Priority Factors of Service Recovery Strategy in Distribution Channel

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In this study, we tried to evaluate the relative importance and find out the differences in consumer perceptions regarding service recovery strategies and the service provider in the distribution industry by using AHP (Analytic Hierarchy Process) analysis method. Therefore in this study, we tried to systematize various recovery strategies which were considered very important during service failure process in the distribution industry and analyze the relative importance for each recovery strategy. We set hierarchy composed of four items of monetary, action-oriented, psychological, and assured level as primary selection criteria and a total of 16 items(indemnity, refund, gift, gift certificate, prompt resolution, exchange, manager support, explanation, apology, empathy, acknowledge, kindness, assortment, after service, manage subcontractor, manage employee) as secondary selection criteria. We tried to take one step further from the service sector and study service recovery strategies specialized in distributor services.

This study suggests various implications about service recovery strategies of distributors. First, this study can provide practical implications – e.g. service recovery efforts should be applied differently depending on service channels. There is a perceptual difference with respect to the importance of the types of service recovery strategies between service provider and final customer. Second, we can find theoretical implications in terms of identifying the priorities through hierarchy design of new recovery strategies and comparison of each element from the classifications of the current fractional recovery strategies. We hope to help service providers to build more efficient recovery strategy system based on the results of this study.

Key words: service failure, service recovery strategy, AHP, distribution, retailing, service channel

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Ⅰ. Introduction

The development of technology brought about new retail business such as TV home shopping and e-commerce, social commerce in the distribution industry and changed the small-scale traditional living dependent structure to the large-scale enterprise type distribution structure. Due to these changes in the distribution industry, competition within the distribution channel as well as competition between distribution channels is being intensified. So, each distributor is putting its heart and soul to maintain the ongoing relationship with customers and trying to develop the relationship with customers through service differentiation, CRM (Customer Relationship Management). Maintaining the ongoing relationship between customers and distributors is very important for distributors given that securing new customers involves more costs and efforts than maintaining the existing customers in an increasingly competitive situation (Reichheld 1996).

Basically, there should be no factors causing customer dissatisfaction in order to maintain the ongoing relationship between distributors and customers. However, service failure still occurs, causing customer dissatisfaction by making the customer thinks the service as poor service. Even if distributors work hard not to cause service failure situations, it is difficult to avoid service failure due to the characteristics of services (i.e. inseparability, intangibility and heterogeneity). However, appropriate recovery strategies for overcoming service failure in the situation after service failure ease customer dissatisfaction and even make customers use the same service again because they remember experiencing high satisfaction (Bitner, Booms, and Tetreault 1990).

Most previous studies with regard to service failure and recovery have carried out research in various aspects (Hoffman, Kelley, and Chung 2003) such as general types of service failure (Bitner et al. 1990; Gremler and Bitner 1992), customer's attribution for failure (Bitner, Booms, and Mohr 1994; Folkes and Kostos 1986), customer's expectations regarding service recovery (Kelley and Davis 1994), customer's evaluation process related to recovery (Goodwin and Ross 1992; Hoffman and Kelley 2000), type of fairness perceived by customers in the service recovery process and consequent customer response and influence (Mattila and Patterson 2004; Patterson, Cowley, and Prasongsukarn 2006). However, most studies on service failure just examined if service recovery strategies are influential and did not try to find out which recovery strategy customers think important. Also, it is important to study service failure and recovery strategies in the distribution industry because distribution services are ones increasing the value of the product through marketing mix and show different features from those of the general service industry.

In this study, we tried to evaluate the relative importance and find out the differences in perception regarding service recovery strategies perceived by the customer and the service provider in the distribution industry by using AHP (Analytic Hierarchy Process) analysis method. AHP is the decision making method for the purpose of systematic evaluation for each alternative if there are a number of decision-making objectives or evaluation criteria and relative priority evaluation is possible for numerous alternatives (Saaty 1990). Therefore in this study, we are to systematize recovery strategies considered important during service failure in the distribution industry and analyze the relative importance for each recovery strategy to provide basic data systematic strategy establishment for recovery during service failure. In addition, we are to help service providers to build more efficient recovery strategies system based on it.

Ⅱ. Theoretical Background

2.1 Service Failure and Recovery

In some cases, although service providers work hard to provide the best service, the service is not delivered properly. Service failure occurs when the service did not meet the level of service expected in advance and this causes the customer's negative feelings. That is, service failure can be said for customers to experience service results poorer than they expected and mean that the customers have a bad feeling for service process or results (Bell and Zemke 1987; Heskett, Sasser, and Hart 1990). Berry and Parasuraman (1991) defined service failure as dissatisfaction caused in the service process or result due to service provider's mistake etc. This means that customer dissatisfaction occurs in the process of services between the customer and the service provider and as a result, the customer feels unpleasant feelings and it mainly occurs in the interaction between companies or service providers and customers (Sparks and McColl-Kennedy 2001). Thus, the reaction of the customer who felt negative feelings by experiencing service failure not only declines the image and brand value of the service company but negatively affects the company's sales in the long run and eventually causes cause additional costs by service recovery efforts.

Companies are trying to pursue perfect services through a variety of efforts but it is difficult to avoid service failure due to the nature of human among the inherent distinctiveness of services. However, companies are using a variety of methods to address and minimize damage caused by service failure and this is called service recovery. The recovery for service failure can be defined as a wide range of activities taken by the service provider in response to the failure (Kelley and Davis 1994; Smith,

Bolton, and Wagner 1999). Weun, Beatty, and Jones (2004) said that service recovery is a series of all actions that present solutions to the customer's dissatisfaction caused by any mistake regardless of the intent of companies. In addition, Etzel and Silverman (1981), McCollough and Bharadwaj (1992) proposed that efficient recovery strategies in case of service failure are more effective than good services from the beginning and may lead to service paradox situation because customers evaluate the provider more favorably. In other words, service failure situation can be regarded as a positive opportunity rather than a negative one to the service provider and it means if resolving the service failure well, the provider can enter into long-term relationships with customers. Johnston and Fern (1999) also reported that double deviation repeating the same mistake can lead to customer satisfaction if the company presents appropriate recovery strategies. They stressed that companies must pay attention to efforts to reduce service failure as well as recovery and put forth proper recovery strategies.

