第二次服務失誤和補救的效果

The Effects of Second Service Failure and Recovery on Satisfaction and Repurchase Intention

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摘要：過去有許多文獻探討補償對單次服務失誤的影響，惟僅有極少數的研究著重二次服務失誤結果和其補救。許多服務的提供是持續性的，客戶因而可能經歷多重服務失誤。本文旨在探究第一次和第二次的服務失誤與補償對滿意度和再度購買意願的影響。

　　本研究方法係採用單因子完全隨機設計，透過餐廳服務情境設計，進行三個不同的補償策略測試:不予補償，50%的折扣補償，150%的折扣補償，共計有288位受試者參與研究。研究結果發現，第一次和第二次的服務失誤中，提供補償對滿意度和再度購買意願有顯著影響。不過，第一次服務失誤後，高度的補償和中度的補償相比，再購買之意願只稍略有增加。顧客經歷第二次服務的失誤後，顯著地降低滿意度和再惠顧的意願，本文最後討論管理意涵與未來研究方向。

關鍵詞：補償策略；服務補救；顧客滿意度；優惠券

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Abstract: Many studies have examined the effects of compensation in single service recovery, but few works have examined the consequences of second failure and recovery. Many services are provided on an ongoing base. Customers are likely to experience multiple service failures. This study examines the effects of first and second service failure and compensation on satisfaction and purchase intention.

This work used a single-factor completely randomized design. Three levels of compensation were employed: no compensation, 50% discount, and 150% discount. A total of 288 subjects participated in the study, which utilizes scenarios in a restaurant setting. Findings indicate that compensation level has a significant influence on satisfaction and repatronage intention for the first and second failure. However, compared with a moderate level of compensation, a high level of compensation increased repurchase intentions only marginally for the first failure. A high level of compensation increased both satisfaction and repurchase intention only marginally for the second failure. Customers who experience second service failure and recovery reported a significantly lower satisfaction and revisit intention than those at the first time. Managerial implications and directions for future research also are discussed.

Keywords: Compensation strategy; Service recovery; Satisfaction, Coupon

1. Introduction

Despite management's persistent efforts to deliver exceptional service, zero defection is an unrealistic goal in the service delivery (Goodwin and Ross, 1992; Sundaram, Jurowski and Webster, 1997; Webster and Sundaram, 1998). Several studies found that the ability to recover from a service failure favorably affects customers' evaluation of the service and the organization (Smith and Bolton, 1998; Tax, Brown and Chandrashekaran, 1998). Yet, according to a study by Hart (1988), more than 50% of customers felt more negative about the organization after they had complained about a service failure. Service recovery is very

important because service failures may hurt customer relationship, and failure to detect and resolve those service failures would hurt that relationship even more (Halstead, Morash, and Ozment 1996; Dixon, Freeman and Toman, 2010).

Research has found that when the service provider's reaction to service failure was positive, customers were more satisfied than customers who experienced no service failure at all (Kelley, Hoffman and Davis, 1993). In fact Maxham (2001) found that some customers would rate a firm higher after a service failure recovery than before a service failure. One reason this phenomenon may occur is that customers are given the opportunity to voice their dissatisfaction and receive a favorable outcomes as a result of their actions (Kelley Hoffman and Davis, 1993). Likewise, Smith and Bolton (1998) reported that ability to recovery from a service failure favorably affects customers' evaluation of the service and the organization. Zemke and Bell (1990) indicated that effective service recovery leads to enhanced perceptions of the quality of products and services, and enhanced perceptions of the firm's competence.

Compensation is the most common form of recovery for service failure (Walster, Berscheid, and Walster, 1973). The effects of compensation level in a single failure were studied by several researchers (e.g., Grewal, Roggeveen and Tsiros, 2008; Smith and Bolton, 1998; Smith, Bolton, and Wagner, 1999; Mattila, 2001; Smith and Bolton 2002; Hoffman, Kelley, and Chung, 2003). For example, Grewal, Roggeveen and Tsiros (2008) found that compensation improve repurchase intentions for a stable failure (which happens frequently), but not for an unstable failure for which customers do not consider compensation is necessary. Furthermore, when a company is not considered responsible, compensation does not affect repurchase intentions, regardless of the stability of the failure. Although studies like this were very informative, they focused only on a single failure and recovery effort. Many service relationships are on an ongoing base. Customers will likely experience multiple failures. Some longitudinal studies have examined customer satisfaction and intention (e.g., Mittal, Kumar and Tsiros, 1999; Oliver, 1980). However, they did not explore within-subject perception changes following multiple failures. While Maxham and Netemeyer (2002) conducted a longitudinal study of customer evaluation multiple service

failure and recovery efforts, they didn't examine the effect of compensation levels on satisfaction and repurchase intentions.

The purpose of this research is to test the effectiveness of the recovery efforts on customer's satisfaction level and repurchase intent in the context of multiple service failures. Specifically, the study aims to answer the following questions:

1. In the first and second service failure, how do compensations influence satisfactions and repurchase intentions?

2. How significant, if any, satisfactions and repurchase intentions change after the second service failure/recovery, as compared with those in first service failure/recovery?

