

Smartphone Service Recovery According to Gender in Korea

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Abstract

The recovering trust with service failure is very important in business area. Service failure could be causes of incomplete service or employee's improper response. Although the recovering trust is important in smartphone application, few studies examine how recovering trust influence according to gender. This study investigates the process of recovering trust. The study conducted survey to verify the proposed research based on the theory such as justice, trust, gender etc. The result of the study reveals that the process of recovering trust varies depending on the gender which is one of the key factors that determines users' behavior.

Keywords: *Procedural justice, Interactional justice, Distributive justice, Recovering trust, Satisfaction, Gender*

1. Introduction

Smartphone application is a fast growing industry in Korea as well as for nations all around the world, and there are different types of users. Many studies have been conducted in mobile organization related fields such as MIS, Marketing *etc.* However, few studies have been conducted in smartphone applications. Despite the importance and richness of the topic, few research have been made to investigate users' response to both service failure and service recovery and also the impact of those important variables on service organizations.

Understanding service recovery is an important issue for service providers. Marketing strategies such as users' retention through service recovery will be an effective means to success in today's competitive market, mainly because acquisition of new users is becoming more difficult and more expensive than retaining existing users. For this reason, we focus on the process of service recovery based on the justice theory which is a mainly used explanation for the process of service recovery. Furthermore, we consider the role of gender, as it is one of the important variables which affect users' behavior.

2. Theoretical Background

2.1. Recovering Trust and Service Failure

Trust as a behavioral intention is "the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" [1]. Trust helps users overcome perceptions of risk and uncertainty in online-based services. This is important

when you encounter an unfamiliar web site or have no meaningful relationship with service providers [2]. Recovering trust as a part of trust has been used mostly in strategies for recovering service failure. Recovering trust after service failures provides possibilities for users to evaluate the overall performance of service providers' attitude and efforts. Service failure can be defined as a service encounter that results in a dissatisfied user [3]. Improper recovering efforts of organization with service failure promotes customer churn, efficient recovering of trust can strengthen the relations with users. The relationship of organizations and customers who have experienced the recovery through efforts of organization became stronger and is higher than 70%, and the loyalty of customers because of satisfaction with service recovery is higher than the others. Therefore, organizations' effort for service failure is important, since proper recovering of trust can become a key factor which can strengthen the relationship with unsatisfied customers [3]. Service failure in online retailing service occurs when customers notice delivery problems, poor interface design, customer problems, payment problems, security problems and other miscellaneous.. If service failure was experienced, it is necessary to establish a method with service recovery to maintain a sustainable relationship with the customers [4]. Because it is impossible for service providers to avoid service failures, they have to learn how to return to a state of satisfaction.

2.2. Justice

Many researchers have focused on the service recovery using the equity theory.in case of Service failure situation. Based on equity theory, it suggests theoretical framework on unsatisfied customers' behavior after consumer complaint action [5]. It is reasonable to explain recovering trust of providing service using equity theory, because customers respond strongly when the organization providing service is not proper [6]. Many studies have empirically researched the dimension roles of justice on customers' evaluations on service recovery [7]. Equity theory compares equity of the input/output ratios of themselves and their reference group, based on social exchange theory [8]. Research on justice predominantly focuses on its impact on work outcomes such as organizational citizenship behavior, job satisfaction, job turnover and work performance.

Prior studies have revealed that justice possesses three components which are procedural justice, interactional justice, and distributive justice. Procedural justice is related to feeling the perceived fairness of process. That means customers perceive the fairness of various processes and procedures for recovering failure in service. For example, if the customer has been waiting for a long time in order to receive a refund based on refund process, that means it was conducted well for distributive justice, not procedure justice. Interactional justice is related to the quality of the interpersonal treatment people receive. Distributive justice is related to the fairness of outcome allocations. Justice theory can be applied to various situations in online or off-line, therefore, it is needed to understand the social behavior [9].

2.3. Gender

Gender has been found to be a salient factor of behavior. Many studies showed that behavior of IT usage may be different according to gender. Gefen *et al.* [10] suggests that gender is an important variable moderator affecting behavioral outcomes. Empirical studies revealed that men and women are affected differently by trust in the case of online, e-mail and internet stores. Some studies found that significant gender differences exist on the relationships between attitudes and behavioral intention [11]. For example, Venkatesh and Morris (2000) were able to identify usage differences between men and women, tied to perceptions and level of adoption. Technology usage for men was strongly influenced by their perception of the usefulness of the technology, while women were more strongly influenced by perceived ease of use.