In order to make use of appropriate service recovery strategies, the difference in recognition between service providers and customers is important and Bitner et al. (1994) found out that there is a difference in perception of satisfactory or unsatisfactory situation depending on the customer and the service provider's perspective in service encounter situations. Also, Chung-Herrera et al. (2004) reported that differences occurred according to the customer and the service provider's perspective in service failure and recovery efforts. The customer and the service provider made a quite different evaluation especially in bad recovery situation and this shows that they have different understanding of types of service failure, severity, recovery type and satisfaction for recovery between the customer and the service provider. Therefore, comparison of the difference in perception gap for service recovery strategies between service providers and customers is an important topic in service failure, recovery.

The fact that appropriate recovery strategies after service failure further strengthen the relationship with customers has a more important meaning in that if the dropout rate of customers is reduced by 5%, the profit rate can increase up to 85% especially in the distribution industry (Reichheld and Sasser 1990). It is very important to study service recovery strategies specialized in the distribution industry for the reasons that maintaining the relationship with customers has a more important meaning in the distribution industry and distributors' own specialized customer services are provided such as product assortment and parking service, mileage service, to increase the value of products handled by distributors. In addition, it is very important to identify the perception gap between customers and service providers for recovery strategies in service failure situations is a very important part in establishing relationship and it is also

very important to examine the priorities of service recovery strategies perceived by customers and those of recovery strategies perceived by service providers.

Research Question 1: How do the priority and importance of service recovery strategy factors appear depending on customers and service providers?

2.2 Face-to-Face, Non-Face-to-Face Service Channel

As the advantages of online shopping such as ease of obtaining information, saving time and effort, competitive price are highlighted due to recent development of communication technology, more and more people are enjoying online shopping (Koo 2006; Lim and Dubinsky 2004; Verhoef and Langerak 2001). Such emergence of a variety of communication due to the development of information and communication technology increases and promotes non-face-to-face service channels. Generally, non-face-to-face service channels mean the method that customers use distribution channels by using information and communication technology without direct contact with employees and represent transactions by using Internet and TV, phone, mail. On the contrary, face-to-face service channels mean all the methods of transactions through direct contact between customers and employees and include traditional distribution channels such as department stores, discount stores, convenience stores.

Channels used by customers depend on their disposition and circumstances, values and are changed depending on risk factors they perceive (Gupta, Su, and Walter 2004; Kim 2002). This is because there are some basic characteristic differences between face-to-face and non-face-to-face service channels.

First, major key elements are focused on information in non-face-to-face service channels while they are variously distributed to location and physical facilities, employees etc. in face-to-face service channels. This means that a number of key elements in face-to-face service channels are meaningless in non-face-to-face services (Zhang and Prybutok 2005).

Second, one-to-one communication is possible in face-to-face service channels but many-to-many communication is possible through information and communication technology in non-face-to-face service channels. In other words, customers can be providers of information in non-face-to-face service channels and various interactions are possible among customers (Li, Tan, and Xie 2002).

Finally, transactions in face-to-face service channels are carried out by contact between customers and employees while transactions in non-face-to-face service channels are conducted by latest information and communication technologies through Internet, smart devices as well as traditional means of communication such as

TV and telephone.

As shown above, there are fundamental differences between face-to-face and non-face-to-face service channels and service levels perceived by customers may be different because of this (Li et al. 2002). This means that there may be differences in priority of recovery strategies during service failure. Thus, in this study, we set the following research question in order to examine the characteristics of importance and priority in recovery strategies between face-to-face and non-face-to-face service channels.

Research Question 2: How do the priority and importance of recovery strategy factors after service failure appear depending on face-to-face and non-face-to-face service channels?

2.3 AHP

If evaluation criteria are two or digitized in decision-making, people can determine priorities relatively easily. However, if evaluation criteria are multiple, it is difficult to determine priorities easily. Moreover, evaluation criteria themselves are intangible and qualitative difficult to quantify, decision making is more difficult. Like this, if decision is made based on a number of evaluation criteria difficult to quantify, AHP helps decision-making by organizing factors in order of priorities. AHP is one of multi-criteria decision making techniques and means to consistently determine the value of a given alter-native to calculate the importance and its purpose is to offer overall view of the complex issue inherent in decision-making and help decision makers to evaluate by comparing identical factors. Also, it is used in a wide variety of areas such as business administration, public administration, public studies, social issues, engineering, manufacturing, and government policy (Saaty 1990; Saaty and Vargas 2001; Triantaphyllou and Mann 1995; Vaidya and Kumar 2006).

This AHP analysis method is carried out through the following four steps.

The first step begins by setting the decision-making hierarchy and is to define the selection and concept related to decision-making problems and to classify interrelated evaluation factors into levels to set the decision making hierarchy. In the top level, the most comprehensive decision-making purpose is placed and more and more specific evaluation factors are placed as the level is lower (Saaty 1980).

In the second step, data for determination are collected through pairwise comparison between evaluation factors. At this time, 9-point scale is given to importance of each evaluation factor and pairwise comparison matrix is created. Importance is up to 9 points because people can compare $7(\pm2)$ objects at the same time (Miller 1956). In addition, if lower evaluation factors are consists of n factors, it is necessary to compare total $n(n-1)/2$ times (Saaty and Vargas 1982). Pairwise comparison of each evaluation

factor takes inverse number based on the opposite angle and is expressed as pairwise comparison matrix A as follows.

$$A = \begin{bmatrix} 1 & a_{12} & a_{13} & \cdots & a_{1n} \\ a_{21} & 1 & a_{23} & \cdots & a_{2n} \\ a_{31} & a_{32} & 1 & \cdots & a_{3n} \\ \vdots & \vdots & \vdots & \cdots & \vdots \\ a_{n1} & a_{n2} & a_{n3} & \cdots & 1 \end{bmatrix}$$

Here $a_{ij} = 1/a_{ji}$, $a_{ii} = 1$, $\forall i$

In the third step, the relative weight of each evaluation factor is estimated by using the eigenvalue method. If relative importance is $w_i (i = 1, 2, \cdots, n)$ for n comparable evaluation factors in one level, it can be estimated to $a_{ij} = w_i / w_j (i, j = 1, 2, \cdots, n)$. Thus the following equation is established.

$$\sum_i^n a_{ij} \cdot w_j \cdot \frac{1}{w_i} = n \ (i, j = 1, 2, \cdots, n)$$

This is also as follows.

$$\sum_i^n a_{ij} \cdot w_j = n \cdot w_i \ (i, j = 1, 2, \cdots, n)$$

Matrix A composed of factor a_{ij} can be expressed as follows.