2. Theoretical Background

2.1. Equity Theory, Prospect Theory and Attribution Theory

Recent evidence in services literature suggests that customers involved in service failure and recovery form their perceptions of justice on several factors: the perceived fairness of the service recovery outcome (distributive justice), the perceived fairness of the procedures (procedural justice) and the perceived fairness of the manner in which they were treated (interactional justice). However, only two components of the equity concept are relevant for the study of service recovery: distributive justice and interactional justice (McCollough, Berry and Yadav, 2000; Goodwin and Ross, 1989, 1992). This study focuses on distributive justice. Smith and Bolton (1998) empirically verified that compensation influence distributive justice. From a service recovery perspective, distributive justice reflects the perceived fairness of the tangible outcome of the service recovery. Equity theory suggests that parties involved in an exchange feel equitably treated and thus satisfied if their amount of input to the exchange is somewhat in balance with their output of the exchange. The distributive justice have been emphasized to be critical determinants impacting consumers' evaluations of service recovery and satisfaction (e.g. Goodwin and Ross, 1989, 1992; McCollough, Berry and

Yadav, 2000; Smith, Bolton and Wagner, 1999; Tax,Brown and Chandrashekaran, 1998).

Prospect theory also offers important insight in service failure and service recovery research. The theory suggests that dissatisfaction with the service has a greater impact on customer satisfaction and repurchase intention than satisfaction with the service (Maxham and Netemeyer, 2002). Based on prospect theory, consider a customer who suffered a service failure before (perceived loss), the restaurant store manager resolved the mistake by explanation, apology profusely and offer compensation interaction (a free meal) at the first time. Suppose that the customer is not satisfied and the same service failure happened for the second time. Because loss loom larger than gain, it is likely that customers will request a higher level of compensation to restore to satisfactory level. Even if the customer was satisfied with the first recovery, the second failure would remind the customer the first failure. The multiplying effect of the two failures would make it much more difficult to win the customer back.

Attribution theory would also offer insight into understanding consumer responses to service failures. Attributions refer to what people perceive to be the causes behind observed behaviors or events. For negative events, people engage in spontaneous causal thinking. Most causes can be classified on three dimensions: locus (the person who is responsible), control (whether the responsible party has control over the cause), and stability (whether the cause is likely to recur). Attributions influence both affective and behavioral responses (Bitner, 1990; Grewal, Roggeveen and Tsiros, 2008). Bitner (1990) found that when compensation is offered, offering no explanation would appear as an admission of guilt. Bitner (1990) also found that when customers perceive that the firm has control over the cause, they are more dissatisfied than when they believe the firm has no control; when customers perceive the cause of the failure is stable, they also are more dissatisfied than when they believe the failure is rare. Grewal, Roggeveen and Tsiros, (2008) found that compensation results in higher repurchase intentions when the failure is attributed to a stable cause but has no effect when the failure is attributed to an unstable cause.

2.2. Compensation Strategy and Service Recovery

Researchers defined compensation as "firm provide something extra in atonement" (Duffy, Miller and Bexley, 2006, p.114) and can mitigate customers' negative viewpoint to the firm (Wat and Shaffer, 2005). Compensation is regarded as a way for achieving an equitable exchange relationship (Alexander, 2002). Compensation offers some tangible value to verify that the service provider is willing to address poor service delivery and to take responsible for that (Bitner, 1990).

The most common forms of compensation are refunds and replacements. Hoffman and his colleagues (1995) used critical incident technique to study the restaurant industry and found that replacements and refunds plays very important role in compensation. Other research such as Tax, Brown and Chandrashekaran, (1998), and Hoffman, Kelley and Chung, (2003) all found that a cash refund could improve customer retention. Other forms of compensation, such as a price discount can also be used in service recovery to improve repurchase intentions, positive word of mouth, and satisfaction (Boshoff, 1997; Wirtz and Mattila, 2004). According to Hoffman, Kelley and Chung (2003), all types of compensation – a total replacement of service; a correction (e.g. re-cooked food); or substitution (e.g. providing similar product to replace original) – can improve customer satisfaction.

3. Hypothesis

3.1. The Effects of Compensation on Satisfaction and Repurchase Intention

Critical incident studies of service failures and recovery encounters found that compensation was an effective recovery strategy (Bitner, Booms and Mary, 1990; Hoffman, Kelley and Chung, 2003; Kelley, Hoffman and Davis, 1993). In general, these studies suggest that compensating customers after a service failure leads to more favorable consumer responses, either by dissipating their anger and dissatisfaction or by enhancing their overall experience (Bitner, Boom and Mary,

1990). Tax, Brown, and Chandrashekaran (1998) use content analysis of qualitative evaluations of service complaint experiences to show that compensation is the most important recovery dimension associated with customers' perceptions of distributive justice. Therefore, higher levels of compensation should result in higher distributive justice evaluations, which lead to higher level of customer satisfaction.

Previous research indicates that high service recovery remuneration improves satisfaction with service (Grewal, Roggeveen, and Tsiros, 2008). As compensation increases, so should evaluations of the recovery effort and levels of satisfaction. Additional compensation, where the value is easily discerned, would be likely to positively impact the psychological accounting mechanism and, in turn, positively offset any negative imbalance as explained by equity theory. For the second failure, progressively increased compensation would enhance perceptions of distributive justice too.

Estelami and DeMaeyer (2002) noted that extant research suggests that such generosity should positively impact "customer delight" with the exchange and subsequently impact attitude, word of mouth, and repurchase intentions. Examples of generosity would include accepting return merchandise on items not carried by a service provider, accepting cash payments that may be a few cents short, and compensating customers for service failures. Therefore, additional compensation might increase attention, trust, and loyalty among the patrons of the service provider.