3. Research Model and Hypotheses

Based on above studies on Smartphone applications and trust, the following model is tested. Figure 1 presents the study's conceptual framework, showing the hypothesized relationships between the constructs.

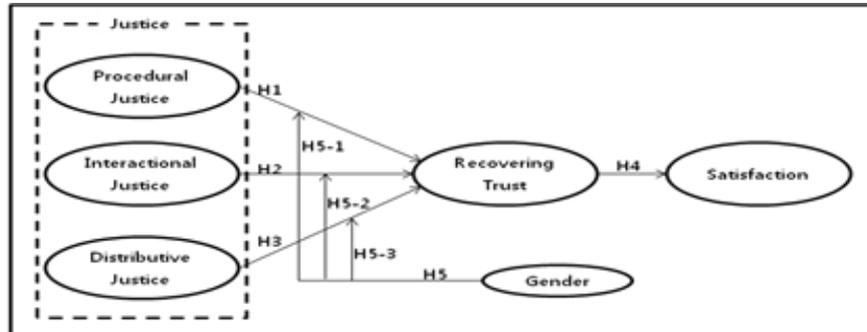


Figure 1. Research Model

3.1. Justice and Recovering Trust

In the literature, it has indicated that justice in relation to trust [12]. Three dimensions of the justice are critical factors to build the trust, because trust is built by the well-pleasing interaction between customers and service providers. Procedural justice perception is related to solve mistrust effectively in the decision-making or final decisions [13]. Customers have been satisfied when service providers deal with the problems on the service process carefully [12]. We propose the following hypothesis:

H1. Procedural justice is positively related to trust in the smartphone application usage.

It is quite likely to have a significant impact on the consciousness they form about interactional justice, which supports their levels of trust between sellers and buyers [13]. Interpersonal justice generally means that customers are serviced with politeness, decorum, kindness, and respectability. Individuals make use of holistic impressions of impartial treatment to estimate for interpersonal trust. As noted by Fang and Chiu [12], interpersonal justice bring about trust building, which further enlivens reciprocation, results in the stability of trading relationships, and ultimately leads to positive actions. Past studies have suggested that there is a positive relation between interpersonal justice and trust. We propose the following hypothesis:

H2. Interactional justice is positively related to trust in the smartphone application usage.

The lack of distributive justice may cause complaints and compensation compared to others, and the grumbles will make consumers more angry and distrustful [14]. That is the reason why the role of distributive justice is important in building trust. Some studies have also proved that distributive justice has a significant impact on trust [12]. We propose the following hypothesis:

H3. Distributive justice is positively related to trust in the smartphone application usage.

3.2. Recovering Trust and Satisfaction

Trust on the trading behavior can be seen as a behavioral belief to create a positive attitude. In the online environment, consumers hope that the sellers would react positively to interests of consumers, keeping the faith in transactions, and get the products or services that they ordered. In many studies it has been emphasized that trust is important for improving long-term relationships between the sellers and the buyers in the online

market. Trust in an online seller has been shown to have influences on the intended use of the e-vendor and other trust-related behaviors like that satisfaction or intention of usage [2]. We propose the following hypothesis:

H4. Trust is positively related to satisfaction in the smartphone application usage.

3.3. Gender

Because females are subjective and complex, they consider the process to be more important than the result. Males, on the other hand, consider the outcome as the only thing that matters to them. In fact, males are objective and simple when they do some work or make decisions. Looking at the existing mobile service or IT behavioral research, it has shown that gender differences were in the usages of mobile services. In case of smartphone applications, service recovery may have three different justices such as procedural, interactional and distributive justice. Thus we suppose that it has similar relationships in the recovering of trust in the using mobile applications. We propose the following hypothesis:

H5. Justice has a different influence on the recovering of trust according to gender.

4. Research Method and Analysis

A survey was conducted in Korea in order to empirically test the trust recovering in the smartphone application usages. Survey questions used were borrowed from prior studies that had proven the validity and reliability of the questions. We collected 24 questionnaire items for each of the five constructs. Among the 520 total questionnaire responses, 487 remained after surveys with invalid or missing data were excluded. All questions were rated on a 7-point Likert scale that ranged from 1 for “strongly disagree” to 7 for “strongly agree”.