〈Table 1〉 Scale of Relative Importance

Intensity of importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective
3	Moderate importance of one over another	Experience and judgment strongly favor one activity over another
4	Essential or strong importance	Experience and judgment strongly favor one activity over another
7	Very strong importance	An activity is strongly favored and its dominance demonstrated in practice
9	Extreme importance	The evidence favoring one activity over another is of the highest possible order of affirmation
2, 4, 6, 8	Intermediate values between the two adjacent judgments	When compromise is needed
Reciprocals		If activity i has one of the above nonzero numbers assigned to it when compared with activity j, then j has the reciprocal value when compared with i

Source: Saaty, T. L. (1990), "How to make a decision: The Analytic Hierarchy Process," *European Journal of Operational Research*, 48(1), 9-26.

$$A = \begin{bmatrix} w_1/w_1 & w_1/w_2 & w_1/w_3 & \cdots & w_1/w_n \\ w_2/w_1 & w_2/w_2 & w_2/w_3 & \cdots & w_2/w_n \\ w_3/w_1 & w_3/w_2 & w_3/w_3 & \cdots & w_3/w_n \\ \vdots & \vdots & \vdots & \cdots & \vdots \\ w_n/w_1 & w_n/w_2 & w_n/w_3 & \cdots & w_n/w_n \end{bmatrix}$$

This is the same as eigenvalue problem in linear algebra and therefore, it is possible to obtain w in the following according to the eigenvalue method.

$$A \cdot w = n \cdot w$$

Here, $w = [w_1, \ w_2, \ w_3, \ \cdots w_n]$ is the right eigenvector of matrix A and n is eigenvalue of matrix A.

However, AHP assumes that evaluation by pairwise comparison is not correct and therefore, w must be estimated. Assuming that weight w of each factor for pairwise comparison matrix A is unknown, this matrix is called as A and weight w estimated for this matrix can be calculated using the following equation.

$$A \cdot w = \lambda_{max} \cdot w$$

Here, maximum eigenvalue of λ_{max} : matrix A

Since λ_{max} is always greater than or equal to n, as the value of λ_{max} gets closer to n,

pairwise comparison matrix A can be interpreted as consistent. Consistency can be tested through CI (Consistency Index) and CR (Consistency Ratio).

$$CI = (\lambda_{max} - n)/(n-1)$$
$$CR = (CI/RI) \times 100\%$$

Here, RI (Random Index) means to optionally extract integers from 1 to 9 and then create inverse number matrix to obtain CI. Generally, if CR value is shown within 10%, the response is accepted as consistent and reliable (Saaty 1990).

In the final step, ranking is obtained by putting relative weight of evaluation factors present in each level. At this time, comprehensive importance vector determining the priority for lowest alternatives for top level decision-making is obtained and this can be obtained by putting the relative weight of each alternative together.

Specifically, comprehensive importance for alternatives of kth sub-level can be obtained through the following equation.

$$C[1,k] = \prod_{i=2}^{k} B_i$$

$C[1, k]$: Comprehensive weight of kth level fac-

<Table 2> Random Index

n	1	2	3	4	5	6	7	8	9
RI	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45

tor for the first level

B_i : $(n_{i-1}) \cdot n_i$ matrix including the line constituting estimated w vector

n_i : Number of factors of ith level

Ⅲ. Methods

3.1 Setting of Service Recovery Hierarchy Map

The most important part in analyzing the priorities by AHP is to set and structure evaluation factors to set decision-making hierarchy. In order to set appropriately structured decision-making hierarchy by comprehensively organizing and putting together several alternatives of service recovery in service failure situations, we examined a variety of previous studies related to service recovery.

In the study on service recovery strategies, Bell and Zemke (1987) classified recovery strategies into urgent reinstatement, empathy, apology, symbolic atonement, follow-up and Bitner et al. (1990) classified the components of service recovery strategies into 4 kinds of acknowledgement, explanation, apology, compensation. In addition, Smith et al. (1999) classified service recovery strategies according to fairness theory and shows that there are distributive justice (compensation), procedural justice (response speed), interactional justice (apology, recovery initiation).

In the study related to service failure and recovery of the distribution industry, Kelley, Hoffman, and Davis (1993) and Forbes, Kelley, and Hoffman (2005) classified recovery strategies of retail and e-commerce retail into 12, 11, respectively through CIT (Critical Incidents Technique). In these two studies, same recovery strategies (discount, correction, correction plus, replacement, apology, refund, store credit, unsatisfactory correction, failure escalation, nothing) were presented regardless of online and offline retails but other recovery strategies were also presented due to the nature of the channel. In case of offline retails, manager/employee intervention and customer initiated were shown and in case of online retail, replace at brick and mortar was added.

In the exploratory study on service failure factors and recovery strategies of internet shopping mall companies, Jang and Park (2005) classified recovery strategies into 8 kinds such as nothing, apology, cash refund, exchange, replacement of other good/service, replacement of point, coupon, discount. To questions about recovery strategies that customers want to additionally request to shopping mall companies, various answers have been proposed such as accurate information, immediate response of the service provider, kindness, good quality products, thorough management of partner firms, thorough A/S etc. In addition, many strategies have been mentioned by various studies on service recovery and they are summarized in 〈Table 3〉.

<Table 3> Service Recovery Strategy Type

Scholars	Industry	Service recovery strategy type
Bell and Zemke (1987)	-	apology, urgent reinstatement, empathy, symbolic atonement, follow-up
Bitner et al. (1990)	airline, hotel, restaurant	acknowledgement, explanation, apology, compensation
Kelley et al. (1993)	retail	discount, correction, manager/employee intervention, correction plus, replacement, apology, refund, store credit, customer initiated, unsatisfactory correction, failure escalation, nothing
Hoffman et al. (1995)	restaurant	free food, discount, coupon, managerial intervention, replacement, correction, apology, nothing
Johnston and Fern (1999)	bank	A. single deviation to satisfy : put it right, quickly, modest apology, written confirmation, deal with third party, refund costs incurred, assure not happen again B. single deviation to delight : put it right, quickly, modest apology, written confirmation, deal with third party, refund costs incurred, assure not happen again, follow up call or letter, apologize by letter C. double deviation to satisfy : staff to 'put themselves out', put it right better/faster, involve higher authority, provide compensation, managerial apology, written assurance, written explanation D. double deviation to delight : nothing possible
Smith et al. (1999)	hotel, restaurant	compensation, response speed, apology, recovery initiation
Hoffman et al. (2003)	hotel, restaurant	A. compensatory responses : gratis, discount, coupon, free upgrade, free ancillary product B. action-oriented responses : total replacement of good/service, correction, substitution, cash refund, store credit C. other responses : failure escalation, empathetic response, managerial intervention, referred customer elsewhere, no response
Forbes et al. (2005)	e-commerce	discount, correction, correction plus, replacement via original channel, apology, refund, store credit, unsatisfactory correction, failure escalation, nothing, replace at brick and mortar
Jang and Park (2005)	internet retailing	nothing, apology, cash refund, exchange, replacement of other good/service, replacement of point, coupon, discount, others
Chuang et al. (2012)	banking industry	psychological, tangible