Equity may explain how consumers respond to service recoveries (e.g., Alexander, 2002; Goodwin and Ross 1992; Smith, Bolton and Wagner, 1999), such that the effectiveness of recovery efforts may be a function of equity in the exchange (Oliver and Swan, 1989). Service failure and recovery create an exchange in which the consumer experiences a loss due to the service failure and the firm attempts to make up for it in the form of a recovery (Smith, Bolton and Wagner, 1999). In general, to retain customers, companies must ensure that the recovery effort provides a benefit that the consumer believes equitably makes up for his or her loss (Adams, 1965; Deutsch, 1985). In the case of core service failures (e.g., cancellation of a flight), the firm must fix the problem quickly

(Parasuraman, Berry and Zeithaml, 1991), but simply fixing the problem (e.g., booking the customer on the next flight) may not be enough. Consumers also may expect to be compensated for the harm done (e.g., 3 hr spent waiting) to preserve the equity of their relationship with the company. Equity theory suggest that when service failure occur, customer perceive a loss due to the service failure and compensation is one of the effective way to restore equity (Walster, Berscheid and Walster, 1973).

Moreover, social exchange theory highlights the role of distributive justice as it relates to the allocation of costs and benefits in achieving equitable exchange relationships (Adams, 1965; Deutsch 1975, 1985). In terms of service recovery, distributive justice perceptions involve the allocation of compensation (in the form of discounts, free merchandise, refunds, coupons, and so forth) by the organization in response to the inequity caused by a service failure. Walster, Berscheid, and Walster (1973) have shown that compensation is a strategy for restoring equity to an exchange relationship when one party has been harmed by the other. Therefore, higher levels of compensation should result in higher distributive justice evaluations.

In the second failure/recovery, it's likely that the more money (high distributive justice) the firm offers to customers, the more they will be satisfied. Therefore, regardless the first or second service failure, the higher levels of compensation will result in the higher level of satisfaction and repurchase intension. Consequently, we proposed this hypothesis:

H1: (a) For the first failures, the higher level of the additional service recovery remuneration will lead to the higher levels of (1) satisfaction with the additional recovery effort,(2) satisfaction with the service, (3) overall satisfaction and (4) repurchase intention.

(b) For the second failures, the higher level of the additional service recovery remuneration will lead to the higher levels of (1) satisfaction with the additional recovery effort,(2) satisfaction with the service, (3) overall satisfaction and (4) repurchase intension.

3.2. Effect of the Prior Experience on Customer Satisfaction and Repurchase Intention

Prospect theory suggests that losses are weighed more heavily than gains (Kahneman and Tversky, 1979; Oliver, 1997). Choong (2001) also used the theory to emphasize that the customer's value function is steeper for losses than for gains. And similarly, asymmetric disconfirmation proposes that negative performances impact satisfaction and purchase intentions more than positive performances do (Mittal, Ross, and Baldasare, 1998). In addition, Mittal, Ross and Baldasare (1998) found that each additional unit of positive performance has diminishing value. Consequently, despite of the additional compensation of the recovery efforts, customers reporting two failures may still rate the firm lower. When a second failure occurs to customer, they tend to focus more on the negative consequences associated with the failure, because these negative perceptions are more memorable and embed to complainants' recollection. Thus, complainants may become desensitized and underweight to satisfactory recovery efforts, thereby mitigating their positive effects. Prospect theory also suggests that dissatisfaction with the service has a greater impact on customer satisfaction and repurchase intention than satisfaction with the service (Maxham and Netemeyer, 2002).

Moreover, attribution theory also hints diminishing ratings following multiple failures. That is, when multiple failures occur, complainants will likely reevaluate their attributions. Stability attributions should play a very important role in customers' judgments elicited after the second service failure. Customers who attribute outcomes to stable and permanent causes are more confident that the same outcome will recur than customers who attribute outcomes to unstable causes (Weiner, 1986). Consequently, a customer's inference about whether the cause of the service failure is stable or unstable over time should influence his/her re-patronage intentions (Folkes, 1984; 1988). In a field study, Folkes, Koletsky and Graham (1987) show that customers' stability attributions influence their propensity to re-patronize an airline. Thus, when a service failure is attributed to a stable (i.e., recurring) cause, customers will have lower cumulative satisfaction and be less likely to re-patronize the organization. For example, consider a

situation in which bank customers complains about overcharges on their statements. Given that the bank successfully resolves the complaint, attribution theory suggests that complainants may believe that the failure was unique or due to a circumstance beyond the bank's control (i.e., an unstable attribution) (Folkes, 1988). In such cases, customers may feel more positive about the firm than before the failure, triggering a recovery paradox. If another failure occurs, though, complainants may discount the circumstantial attribution and instead believe that the firm consistently makes mistakes (i.e., a stable attribution). Given that, as Weiner (2000, p. 384) has argued, "one cannot logically make unstable attributions for repeated events," customers will likely infer that multiple failures are due to problems inherent to the firm. In such cases, even consistently satisfactory recoveries may have a tempered impact following multiple failures.

Therefore, it is likely that customers who experience two failures will attribute that failure to be stable. Hence, the following hypothesis was proposed.

> **H2: *Regardless of additional recovery efforts, customers who encounter two failures will rate their satisfaction with (1) the recovery effort, (2) service, (3) overall satisfaction and (4) repurchase intention lower than their rating after the fist service recovery.***

4. Methods

An experiment was conducted to examine the effects of compensation on the effects of satisfaction toward the recovery, toward the service, overall satisfaction, and repurchase intension.

4.1. Design and Procedures

This study examines three strategies managers may employ to improve perceived service recovery satisfaction after a service failure, namely giving non compensation, 50% discount compensation and 100% discount plus additional 50% discount coupon compensation.