This study tests hypotheses by using Smart PLS 2.0. The partial least squares (PLS) method was used to test the research model and outcome variables. We analyzed the data via PLS. The test of the structural model included estimating the path coefficients and R² values, which shows the predictive power of the model.

5. Results

The reliability of measurement items was assessed by the internal consistency method. Cronbach’s alpha values used for estimating internal consistency, which values for each construct surpasses the recommended value of 0.6 or 0.7. These values range from 0.910 to 0.964 in this study.

Individual composite reliability, convergent validity of the measures associated with individual constructs, and discriminant validity assessed the adequacy of the measurement model. We assessed the composite reliability of constructs for all questions which ranged from 0.85 to 0.94. We also found that questions had convergent validity which is evaluated by the use of item reliability, average variance extracted (AVE), and t-statistics for factor loadings. It is adequate when items load highly (loading > .50) on their associated factors, and the AVE from the construct should be greater than the variance shared between the construct and other constructs in the model for satisfactory discriminant validity. All of the measures loaded much higher than the suggested threshold and shows the validity of the questionnaire items used in our study (See Table 1).

Table 1. Measurement Model Results

	Items	Standardized Factor Loading	Cronbach's α	AVE	Composite Reliability	t-value
PJ	1	0.844	.910	.81	.85	30.565
	2	0.821				54.242
	4	0.776				36.307
IJ	1	0.699	.946	.77	.94	40.752
	2	0.852				77.446
	3	0.851				71.985
	4	0.841				66.852
	5	0.544				22.523
DJ	1	0.816	.950	.79	.89	58.862
	2	0.750				27.964
	3	0.822				44.634
	4	0.781				27.002
	5	0.779				63.620
Trust	1	0.773	.964	.78	.94	68.777
	2	0.800				37.050
	3	0.806				103.481
	4	0.768				36.898
	5	0.755				55.859
Satisfaction	1	0.545	.953	.61	.94	80.477
	2	0.640				73.908
	3	0.630				75.069

Table 2 shows the results of the structural model. In the total model, the results show that interpersonal justice and distributive justice have significant effect on trust ($\beta=0.321$; $t=3.376$; $\beta=0.465$; $t=5.861$) and the effect of trust on it is a fairly positive relationship ($\beta=0.796$; $t=14.970$). However, procedural justice has no significant effect on trust ($\beta=0.112$; $t=1.209$). We used multi-group analysis to understand how gender is a moderator in recovering trust in smartphone applications. Multi-group analysis has been used to investigate moderating variables in a structural model when independent data samples are available for each group of the moderating variables. The results of a multi-group analysis using nested chi-square test comparing the male and female groups are shown in Table 1. The results indicate that procedural is found to affect trust more significantly in the male group than in the female group

Table 2. Model Analysis and Chi-Square Difference ($p < .05$)**

IV	DV	Total		male(n=131)		female(n=356)	
		path	t-value	Chi-square difference			
				path	t-value	path	t-value
PJ	TRUST	0.11	1.21	11.013			
				0.196	1.84**	0.09	1.01
				-0.739			
IJ	TRUST	0.32	3.38**	0.308	3.04**	0.32	3.53**
				-3.105			
				0.445	5.42**	0.47	5.38**
DJ	TRUST	0.47	5.86**	4.732			
				0.815	21.75**	0.79	13.45**
				4.732			
TRUST	SAT	0.80	14.97**	0.815	21.75**	0.79	13.45**

6. Conclusion

This article empirically investigated the moderating effects of gender in the recovering of trust behavior related to a smart-phone application services. The results showed that justices, except procedural justice, have significant influence in recovering trust. The path from procedural justice to recovering trust was stronger to male than female. On the other hand, the path from distributive justice to recovering trust was stronger to female than male. No statistically significant difference was observed for the interpersonal justice.

This study has some implications. First, we proposed the recovery model for smart-phone application services. While previous research has focused mainly on the offline services such as hotel service or shopping service, this study focused on online service especially, smart-phone application services. Second, we investigated that the relationship between justice and recovering trust in terms of gender. This study revealed that the impact of justice on trust recovery has differences depending on gender. Third, this study shed lights on the process of trust recovery in smart-phone application services users, enabling smart-phone application services providers to enhance user's trust and satisfaction by developing more gender-oriented services. This study helped our understanding of the intricate connections between gender and the process of recovering trust in smart-phone application services.

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