Distribution industry is in the form in which complex services are combined and a variety of efforts are required to maintain customer relationships. A variety of services need to be provided such as product assortment, price, quality, employees, store locations, additional facilities, working hours, payment method, convenience, accessibility and the cause of service failure can be found in many places. Also, service failure of distributors can be triggered in more various forms because distributors are traditionally located in the center of the distribution channel and are closely related with production and manufacturers and other distributors as well as customers. For example, most customers complain defects of the product that they purchased to the seller and strictly speaking, this case is the manufacturer's service failure not distributor's. However, due to the nature of the distributor, this service failure leads to degradation of service of the distributor. Recently, many distributors make a contract with delivery companies to conduct delivery services and just as service failure for this worsens the quality of service of distributors, unforeseen service failure is caused by partner firms. Because of these points, counterplans for service recovery strategies must be arranged even if distributors themselves do not cause service failure. Fully given the characteristics of the distribution industry, recovery strategies for service failure need to properly fuse recovery strategies of various dimensions mentioned

in the existing service industry and recovery strategies of service guarantee type specialized in the distribution industry as shown in ⟨Table 3⟩. Putting concepts on service guarantee presented by many scholars together, service guarantee is a promise provided to customers at the enterprise level for services to be provided to customers (Hays and Hill 2001; Liden and Skalen 2003; McCollough and Gremler 2004) and furthermore, it is a formal promise designed by the service provider in order to reduce the loss of customers in service failure situations (McCollough 2010). Therefore, service guarantee can be provided as a means for service recovery (Tax and Brown 1998). That is, it increases the possibility for customers to continuously select the service company by promising good service and maintaining service quality consistently perceived by customers (Liden and Skalen 2003; Singh 1990) and reduces the risk perceived by customers by telling customers the step of service recovery in service failure situations (Berry and Yadav 1996). The assured level presented in this study is different from existing service guarantee at action time. That is, the existing guaranteeing level is presented before customers receive services directly and serves to reduce risks for service companies (Berry 1995). However, assured level presented in this study is a service recovery strategy provided to customers in service failure situations after service experience and plays a role of convincing through promise with

customers to avoid future service problems. In particular, it can be explained as an act of commitment assuring to avoid the same future service failure to customers for representative service failure situations that may occur in distributors such as out of stock or lack of products, service failure by employees and partner firms. In the fiercely competitive and multi-channel distribution market environment, risks perceived by customers lead to deviation behavior and this has a direct bad influence on management performance. Therefore, to maintain the relationship with customers, act giving confidence through a promise of providing smooth services to customers after service failure is considered to be very important. As a result, we regarded that in case of primary level of service recovery strategies of distributors, it is proper to additionally set assured level as well as monetary, action-oriented, and psychological levels mentioned as important recovery strategies in the existing service field.

In this study, we summarized existing studies related to existing service recovery and set a total of 37 evaluation criteria such as free, indemnity, refund, correction, urgent reinstatement, rapid response, apology, assortment etc. And then, we carried out the work of integrating or removing variables of similar concepts through brainstorming of researcher (ex: correction, urgent reinstatement, rapid response → prompt resolution). At the same time, in order to check if service recovery strategies proposed by re-
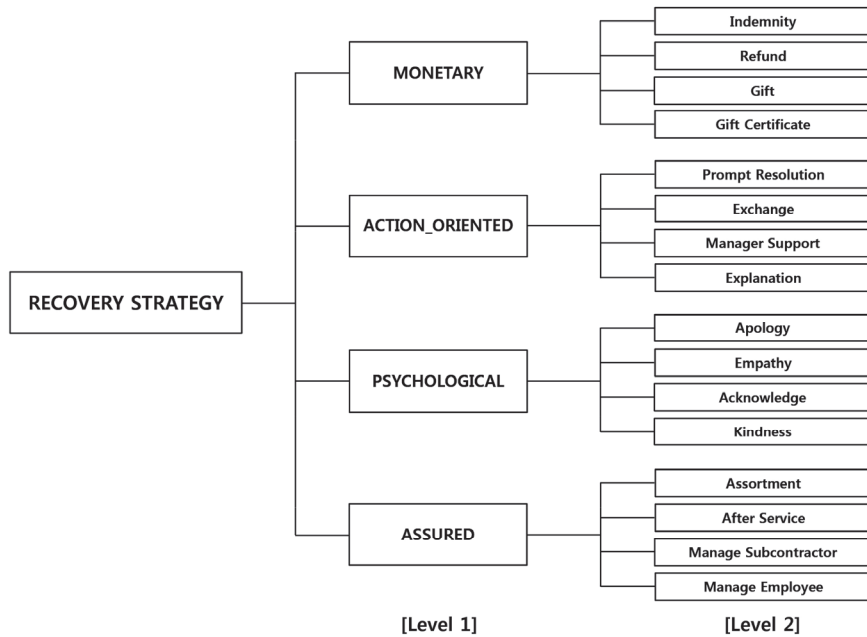
searchers are really realistic or they are recovery strategies that can be applied to the Distribution Industry or service recovery strategies proposed can be equally applied in face-to-face and non-face-to-face service channels, we carried out FGI (Focus Group Interview) a total of 2 times targeting 5 undergraduate and graduate students. Through interviews with 3 experts working as professors at Universities located in Seoul with respect to the marketing and distribution sectors, we verified the validity with respect to selection criteria of service recovery strategies and hierarchy map setting. Through this process, we set hierarchy composed of four items of monetary, action-oriented, psychological, assured level as Level 1 and a total of 16 items as Level 2.