For each compensation level, there are two service failure/recovery scenarios,

one for the first failure and the other one for the second failure. In the version of no compensation, the first scenario is: a customer and his/her friend went out for dinner in the weekend. The customer ordered a medium-cooked steak. After a while, the waiter brought an overcooked steak. The customer noticed the wrong meal and complained to the waiter. The waiter apologized to the customer and called the manager to solve the problem. The customer had to wait three more minutes to see the manager and once again he/she had to explain the problem to the manager. The low recovery in this situation is that the manager says sorry to the customer and he replaced the meal with a good one. In the second scenario, respondents firstly are requested to think about the previous scenario and then read the second scenario. The second scenario is similar to the first scenario in scope of service failure and recovery except it happened four months later after the first service failure which was mentioned in the first scenario. We use four months as the duration between two failures because it's not too short which customer can have prejudice with service provider; and it's also not too long so that customer can still remember it. For other two compensation levels, the first and second scenarios are similar to first and second scenarios of the no compensation version in the scope of service failure. They are different in the recovery efforts in which 50% discount and 150% discount for the meals were offered respectively.

This research used a single-factor completely randomized design with three levels: No compensation, 50% discount, or 150% discount. Three versions of the instrument were randomly distributed to respondents. Each version contained two service failure and recovery scenarios. Each of the two scenarios was the same in regards to the recovery attempt (no compensation, 50% discount, or 150% discount). First, participants were asked to read carefully the first scenario and then provide responses to the scale items followed. Then, they were asked to read the second scenario which related to the first scenario and answer the question followed. Finally, participants were requested to provide general demographic information.

The between-group sample keeps demand artifacts to a minimum (Shimp, Hyatt, and Snyder, 1991). Although the three scenarios were different, the

questions in the questionnaire were kept exactly the same to facilitate analysis.

4.2. Measures and Subjects

To assess the realism of the service failure and recovery scenarios, participants were asked to respond to the following items (7-points Likert-type scale): "I think that a similar problem would occur to someone in real life (very unlikely to very likely)" and "I think the situations given in the scenario are: (very unrealistic to very realistic)" (Goodwin and Ross, 1992; Sundaram et al., 1997). The mean score of realistic of scenario for the first, second, and third version of survey is 5.21; 5.15 and 5.2 respectively.

Modified Likert-type scales were adapted from prior research to measure four dependent variables: service satisfaction, recovery satisfaction, overall satisfaction, and revisit intention. Service satisfaction, a four-item, seven-point scale, was adapted from Maxham (2001), and Maxham and Netemeyer (2002). Items used including: "I am satisfied with the service received at this restaurant." (1=very dissatisfied to 7=very satisfied); "In my opinion, the service provided by this restaurant was satisfactory." (1=strongly disagree to 7= strongly agree); "How satisfied are you with the quality of the service provided during this visit to the restaurant?" (1=very dissatisfied to 7=very satisfied); and "I am satisfied with the overall dining experience during this visit to the restaurant." (1=strongly disagree to 7= strongly agree)

Recovery satisfaction was measured using a three-item seven-point scale adapted from Maxham and Netemeyer (2002). Items included: "In my opinion, the restaurant provided a satisfactory resolution to the problem on this particular occasion." (1=very dissatisfied to 7= very satisfied). "I am satisfied with the restaurant's handling of this particular problem." (1=very dissatisfied to 7= very satisfied). "I am satisfied with this particular restaurant experience." (1=very dissatisfied to 7= very satisfied).

Overall satisfaction was measured using a three-item scale adapted from Oliver and Swan (1989) and Maxham and Netemeyer (2002). Items used included: "I am satisfied with my overall experience with the restaurant." (1=very dissatisfied to 7= very satisfied); "As a whole, I am happy with this restaurant."

(1=very dissatisfied to 7= very satisfied). "Overall, I am pleased with the service experience with this restaurant." (1=very dissatisfied to 7= very satisfied).

Revisit intention was measured using a three-item scale adapted from Maxham and Netemeyer (2002) and Blodgett et al. (1997). Items include: "I would repurchase at this restaurant in the future." (1=strongly disagree to 7=strongly agree); "There is likelihood that I would repurchase at this restaurant in the future." (1=strongly disagree to 7=strongly agree); "I will not repurchase at this restaurant in the near future." (1=strongly disagree to 7=strongly agree).

All the items were translated into Mandarin and then back translated to ensure the accuracy of the translation. The questionnaires were administered to senior-level undergraduate students and full time and part time MBA students at a large university in southern Taiwan. Students who are willing to distribute the surveys by collecting the data from their friends were rewarded 7-Eleven gift vouchers worth from NT$ 100 to NT$500. Respondentss were randomly assigned to one of the three groups. A total of 355 questionnaires were distributed and 288 usable questionnaires were returned, representing a response rate of 81%. It was felt that the use of students is appropriate since 94.1% participants familiar with the restaurant industry mentioned in the scenario (62.8% participants went to restaurant one to three times per month; and 31.3% reported that they went to restaurant more than three times per month). Furthermore, students as consumers are commonly selected to be the subjects of studies in prior research. For example, in Gruber, Szmigin, and Voss (2009) study, students are chosen as respondents when investigating employee's handling approaches encountered with customers' complaints.

5. Results

5.1. Reliability

Researcher have suggested manipulation checks to make sure that research participants perceive the scenarios realistically (realism of scenario), to ensure that respondents perceive the levels of stimuli differently (convergent validity)

within experimental treatments, and to check if the manipulation of a factor does not affect other variables than those intended for alteration (discriminant validity) (Blodgett, Hill and Tax, 1997; Sundaram, Jurowski and Webster, 1997). To evaluate the perceived realism of scenarios, participants were asked to respond to two items: "I think the situations given in the scenario are: (1-very unrealistic to 7-very realistic) and "I think that a similar problem would occur to someone in real life (1-very unlikely to 7-very likely)". For realism of scenarios, means range from 5.15 to 5.21, indicating that respondents found that it was easy to imagine themselves as participants in the scenarios, and those scenarios were very realistic.

