answering the questions or they said they no longer use Samsung and Apple smart phones, 270 copies (170 for Samsung and 100 for Apple) in total were used for final analysis.
3.2 Development of stimulus

As stimuli for the experiment of this study, smart phones of the five global makers (Samsung, LG, Apple, Motorola, and Huawei). And this study chooses smart phones of Samsung and Apple because, while the two brands are highly familiar to customers, the difference of familiarity of the two brands is not statistically significant. (The first preliminary test: 100 copies (20 copies per maker); Samsung M= 5.18, Apple M=4.57. t= -1.412, P>.05). And, the article on negative accident for the two stimuli was made through FGI to 20 residents and graduate school students.

3.3 Measurement of variables

As antecedent factors of customer satisfaction, this study used the followings: the push factor measured with perceived severity of the crisis and boredom; the pull factor measured with attractiveness of the alternative, perceived market competition and Social Climate of Transition; the mooring factor measured with commitment, switching cost, and resistance to innovation. The variables were measured with the following methods. First, to measure boredom, part of the push factor, this study used the revised version of 3 questions (Cronbach’s alpha =.882) out of the questions used in the Boredom Proneness Scale in Vodanovich and Kass (1990) [26]. To measure perception of seriousness of the crisis, this study used 6 questions (Cronbach’s alpha =.914) derived from the questions to measure of seriousness of the crisis in Billings, Milburn and Schaalman (1980) [16]. Second, for attractiveness of the alternative, this study used 3 questions derived from Bansal, Taylor and James (2005) [11] (Cronbach’s alpha =.917), and, for perceived market competition, this study used 1 question based on the studies of Kim (1999) [27] and Jun (2006) [17] (Cronbach’s alpha =.916). For Social Climate of Transition, this study used 3 questions of Mu, Chung and Lee (2014) [28] who revised questions in Schneider, White and Paul (1998) [29] and Jung (2012) [30] (Cronbach’s alpha =.742). Third, to measure commitment, part of the mooring factor, this study used 7 questions made from Fournier (1998) [24] (Cronbach’s alpha =.916). For switching cost, this study used 4 questions made from questions used by Lin and Huang (2014) [31] which is based on Burnham, Frels and Mahajan (2003) [10].
and Jones, Mothersbaugh and Betty (2000) [9] (Cronbach’s alpha = .914). Resistance to innovation was measured with 4 questions made from Zaltman and Wallendorf (1979) [20] and Ram (1987) [21] (Cronbach’s alpha = .794). As dependent variable, this study set switching intention, and, as mediating variable, it set customer satisfaction. The findings of measuring them are as follows. First, dependent variable, switching intention, was measured with 4 questions revised from questions used in Lin and Huang (2014) [31] based on Davis, Bagozzi and Warshaw (1989) [32] (Cronbach’s alpha = .859). Customer satisfaction, mediating variable, was measured with 4 questions revised from those used in Jones, Taylor, Becherer and Halstead (2003) [33] and Kim (1999) [27] (Cronbach’s alpha = .906). All the questions were measured with 7-point Likert scale.

4 Hypothesis tests

4.1 Test of hypothesis 1

Hypothesis 1 is about the effect of the push factor, boredom and perceived severity of crisis, on customer satisfaction. Independent variables are boredom and perceived severity of crisis, and the dependent variable is customer satisfaction, and they were under the regression analysis. As shown in Table 1, while boredom has negative effect on customer satisfaction ($\beta = -.433$, $t = -7.864$, $p < .05$), perceived severity of crisis does not have any significant effect on customer satisfaction ($\beta = .022$, $t = .354$, $p > .05$). So, hypothesis 1-1 was supported at significance level .05, and hypothesis 1-2 was rejected at significance level .05.

| Table 1: Results of Regression analysis of Push Factor |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Dependent Variable          | Independent Variable        | Unstandardized Coefficients | Standardized Coefficients   | t               | p               | R(adj)(R)                  |
| Customer Satisfaction       | Boredom                     | -332                        | -.433                       | -7.864          | .000            | .188(184)                 |
|                             | Perceived Severity of Crisis| .017                        | .048                        | .022            | .354            | .724                      | .000 (.003)                |
4.2 Test of hypothesis 2

Hypothesis 2 is on the effect of the pull factor, attractiveness of the alternatives, perceived market competition, and Social Climate of Transition, on customer satisfaction. Independent variables are attractiveness of the alternative, perceived market competition, and Social Climate of Transition, and dependent variable is customer satisfaction, and they were under regression analysis. [Table 2] shows the findings of the measurement. Attractiveness of the alternative has negative effect on customer satisfaction (β=-.511, t=-9.721, p<.05), and Social Climate of Transition has positive effect on customer satisfaction, but the effect was not significant (β=.112, t=1.841, p>.05). The effect of perceived market competition was also found to be not significant. (β=.010, t=.165, p>.05). Therefore, hypothesis 3-1 was supported at .05 level. But hypotheses 3-2, 3-3 were rejected at .05 level.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized t</th>
<th>p</th>
<th>R(adjR²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction</td>
<td>Attractiveness of Alternatives</td>
<td>-.486</td>
<td>.050</td>
<td>-.511</td>
<td>-9.721</td>
</tr>
<tr>
<td></td>
<td>Perceived Market Competition</td>
<td>.006</td>
<td>.035</td>
<td>.010</td>
<td>.165</td>
</tr>
<tr>
<td></td>
<td>Social Climate of Transition</td>
<td>.091</td>
<td>.049</td>
<td>.112</td>
<td>1.841</td>
</tr>
</tbody>
</table>