The hierarchy related to service recovery strategies presented in this study is as shown in 〈Figure 1〉 and the operational definition and detailed strategies of each level for service recovery strategies of distributors are as shown in 〈Table 4〉.

3.2 Survey Target

In this study, we conducted a survey targeting adult men and women aged 20 years (19 years old in full) or older in both consumers and service providers. In case of customers, the survey was carried out through 1:1 interview targeting undergraduate students and MBA, graduate students of universities located in Seoul

<Figure 1> AHP Structure for the Present Study

[Level 1]   [Level 2]

<Table 4> Service Recovery Strategies of Distribution

Recovery strategy	Detailed strategy
Monetary: Service provider's or employee's act for financial reward	• Indemnity: Pay indemnification for loss of money and time • Refund: Pay cash refund of service failure • Gift: Give customer a gift in compensation for service failure • Gift certificate: Give customer a gift certificate that available in the store to compensate
Action-oriented: Service provider's or employee's act for correcting poor service	• Prompt Resolution: Solve the problems promptly • Exchange: Exchange defective product for new one • Manager Support: Manager deal with service failure directly • Explanation: Explain the cause of service failure and recovery
Psychological: Service provider's or employee's act for Psychological comfort	• Apology: True sincere apology for customers • Empathy: Empathy for customer's dissatisfaction • Acknowledge: Admit service provider's or employee's mistake • Kindness: Service employees treat a customer kindly
Assured: Service provider's or employee's act for promise to assure customer of thorough management and avoiding the same service failure	• Assortment: Promise of good quality product assortment • After service: Promise of after service • Manage subcontractor: Promise of thorough management of partner firms • Manage employee: Promise of thorough management of service employee and service training

and in case of service providers, data were col-
lected through the company specializing in sur-
vey targeting the company's CS (Customer
Satisfaction department) personnel. Also, data
have been collected for 6 months since September
2013. The survey conducted for customers in-
vestigated people who experienced service fail-
ure while using distributors within recent 3
months and the survey was carried out for
distributor service providers after asking them
to recall a service failure situation that mainly
occurred during services. Also, we selected dis-
tribution service companies frequently used by
customers and investigated face-to-face serv-
ices and non-face-to-face services by classify-
ing them into department stores, large retailer,
convenience stores, direct selling, retail stores

and Internet shopping mall, Social Commerce
and TV home shopping, respectively.

The final analysis was carried out based on
data except insincere response. First, in case of
customers, a total of 155 people were surveyed
such as 74 men (47.7%), 81 women (52.3%)
and 20s were 113 people (72.9%), 30s 24 people
(15.5%), 40s 11 people (7.1%), 50s or above 7
people (4.5%).

In case of service providers, a total of 77
were surveyed such as 45 men (58.4%), 32
women (41.6%) and service types include de-
partment store 6 people(7.8%), Internet shop-
ping mall 14 people (18.2%), large retailer 5
people (6.5%), direct selling 17 people (22.1%),
retail store 34 people (44.2%).

Also, in case of service failure situations ex-

〈Table 5〉 Characteristics of the Sample

	Characteristic	Customer	%	Provider	%
Gender	Male	74	47.7	45	58.4
	Female	81	52.3	32	41.6
Age	19-29	113	72.9	18	23.4
	30-39	24	15.5	35	45.5
	40-49	11	7.1	18	23.4
	50 or above	7	4.5	6	7.8
Service sector	Department store	26	16.8	6	7.8
	Internet shopping mall	63	40.6	14	18.2
	Large retailer	28	18.1	5	6.5
	Convenience store	7	4.5	0	0
	Social commerce	15	9.7	0	0
	Direct selling	6	3.9	17	22.1
	TV home shopping	5	3.2	1	1.3
	Retail store	5	3.2	34	44.2
	Total	155	100	77	100

<Table 6> Service Failures

Type of service failure	Customer	%	Provider	%
Delivery problems	40	25.8	25	32.5
Price problems	14	9.0	4	5.2
Retail store or Web site design problems	8	5.2	5	6.5
Customer service problems	26	16.8	5	6.5
Product quality or defect problems	25	16.1	20	26.0
Problem of exchange, return or refund	19	12.3	11	14.3
Information service problems	15	9.7	2	2.6
Payment problems	4	2.6	4	5.2
Security problems	4	2.6	0	0
Others	0	0	1	1.3
Total	155	100	77	100

perienced by customers, delivery problem (Delivery time delay, delivery of product not ordered) was the most, 40 people (25.8%) followed by customer service problem (lack of coupon or mileage system, difficulty of communicating with other customers, lack of kindness of employees or managers, lack of responsiveness to customer requirements) 26 people (16.8%), product quality or product defects (Frequent failure of the product purchased, packaging defects, product defects) 25 people (16.1%). In case of service providers, questions asked about failure situation occurring frequently in everyday life showed the similar results to service failure situations experienced by customers.

3.3 Survey Configuration and Scale

The survey for analyzing service recovery strategies priorities consisted of a total 6 survey items by comparing four Level 1 (monetary, action-oriented, psychological, assured level) presented in <Figure 1> pairwise. In Level 2, questionnaire was constructed for pairwise comparison by each level. Specifically, at the monetary level, 6 pairwise comparison questionnaire items were constructed for 4 sub selection criteria and also at the action-oriented, psychological and assured level, 6 questionnaire items were constructed for 4 sub selection criteria. Therefore, questionnaire was constructed by using a total of 30 pairwise comparison items.

For scale configuration at each pairwise comparison item, we used Likert 9-point scale of listing evaluation criteria on the left and right side and giving values of 1-9. For example, subjects were asked to answer in '1' if 'monetary level' is equally important to 'action-oriented level' and 'left 3' if 'monetary level' is slightly more important than 'actoin-oriented level', 'left 5' if important, 'left 7' if very important and 'left 9' if extremely important. On the contrary,

they were asked to answer in 'right 3' if 'action-oriented level' is slightly more important than 'monetary level', 'right 5' if important, 'right 7' if very important and 'right 9' if absolutely important.

Response results obtained through this method were analyzed by using geometric mean value. Geometric mean is used because it is known to be the only way of maintaining inverse number of matrix when integrating estimation of multiple evaluators and is especially useful when empirical data on decision making or previous studies are not enough (Aczel and Saaty 1983).