Table 1
Descriptive Statistics of Realism

	N	Mean	Std. Deviation
No Compensation	95	5.21	1.03
50% Discount	103	5.15	1.05
150% Discount	90	5.2	1.11

Reliability of the measurements was estimated using Cronbach's coefficient alpha. The Cronbach alpha levels of each of the scales proved satisfaction with service (Alpha = .94), satisfaction with recovery (Alpha=.92), overall satisfaction (Alpha=.94), and repurchase intentions (Alpha=.94). The scales were deemed to be adequate measures of the constructs being investigated, as the majority of alpha's are greater than .9, which well exceeds the minimum recommended of .7 (Nunnally 1978).

5.2. Basic Data Analysis

Table 2 shows the respondents characteristics. Table 3 shows the means and standard deviations of measurement items, including satisfaction with service, satisfaction with recovery, overall satisfaction, and repurchase intention for the three scenarios. Figure 1 shows the means of these measures. One-way ANOVA was used to analyze the result.

## Table 2
Respondent Characteristics

Variable	Category	Number of Respondent	Percentage
Age			
	Under 20	1	0.4%
	21~25	209	72.6%
	Over 26	78	27.0%
Sex			
	Male	166	57.6%
	Female	122	42.4%
Education			
	High school	1	0.4%
	College	206	71.7%
	Graduate school	80	27.9%
Restaurant patronage Behavior (Average Times/Per Month)	None	0	0%
	1-3	181	62.8%
	4-7	90	31.3%
	Over 8	17	5.9%

Table 3
Sample Size, Mean and Standard Deviation of Variables

	N	First Service Recovery		Second Service Recovery	
		Mean	Std Deviation	Mean	Std Deviation
Satisfaction with Service					
No compensation	95	4.11	0.99	3.01	1.03
50% Discount	103	4.90	1.31	3.54	0.99
150% Discount	90	5.43	1.04	3.85	1.10
Total	288	4.80	1.25	3.46	1.09
Satisfaction with Recovery					
No compensation	95	4.15	1.02	3.16	1.03
50% Discount	103	5.54	1.06	4	1.00
150% Discount	90	5.97	0.87	4.46	1.08
Total	288	5.22	1.25	3.87	1.16
Overall Satisfaction					
No compensation	95	4.07	0.94	2.89	0.86
50% Discount	103	5.17	1.18	3.62	1.00
150% Discount	90	5.58	1.05	3.81	1.03
Total	288	4.94	1.23	3.44	1.04
Repurchase Intention					
No compensation	95	4.3	1.05	2.68	1.00
50% Discount	103	5.27	1.30	3.42	1.09
150% Discount	90	5.52	1.12	3.68	1.15
Total	288	5.03	1.28	3.26	1.16

Figure 1

Satisfaction with Service, Satisfaction with Recovery, Overall Satisfaction and Repurchase Intention after the First and the Second Failure/Recovery

Overall Satisfaction

Repurchase Intention
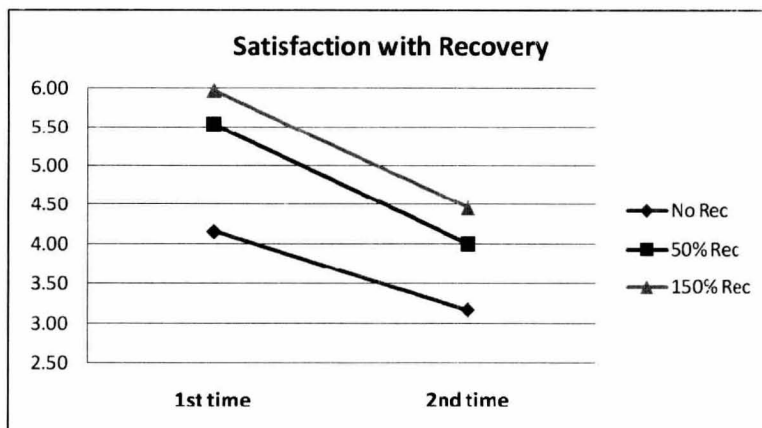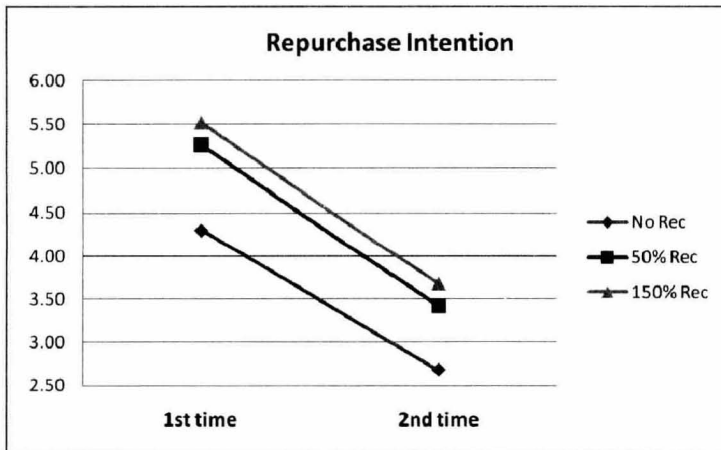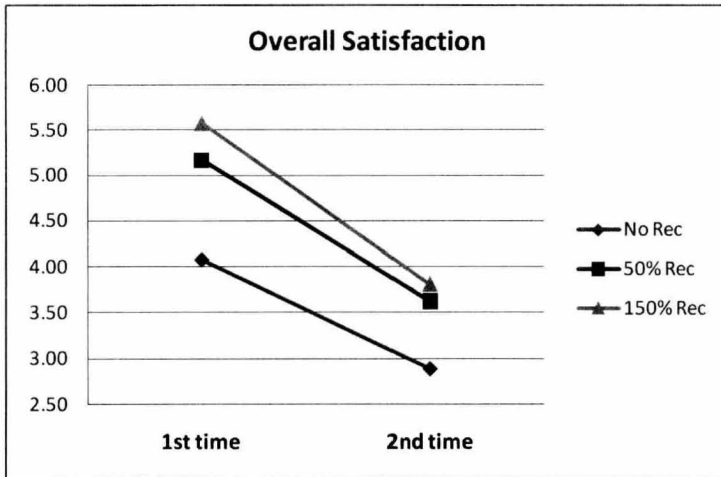
For the no compensation group at the first service failure, the mean scores of the satisfaction with service; satisfaction with recovery; overall satisfaction and repurchase intention are all slightly above 4 on a seven-point scale, which indicate that participants have a neutral or positive feeling and emotion toward the service and the service provider. After the second service failure and recovery, however,