4.3 Test of hypothesis 3

Hypothesis 3 is on the effect of the mooring factor, commitment, switching cost, and resistance to innovation on customer satisfaction. Independent variables are commitment, switching cost, and resistance to innovation and the dependent variable is customer satisfaction. [Table 3] shows the findings of the analysis. All the independent variables were found to have positive effects on customer satisfaction (commitment: β=.732, t=17.613, p<.05, switching cost: β=.320, t=5.538, p<.05, resistance to innovation: β=.344, t=5.996, p<.05). So, hypotheses 3-1, 3-2, 3-3 were supported at .05 level.
4.4 Test of hypothesis 4

Hypothesis 4 is on the effect of customer satisfaction on switching intention. Independent variable is customer satisfaction, and dependent variable is switching intention. Table 4 shows the findings of the analysis. It was found that customer satisfaction has a negative effect on switching intention ($\beta = -0.682$, $t = -15.267$, $p < 0.05$). So, hypothesis 4 was supported at 0.05 level.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>p</th>
<th>R²(adjR²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction</td>
<td>Commitment</td>
<td>$0.640$</td>
<td>$0.36$</td>
<td>$0.732$</td>
<td>17.613</td>
<td>$0.000$</td>
</tr>
<tr>
<td></td>
<td>Switching Cost</td>
<td>$0.246$</td>
<td>$0.045$</td>
<td>$0.320$</td>
<td>5.518</td>
<td>$0.000$</td>
</tr>
<tr>
<td></td>
<td>Resistance to Innovation</td>
<td>$0.276$</td>
<td>$0.046$</td>
<td>$0.344$</td>
<td>5.996</td>
<td>$0.000$</td>
</tr>
</tbody>
</table>

4.5 Test of hypothesis 5

Hypothesis 5 is about the mediating effect of customer satisfaction between antecedents of customer satisfaction (boredom, attractiveness of alternatives, commitment, switching cost and resistance to innovation), which are verified as factors impacting on customer satisfaction, and switching intention.

Table 5: Results of Regression analysis of Customer Satisfaction

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variables</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>p</th>
<th>R²(adjR²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching Intention</td>
<td>Customer Satisfaction</td>
<td>$-0.743$</td>
<td>$0.049$</td>
<td>$-0.682$</td>
<td>-15.267</td>
<td>$0.000$</td>
</tr>
</tbody>
</table>

Table 5: Regression results for testing the mediation

<table>
<thead>
<tr>
<th></th>
<th>STEP 1 Customer Satisfaction</th>
<th>STEP 2 Switching Intention</th>
<th>STEP 3 Switching Intention</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.439</td>
<td>4.647</td>
<td>5.648</td>
<td>-</td>
</tr>
<tr>
<td>Boredom</td>
<td>$-0.036(-.047)$</td>
<td>$0.044(0.053)$</td>
<td>$0.034(0.040)$</td>
<td>0.678</td>
</tr>
<tr>
<td>Attractiveness of Alternatives</td>
<td>$-0.162(-.170)**$</td>
<td>$0.259(.260)**$</td>
<td>$0.212(0.204)**$</td>
<td>0.629</td>
</tr>
</tbody>
</table>
It was found that among independent variables, commitment and attractiveness of the alternative were partially mediated by the customer satisfaction to affect the dependent variables. [Table 5] shows the findings of the analysis.

5 Results and Conclusion

This study intended to examine the psychological mechanism on switching intention of consumers of smart phone, functionally differentiated high-tech products when a brand crisis occurs using the PPM model. The findings of the analysis are as follows. 1) Among push factors, boredom was found to have negative (-) effect on customer satisfaction. But perceived severity of crisis was found not to have effect on customer satisfaction, unlike the expectation. 2) All the mooring factors, commitment, switching cost, and resistance to innovation were found to have positive (+) effects on customer satisfaction. 3) Among the pull factors, attractiveness of the alternative was found to have negative (-) effect on customer satisfaction. But, unlike expectation, perceived market competition and social climate of transition were found not to have effects. 4) Customer satisfaction was found to have strong negative (-) effect on switching intention. 5) Commitment and attractiveness of the alternative were partially mediated by the customer satisfaction to affect switching intention. Such finds offer the following theoretical and practical hints. First, even if a brand crisis happens, the high values of the mooring factors, that is, commitment, switching cost, and resistance to innovation can maintain customer satisfaction, or has positive (+) effect on the existing brand, affecting negatively switching intention. Second, unlike the expectations, in the cases of functionally differentiated high-tech products, perceived severity of crisis and social climate of transition caused by negative accident did not have negative effect on customer satisfac-
tion, nor to switching intention. It seems that the benefits coming from familiarity with the existing brand are perceived to be bigger than inconvenience caused by learning of new differentiated function of the new brand and cost. Consequently, marketers should be prepared for unexpected brand crises by creating commitment of customers with the formation of relationship between customers and brand, and strengthening high-tech functional differentiation and resistance to innovation. In spite of such hints, this study has the following limits. First, this study used the brand crisis situation as real case. And, despite the fact that whether consumers are aware of the negative accident or not has effect on the measurement, this study could not apply that. Second, the negative effect occurred not in the main part of the smart phone, but in the battery part, and this study failed to consider that the battery part was outsourced. Third, research objects were Samsung and Apple products which are number 1 and 2 in market share. So, the findings of this study have limits in generalization. Forth, Brand loyalty has negative effect on brand switch, but this study failed to check brand loyalty in advance. Fifth, this study did not secure balanced findings per brand and per age group. So, analysis based on brand and generation could not be done. Future studies are necessary to overcome such problems.

References