Ⅳ. Analysis Results

In order to ensure reliability of the results in the analysis of using AHP technique, those surveyed must answer each survey item consistently. CR, the method of measuring the degree of determination error by each individual is used and generally, 0.1 or less is considered that the response has reasonable consistency and 0.2 or less is unacceptable but more than that requires re-survey because of lack of consistency (Saaty 1980). CR of customers was verified and as a result, the responses of those surveyed turned out to be consistent, showing that there is no problem in the interpretation of analysis results.

First, we tried to find out how customers' service recovery strategy selection importance and priorities appear. Analysis was carried out and as a result, action-oriented level (34.5 %) was found to be the most important factor in the Level 1 and psychological (23.6%), assured (21.2%), monetary level (20.7%) turned out to be important service recovery strategies in the order. Looking at importance and priority of service recovery strategies selection factors by each level in Level 2, indemnity (37.4%) was found to account for the highest proportion at the monetary level followed by refund (34.3%), gift (15.1%) and gift certificate (13.2%). At the action-oriented level, selection factors were found to be important in order of prompt resolution (46.8%), exchange (23.6%), explanation (16.7%), manager support (12.9%). At the psychological level, it turned out that apology accounted for the largest proportion, 37.4% followed by acknowledge (27.0%), empathy (25.4%), kindness (18.6%). Finally, at the assured level, it was found in the order of post thorough after service (39.0%), assortment (26.9%), manage employee (20.3%) and manage subcontractor (13.8%).

Finally, looking at global weights, the value of multiplying importance of Level 1 by importance of Level 2, prompt resolution (16.1%) turned out to account for the largest proportion among a total of 16 service recovery strategy selection factors. And then apology (8.8%), after service (8.3%), exchange (8.1%) turned out

to account for the high proportion. On the other hand, gift certificate (2.7%), manage subcontractor (2.9%), gift (3.1%), empathy (4.0%) were found to be factors accounting for relatively low proportion in service recovery strategies. That is, in the event of service failure, they think that quick solution is important at least approximately 2 times up to more than 4 times than other recovery strategies.

We examined service recovery strategy selection importance and priorities between customers and service providers that we tried to identify Research Question 1. It was found that customers think importance in the order of action-oriented (34.5%), psychological (23.6%), assured (21.2%), monetary level (20.7%) but service providers in the order of assured (29.4%), monetary (27.7%), psychological (23.1%), action-oriented level(19.7%). Also, final results show that there is a difference in recognition between customers and service providers.

In Research Question 2, we tried to find out the differences between service recovery strategy selection importance and priority of customers depending on service channels. First, the Level 1 for face-to-face services appeared

〈Table 7〉 Customers' Service Recovery Strategy Selection Importance and Priorities (N=155)

Level 1			Level 2			Global weights	
Criteria	Priority scores	Ranks	Sub-criteria	Priority scores	Ranks	Priority scores	Ranks
Monetary	0.207	4	Indemnity	0.374	1	0.077	5
			Refund	0.343	2	0.071	6
			Gift	0.151	3	0.031	14
			Gift Certificate	0.132	4	0.027	16
Action-oriented	0.345	1	Prompt Resolution	0.468	1	0.161	1
			Exchange	0.236	2	0.081	4
			Manager Support	0.129	4	0.045	10
			Explanation	0.167	3	0.058	8
Psychological	0.236	2	Apology	0.374	1	0.088	2
			Empathy	0.170	4	0.040	13
			Acknowledge	0.270	2	0.064	7
			Kindness	0.186	3	0.044	11
Assured	0.212	3	Assortment	0.269	2	0.057	9
			After Service	0.390	1	0.083	3
			Manage Subcontractor	0.138	4	0.029	15
			Manage employee	0.203	3	0.043	12

1. CR: Total=0.008, Monetary=0.004, Action-oriented=0.015, Psychological=0.001, Assured=0.001

〈Table 8〉 Comparison between Customer and Service Provider

| | Level 1 | | | | Level 2 | | | | Global weights | | | |
| | Customer | | Provider | | Customer | | Provider | | Customer | | Provider | |
Criteria	Priority scores	Ranks	Priority scores	Ranks	Sub-criteria	Priority scores	Ranks	Priority scores	Ranks	Priority scores	Ranks	Priority scores	Ranks
Monetary	0.207	4	0.277	2	Indemnity	0.374	1	0.214	3	0.077	5	0.059	9
					Refund	0.343	2	0.173	4	0.071	6	0.048	12
					Gift	0.151	3	0.296	2	0.031	14	0.082	3
					Gift Certificate	0.132	4	0.317	1	0.027	16	0.088	2
Action-oriented	0.345	1	0.197	4	Prompt Resolution	0.468	1	0.148	4	0.161	1	0.029	16
					Exchange	0.236	2	0.179	3	0.081	4	0.035	15
					Manager Support	0.129	4	0.397	1	0.045	10	0.078	4
					Explanation	0.167	3	0.277	2	0.058	8	0.055	10
Psychological	0.236	2	0.231	3	Apology	0.374	1	0.208	3	0.088	2	0.048	12
					Empathy	0.170	4	0.312	1	0.040	13	0.072	6
					Acknowledge	0.270	2	0.203	4	0.064	7	0.047	14
					Kindness	0.186	3	0.276	2	0.044	11	0.064	7
Assured	0.212	3	0.294	1	Assortment	0.269	2	0.216	3	0.057	9	0.064	7
					After Service	0.390	1	0.174	4	0.083	3	0.051	11
					Manage Subcontractor	0.138	4	0.346	1	0.029	15	0.102	1
					Manage employee	0.203	3	0.264	2	0.043	12	0.078	4

1. CR (customer): Total=0.008, Monetary=0.004, Action-oriented=0.015, Psychological=0.001, Assured=0.001
2. CR (provider): Total=0.001, Monetary=0.002, Action-oriented=0.008, Psychological=0.002, Assured=0.006
3. N: Customer=155, Service provider=77

⟨Table 9⟩ Comparison of Service Channel (Customer)