the mean scores of four variables decrease sharply. The satisfaction with service and satisfaction with recovery are below the middle of 3.5. The overall satisfaction and repurchase intention are even both below 3. For the no compensation group, from the first failure to the second failure, the repurchase intention fall down most quickly, from 4.30 to 2.68, as compared with other dependent variables, indicating that customers will probably not come back.

Score for the group of 50% discount at the first and second service failures for four items are all higher than the result reported by the group of no compensation. In detail, for the first failure, the mean scores are all above 5 for satisfaction with recovery, overall satisfaction and repurchase intention (5.54; 5.17 and 5.27 respectively). Only satisfaction with service is below 5 (4.90) but still higher than no compensation group which is 4.11. The results indicate that customers are quite satisfied with this recovery and they are likely to come back next time. However, after the second service failure, the mean scores drop significantly to around 3.5 for satisfaction with service, overall satisfaction and repurchase intention. Only the satisfaction with recovery is higher (4.00). Customers feel a little bit unsatisfied with the service provider after the second service failure. Their probability of coming back for the service would be higher than the respondents in the no compensation group.

Mean scores for the 150% discount group are highest among three groups tested. Respondents at the first failure and recovery reported considerably satisfied with the service (5.43) and with service recovery (5.97). The scores of overall satisfaction and repurchase intention (5.58 and 5.52 respectively) are also higher than two other types of compensation in the item measured. As similar to two previous groups, participants in this group also report a sharp fall at the second service failure and recovery in all four items measured. Among the four variables, repurchase intention (3.68) has the lowest score and the highest score is satisfaction with recovery item (4.46). It seems that respondents were satisfied with the recovery, yet they did not intend to come back.

5.3. Test of Research Hypotheses

5.3.1. Effect of Compensation on Customer Satisfaction and Repurchase Intention

The first hypothesis indicates satisfaction with service, recovery satisfaction, overall satisfaction, and revisit intention varies with the level of compensation. It is expected that a 150% discount of service recovery has greater effect on satisfaction with service, recovery satisfaction, overall satisfaction, and revisit intention than a 50% discount of service recovery; and 50% discount recovery is more effect than no compensation.

First Service Failure/recovery

The means for satisfaction with service were 5.43, 4.90 and 4.11 in the 150% discount, 50% discount and no compensation situation respectively. The direction of the means indicates that the higher the compensation level, the higher the levels of satisfaction with service. Levene's Test showed that $p = 0.069$, indicating that the data meet the homogeneity of variance assumption. Results from ANOVA analysis show a significant difference in the means [$F(2, 287) = 32.614$, $p = 0.000$]. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for group with no compensation (group 1) ($M = 4.11$, $SD = 0.98$) was significantly different from group 50% discount (group 2) ($M = 4.90$, $SD = 1.31$) and group 150% (group 3) ($M = 5.43$, $SD = 1.04$). Group 2 was also significant different from group 3. Therefore, hypothesis 1(a) is supported.

The means for 150% discount, 50% discount and no compensation situations of the satisfaction with recovery were 5.97, 5.54 and 4.15 respectively. Results show a significant difference between these means [$F(2,287) = 86.407$, $p = 0.000$] . Post-hoc reveals the significant difference occur between the satisfaction with no compensation and 50% discount, and between 50% discount and 150% discount. Therefore, hypothesis 1(b) is supported.

The means for 150% discount, 50% discount and no compensation situations of the overall satisfaction were 5.58, 5.17 and 4.07 respectively. There is significant difference between these means [$F(2,287) = 49.958$, $p = 0.000$] . Post-hoc test result show the significant difference occur between the group of the

no compensation and the group with 50% discount, and between the group with 50% discount and the group with 150% discount. Therefore, hypothesis 1(c) is supported.

The means for repurchase intention were 5.52, 5.25 and 4.30 for the 150% discount, 50% discount and no compensation group respectively. Test of homogeneity of variance assumption shows significance level (0.081 > 0.05). Result show a significant difference in the means [$F(2,287) = 28.475$, $p = 0.000$]. Post- hoc test indicated that the mean score for group no compensation ($M = 4.30$, $SD=1.05$) was significant different from group 50% discount ($M = 5.25$, $SD=1.30$) and group 150% (group 3) ($M = 5.52$, $SD = 1.12$). However, there is no significant difference between the 50% discount group and 150% discount group. Substantially increased compensation did not increase the revisit intention significantly.

Second Service Failure/recovery

For the second service failure/recovery, satisfaction with service was significantly different [$F(2,287) = 15.999$, $p = 0.000$]. The means for satisfaction with service were 3.85; 3.54 and 3.01 for 150% discount, 50% discount and no compensation group respectively. Post-hoc test indicated that the mean score for group no compensation ($M = 3.01$, $SD = 1.03$) was significant different from group 50% discount ($M = 3.54$, $SD = 1.00$) and group 150% ($M = 3.85$, $SD = 1.08$). However, the difference between the 50% discount group and the 150% discount group is not significant. These results indicate that moderate compensation is effective in enhancing satisfaction with service, but increased compensation beyond that does not improve satisfaction with the service.