Criteria	Level 1 Face Priority scores	Face Ranks	Non-face Priority scores	Non-face Ranks	Sub-criteria	Level 2 Face Priority scores	Face Ranks	Non-face Priority scores	Non-face Ranks	Global weights Face Priority scores	Face Ranks	Non-face Priority scores	Non-face Ranks
Monetary	0.165	4	0.248	2	Indemnity	0.414	1	0.339	2	0.068	6	0.084	4
					Refund	0.308	2	0.375	1	0.051	10	0.093	2
					Gift	0.145	3	0.155	3	0.024	14	0.038	11
					Gift Certificate	0.133	4	0.131	4	0.022	16	0.032	16
Action-oriented	0.378	1	0.313	1	Prompt Resolution	0.466	1	0.468	1	0.176	1	0.146	1
					Exchange	0.224	2	0.248	2	0.085	3	0.078	6
					Manager Support	0.143	4	0.118	4	0.054	9	0.037	12
					Explanation	0.167	3	0.166	3	0.063	7	0.052	8
Psychological	0.276	2	0.202	4	Apology	0.327	1	0.417	1	0.090	2	0.084	4
					Empathy	0.175	4	0.164	3	0.048	11	0.033	14
					Acknowledge	0.283	2	0.257	2	0.078	4	0.052	8
					Kindness	0.215	3	0.162	4	0.059	8	0.033	14
Assured	0.181	3	0.237	3	Assortment	0.262	2	0.273	2	0.047	12	0.065	7
					After Service	0.388	1	0.391	1	0.070	5	0.093	2
					Manage Subcontractor	0.127	4	0.148	4	0.023	15	0.035	13
					Manage employee	0.223	3	0.188	3	0.040	13	0.045	10

1. CR (Face-to-face): Total=0.001, Monetary=0.002, Action-oriented=0.015, Psychological=0.003, Assured =0.005
2. CR (Non-face-to-face): Total=0.019, Monetary=0.010, Action-oriented=0.017, Psychological=0.003, Assured=0.006
3. N: Face-to-face=72, Non-face-to-face=83

in the order of action-oriented (37.8%), psychological (27.6%), assured (18.1%), monetary level (16.5%) and those of non-face-to-face services in the order of action-oriented (31.3%), monetary (24.8%), assured (23.7%), psychological level (20.2%), showing that the importance of recovery strategies customers think is different depending on the service channel. That is, in case of face-to-face services, action-oriented and psychological level were shown more importantly than simple monetary level, showing that customers regard relationship as important and want compensation for it in face-to-face services. On the other hand, action-oriented and monetary level was found to be more important than psychological level in non-face-to-face service, showing that simple compensation system may be effective. Also, Level 2 showed different results except for factors of action-oriented, assured level. Finally, looking at global weights, in case of face-to-face services, importance was found to be high in the order of prompt resolution (17.6%), apology (9.0%), exchange (8.5%), acknowledge (7.8%) but in the order of prompt resolution (14.6%), after service (9.3%), refund (9.3%), indemnity (8.4%) in case of non-face-to-face services. On the other hand, it was found that selection factors with relatively low importance in face-to-face services include factors of monetary and assured level such as gift certificate (2.2%), manage subcontractor (2.3%) gift (2.4%) and gift certificate (3.2%), empathy (3.3%), kindness

(3.3%) in non-face-to-face services, showing different aspect from face-to-face services.

Additionally, we compared service recovery strategy selection priorities of service providers depending on service channel and as a result, assured level was answered to be the most recovery strategy, 29.3% in face-to-face services followed by monetary (27.1%), psychological (23.9%), action-oriented level (19.7%). On the other hand, monetary level (30.4%) was the highest in non-face-to-face services followed by assured (30.0%), psychological (19.9%), action-oriented level (19.7%).

V. Conclusion

5.1 Conclusion

In this study, we tried to identify which recovery strategy customers think the most in the event of service failure in the distribution service industry. Also, we tried to find out if the idea of customers and service providers is the same and finally tried to identify if there is a difference in importance of recovery strategies customers think depending on service channel. It is very important to identify the recovery strategy and the proportion that customers really want. However, previous studies focused on classification and verification of only the levels of recovery strategies and do not provide in-

formation regarding which level is relatively important. Therefore, we tried to importance and relative weight of service recovery strategies levels by using AHP analysis technique that can identify relative importance of a variety of factors. This allows this study to provide various implications about service recovery strategies of distributors. First, we tried to take one step further from the service sector and study service recovery strategies specialized in distributor services. The reason for this can be seen from responses about service failure experience targeting customers who experienced service failure of distributors. Dissatisfaction about delivery accounted for the large proportion followed by service failure about quality of the product, exchange, return, refund. These are more important factors especially for distributors than other service businesses and inappropriate service recovery for them has a negative effect on the company. Therefore, we tried to derive service recovery strategies especially required for distributors and compare and identify priority recovery emphasized by customers and service providers among various service recovery strategies.

First, importance and priority of recovery strategies customers think were identified and as a result, importance and relative weight were found to be high in the order of action-oriented (34.5%), psychological (23.6%), assured (21.2%), monetary level (20.7%). Also, according to Research Question 1 designed to identify if im-

portance of service recovery strategies that customers think and importance that service providers think match or does not match, service providers think important in the order of assured (29.4%), monetary (27.7%), psychological (23.1%), action-oriented level (19.7%) but customers think important in totally different order. As mentioned earlier, this is because there are differences in perception between customers and service providers and failure is not recovered or satisfaction is not high even if many companies offer a variety of compensation in service failure situations.

Finally, for more detailed research, we classified service channels to conduct Research Question 2 and importance appeared in the order of action-oriented (37.8%), psychological (27.6%), assured (18.1%), monetary level (16.5%) in face-to-face services. On the other hand, it appeared in the order of action-oriented (31.3%), monetary (24.8%), assured (23.7%), psychological level(20.2%) in case of non-face-to-face services, showing that there is a difference the importance of recovery strategies customers think depending on service channel.

5.2 Theoretical Implication

We tried to study service recovery strategies specialized in distributor services. It is a challenge for expending study about service field. We identified the priorities through hierarchy design of new recovery strategies for distribution

service and comparison of each element out of existing fractional recovery strategies classification and fractional influence verification (Bell and Zemke 1987; Bitner et al. 1990; Smith, et al. 1999).

Especially we supported gap model of service quality presented by Parasuraman, Zeithaml, and Berry (1985). We discovered the difference of expected perception between customers and service providers for service recovery. Previous studies also suggest these recovery strategies but the question about which strategy must be preceded remained. The results of this study make it possible to think studies on recovery strategies more deeply.