The means for satisfaction with recovery at the second service/failure were 4.46, 4.00 and 3.16 for the 150% discount, the 50% discount and no compensation situation respectively. As the first service failure/recovery, here we also find a significant difference between means [$F(2,287) = 37.382$, $p = 0.000$]. Post-hoc test indicated that the mean scores of each group are significant different as compared with each other. Means score indicate that the higher levels of recovery compensation, the higher level of satisfaction with recovery.

For overall satisfaction, the means at the second time for 150% discount,

50% discount and no compensation situations of the overall satisfaction were 3.81, 3.62 and 2.89 respectively. The mean score of overall satisfaction also demonstrated significant difference [F (2,287) = 23.779, p = 0.000). Post-hoc test indicated that the mean score for the no compensation group (M = 2.89, SD = 0.86) was significant different from 50% discount group (M = 3.62, SD = 1.00) and group 150% (M = 3.81, SD = 1.03). Once again, we cannot find significant difference between the 50% discount group and the 150% discount group.

The means of revisit intention was 3.68 for the 150% discount recovery, 3.42 for the 50% discount recovery, and 2.68 for the no compensation recovery. There is a significant difference between means [$F(2,287)$ = 21.848, p = 0.000]. Post-hoc test indicated that the mean score for the no compensation group (M = 2.68, SD = 1.00) was significant different from the 50% discount group (M = 3.42, SD = 1.09) and the 150% group (M = 3.68, SD = 1.15). However, there is no significant difference between the 50% discount group and the 150% discount group.

H1(a) predicted that for the first failure, the higher level of additional compensation of recovery is, the higher level of customer satisfaction with service, satisfaction with recovery, overall satisfaction, and repurchase intention will be. In general, *H1(a)* is supported except for the repurchase intention between group 50% discount and group 150% discount. However, only partial support is found for *H1(b)*. For the second failure, significant differences in satisfaction with compensation exist among the three levels of compensation. However, we cannot find the significant difference between group 50% discount and group 150% discount for satisfaction with service, overall satisfaction and repurchase intention. In other word, respondents receiving higher level of compensation are more satisfied with the compensation, yet this higher satisfaction did not turn into higher satisfaction with service, overall satisfaction and repurchase intention.

5.3.2. The Difference in Customer Satisfaction and Repurchase Intention Between First and Second Failure/Recovery

No compensation

The purpose of H2 was to test whether satisfaction with service, satisfaction

with recovery, overall satisfaction, and revisit intention after the second failure/recovery differ from those at the first failure/recovery. Paired-samples *t*-test was performed to test the effect of the same compensation on satisfaction with service, recovery satisfaction, overall satisfaction, and revisit intention. For participants who received no compensation, their satisfaction with service demonstrated significant difference between the first and the second service failure/recovery [$t(94) = 11.738$, $p = .000$]. The means for satisfaction with service were 4.11 and 3.00 for first and second service failure/ recovery which shows that the seconds mean score is lower than the first mean score. Eta square statistic (0.594) indicates the large difference between the first and the second service failure/recovery. There was a statistically significant decrease in satisfaction with recovery scores from the first time of failure/recovery ($M = 4.15$, $SD = 1.01$) to the second failure/recovery ($M = 3.16$, $SD = 1.03$), [$t(94) = 10.63$, $p = .000$]. The value of Eta square is 0.55 indicating that there is a large difference in these mean scores. The means for overall satisfaction at the first and second service/failure were 4.07 and 2.89, respectively. A significant difference exists with $t(94) = 12.90$, and *p*-value =.000. Eta square is 0.639 indicating a large difference in these mean scores. As for revisit intention, the mean score were 4.30 and 2.67 for the first and the second service failure/recovery respectively. Revisit intention showed significant difference [$t(94) = 17.68$, $p = 0.000$]. Eta square = 0.769, indicating the significant difference between first and second service/recovery.

50% discount group

Satisfaction with service demonstrated significant difference between the first and the second service failure/recovery [$t(102) = 13.01$, $p = .000$]. The means for satisfaction with service were 4.90 and 3.54 for first and second service failure/ recovery. Eta square = 0.624, indicating large difference exists between the first and the second service failure/recovery.

We also find a statistically significant difference in satisfaction with recovery scores between the first time of failure/recovery ($M = 5.54$, $SD = 1.06$) and the second time of failure/recovery ($M=3.54$, $SD=0.98$), [$t(102) = 19.12$, $p = .000$]. Eta square = 0.782, indicating that there is a large difference in the mean scores.

The score means for overall satisfaction at the first time and second time of service/failure were 5.16 and 3.62, respectively. Statistical test showed significant difference exists [$t(102) = 15.30$, $p = .000$). Eta square = 0.697, indicating a large difference in these mean scores.

Revisit intention showed a significant difference [$t(102) = 15.93$, $p = .000$] with score mean 5.27 for the first and 3.42 for the second service failure/recovery. Eta square = 0.713, indicating large difference in means.

150% discount group

Participants who received an 150% discount in service recovery following a service failure showed significant difference in satisfaction with service between the first and the second service failure/recovery [$t(89) = 14.89$, $p = .000$], with means 5.43 and 3.85 respectively. Eta square statistic (0.714) indicates large difference in means exist.

The means for satisfaction with recovery at the first and second service/failure were 5.97 and 4.46, respectively. Significant difference exists [$t(89) = 15.23$, $p = .000$]. Eta square = 0.723 indicates large difference in mean scores.

As for overall satisfaction, the means score at the first and the second time service/failure were 5.58 and 3.81, respectively. Significant difference between two means exists [$t(89) = 15.08$, $p = .000$]. Eta square = 0.719, indicating a large difference in these mean scores.

For revisit intention, the mean score were 5.52 for first time of service failure/recovery and 3.68 for the second time. Revisit intention demonstrated significant difference [$t(89) = 14.36$, $p = 0.000$]. Eta square = 0.699, indicating large difference between the two mean existed.

The result of Paired-samples *t*-test showed that there is a significant difference in the mean scores of satisfaction with service, recovery satisfaction, overall satisfaction, and revisit intention between the first and the second service failure/ recovery, regardless of the level of compensation. After the second service failure/recovery, participants always rate the restaurant lower than the first failure/recovery. Therefore, hypothesis 2 is supported.

6. Discussions and Managerial Implications

6.1. Discussions

The purpose of this study was to examine the effect of various levels of compensation in service recovery attempts in multiple service failures. H1 hypothesized that in the both first and second service failure/recovery, a higher level of compensation would lead to higher satisfaction with service, higher satisfaction with recovery, higher overall satisfaction, and higher intention to repurchase. One way ANOVA was used to test this hypothesis. The predicted impacts of levels of compensations on satisfaction and repurchase intention was supported for the first failure/recovery, except repurchase intention between 50% and 150% compensation. For the second failure/recovery, significant differences exist between no compensation and 50% compensation. However, there was no significant difference in satisfaction with service, overall satisfaction and revisit intention between 50% discount and 150% discount of compensation.

Hypothesis 2 predicted that satisfaction and revisit intention after the second service failure/recovery were always lower then those after the first service failure/recovery, regardless of level of compensation. The hypothesis was supported for all of the dependent variables.

Grewal, Roggeveen and Tsiros (2008) argued that post-failure compensation make consumer view repurchase as less risky, since they expect the company will compensate them again if a failure were to occur again. Their empirical results confirmed their argument. Similarly, this research found that compensation increases the repurchase intention, as compared with no compensation. However, after the second failure, consumers' repurchase intention dropped significantly, regardless compensation level. This result showed that consumers come to a service company for the service provided. If the company fails to provide the service twice, consumers will likely attribute the problems as inherent to the firm. This attribution would likely to drive them away, despite the compensation. This result is similar to the findings by Dixon, Freeman and Toman (2010) and Maxham nd Netemeyer (2002). Dixon, Freeman and Toman (2010) pointed out

that company creates loyal customers by helping them solve their problems quickly and easily, not by "delight" their customers. Maxham and Netemeyer (2002) found that satisfactory recoveries can produce a "recovery paradox" after one failure, but do not trigger such paradoxical results after two failures.

This study has limitations which point to the directions for future studies. First and foremost, the use of written scenarios in the study may limit the emotional involvement of research participants. The respondent's negative feelings as indicated by the survey instruments may be substantially weaker than when they experience actual service failure (Hess, Ganesan and Klein, 2003; Mattila, 2001; Smith and Bolton, 2002; Sundaram, Jurowski and Webster, 1997). Future studies may conduct field experiments to further verify the results of this study.

Second, the study findings are from a single industry setting (restaurant); It has been argued that service recovery evaluation is context specific (Hoffman and Kelley, 2000; Mattila, 2001). A more complete understanding of the effect of service recovery attempt would necessitate the examinations of various categories of service.

Third, there are many different types of service failures that occur in the restaurant industry, and different service recovery strategies can be used. Consumers' reactions can vary greatly across different kinds of service problems and service recoveries. This study included only one type of service failure and three levels of service recoveries. Therefore, the way that participants of this study updated cumulative satisfaction may not be applied to other type of service failures and recovery situations.

Forth, in the experiment, service recovery was manipulated at three level of compensation. The results showed that 50% compensation is significantly different from 150% in terms of satisfaction for the first service failure/recovery. At what level did the saturation begin? Exactly how much a firm should compensate a particular failure still awaits further studies.

Finally, this study did not examine the commitment of consumer toward the service. When commitment to a brand is low, consumers are expected to process service failure in a relatively objective manner. A highly-committed consumer, on

the other hand, is more likely to counter argue the negativity (Ahluwalia, Burnkrant and Unnava, 2000). Thus, commitment may moderate the effect of service failure/recovery on satisfaction and repurchase intention. This moderation effects await further studies.

6.2. Managerial Implications

Since failures are a common occurrence in service setting, this study has important implications for practitioners. First, regardless customer experience the first service failure or the second service failure, managers are advised to give customer compensation instead of no compensation. This is reasonable because based on equity theory, offering compensation tip the balance towards satisfaction.

Second, manager should not offer too much compensation for customer. Many service providers think that the more they offer compensation to customer, the more they satisfied customer. This study shows that this is not the case. Service providers are advised to offer a moderate compensation (e.g. 50% discount) instead of very high compensation (e.g. 150% discount) in both first and second service failure because it cost much less while maintaining about the same level of satisfaction and revisit intention.

Third, a customer who encounters a second failure is very likely to leave the company for a competitor, regardless the level of compensation. Firm should "red flagged" a customer who has experienced a past problem in the database. Employees can be trained to take additional care to ensure that the particular customer does not encounter a second failure. Not all service industries maintain formal databases of customers; for example, most restaurants do not (Magnini *et al.*, 2007). However, the good news is that many other services businesses, such as hotels, airlines, auto maintenance, do use customer databases, and these databases provide the opportunity to track and monitor the customer service failure history.

7. References

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