Also, new types of distribution channel that couldn't be seen in the past appear in recent years. For example, distribution service industry of TV home shopping and social commerce hasn't been studied minutely. However, nowadays some researchers have studied characteristics of new channels and management strategies for it. So we thought that service recovery strategies must be studied according to these researches as well. That is why we expanded area of research that includes new types of distribution channel and we focused on the service recovery strategies by distribution channel. Therefore, we found the feature of lots of channels and conducted this study by classifying them into face-to-face service channels and non-face-to-face service channels. According to Orth, Bouzdine-Chameeva and Brand (2013), contact between customer

and service provider increases trust and leads to a positive attitude of customer. Service failure damaging truth, the customer wants to be rewarded with psychological dimension for recovery of truth in case of face-to-face service channels. Contrastive, in case of non-face-to-face service channels, there is less truth than face-to-face service channels. Thus, non-face-to-face customer wants to be rewarded with monetary dimension than psychological dimension. In this study, there is academic implications in that this not only academically support the fact that satisfaction of recovery for service failure varies depending on service channel as mentioned by Hoffman, Kelly, and Forbes (2005) but shows that which factors customers think important depending on service channel.

5.3 Practical Implication

Practical implications presented in this study based on the results of study are as follows. First, action-oriented strategies customer think the most important imply that the delegation of authority for employees is a very important factor at the enterprise level. Prompt resolution for service failure situations and explanation, quick exchange of the product that caused the failure are related to the degree of authority of the employee. An authorized employee can respond quickly to the service failure situation because they employee can solve the problem by himself on behalf of the opinion of the

organization. Of all levels of recovery strategies proposed, customers regarded prompt resolution of the problem as the most important. The ability to respond quickly to customers can be the most prominent recovery strategy than any action and therefore, it can be said to be very important for a company to give appropriate authority to its employees. Furthermore, we compared the importance of customers and providers for service recovery strategies and as a result, service providers evaluated the importance of recovery strategy of action-oriented level as the lowest. Ultimately, for 'prompt resolution' recovery strategy, customers evaluated the importance as 1st rank and service providers as 16th rank. This shows distinct differences in recognition between customers and service providers without filtration. Like the gap model of service quality presented by Parasuraman, Zeithaml, and Berry (1985), the difference of expected perception between customers and service providers for service recovery can have a tremendous impact on corporate management activity performance for customer satisfaction. Therefore, efforts to reduce this gap are essential and this can be said to be the most important implication presented in this study. In addition, psychological level followed by action-oriented level turned out to be an important factor in a recovery situation of customers and customers thought sincere apology for the problem from employees as important. These findings show that psychological compensation for customers must be prioritized than unconditional material compensation in distributors. Through this study, it was found that recovery strategies of psychological level are more important than those of monetary level at least in distributors. Also at the corporate level, strategies of increasing the effectiveness while reducing costs for service recovery will very pleasant. In addition, assured level takes priority over monetary level in terms of its importance. Customers want to listen to a definite answer about how the company will provide after-sales service for the problem in the service failure situation. That is, by promising problem-solving to customers in the future, a company must increase the reliability of the company and induce continuous visit by reducing perceived risk.

Global weights for detailed strategies of all levels can be listed in the order of prompt resolution of service failure, polite apology of employees, promise for after service, exchange for purchased products and indemnity. The notable fact is that the act of attempting service recovery through gift or gift certificate for service failure was found to be relatively the most unimportant factor for customers. It can be seen that customers do not like receiving gift certificates available in the company to customers who have resistance to the services of the company or receiving gift not directly related to problem-solving. On the other hand, refund and indemnity belonging to the detailed strategy of the same monetary level turned out to be rela-

tively important factors. In conclusion, companies must not waste costs by conducting recovery strategies that customers do not think important and give monetary compensation in the way that customers want and service recovery strategies of different levels must be conducted together to prevent them from leaving.

Also, we compared the importance of service recovery strategies depending on the distribution channel. As new types of distribution channel that couldn't be seen in the past appears in recent years, studies on the characteristics of each channel and resulting management strategies are underway. Realizing that studies on service recovery strategies must be carried out by channel in this context, we conducted this study by classifying them into face-to-face service channels and non-face-to-face service channels.

Customers evaluated action-oriented level as the most important recovery strategy in both the channel of direct contact with employees and channel of not direct contact with employees. However, as the second most important factor, they evaluated psychological level in face-to-face channel and monetary level in non-face-to-face channel as important. This means it is more important to give psychological compensation that authenticity is felt than simple monetary compensation as the channel is frequently contacting with service provider and highly involved. On the other hand, it can be seen that they prefer monetary compensation if

service failure occurs in non-face-to-face service with relatively low interaction. Therefore, the company can make use of more useful service recovery strategies by identifying recovery strategies expected by customers depending on the characteristics of each channel.

We additionally compared perception between customers and service providers in the area limited to non-face-to-face channels and as a result, customers think action-oriented level (31.3%) as the most important recovery strategy while service providers evaluate the importance of action-oriented level (19.7%) as the lowest. It was found that even if non-face-to-face distribution channel is a situation where there is no contact with employees but customers still expect service recovery of action-oriented level. In order to proactively respond to these expectations, the importance of action-oriented level non-face-to-face distribution service providers are currently thinking needs to be reconsidered.

Through the above results, it was found that there are differences between the importance of service recovery strategies generally customers think and importance of service providers think and relative weight. Also, it turned out that the priority of recovery strategy levels customers want and weight are different depending on distribution service channels. Through this, this study can provide practical implications like service recovery efforts should be applied differently depending on service channels and there should be changes in perception because

there is a difference in perception with respect to the importance of service recovery strategies types between service providers and customers.

Also, relative importance evaluation for service recovery strategies according to distributor service failure can be a real help for a number of distributors. Companies cannot satisfy customers without a clear understanding of them. The results of this study give various types of distributors the opportunity to think meaning and importance of service recovery again and are considered to be very useful in planning more flexible and effective service recovery strategies.

5.4 Limitation and Directions for Future Research

In this study, we achieved the research purpose of examining which service recovery strategy customers think important during service failure and differences in perception for service recovery strategies between service providers and customers but there are the following limitations.

First, samples of different ages were not obtained. Generalization was difficult because most respondents are in their 20s, 30s and the number of samples was limited because it was difficult to collect data on employees in reality.

Second, in this study, we examined differences in perception for service recovery strategies between service providers and customers. However we collected data from service providers and customers separately due to the dif-

ficulty of data collection. Future research needs to use dyadic data to conduct more accurate comparison analysis.

Lastly, there may be difference in importance depending on the severity of service failure but we did not consider it. Future studies need to be carried out by considering some other variables such as severity of service failure or type of failure.

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