

**THE EFFECTIVENESS OF SERVICE RECOVERY AND ITS ROLE IN
BUILDING LONG-TERM RELATIONSHIPS WITH CUSTOMERS IN A
RESTAURANT SETTING**

By

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B.S., Sejong University, Korea, 1995
M.S., Florida International University, Florida, 1998

AN ABSTRACT OF A DISSERTATION

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requirements for the degree

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Department of Hotel, Restaurant, Institution Management & Dietetics
College of Human Ecology

KANSAS STATE UNIVERSITY
Manhattan, Kansas

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ABSTRACT

This study proposed and tested a theoretical model of service recovery consisting of antecedents and consequences of service recovery satisfaction. This study further tested recovery paradox effects and investigated the effects of situational and attributional factors in the evaluation of service recovery efforts and consequent overall satisfaction and behavioral intentions.

The study employed scenario experimentation with three dimensions of justice manipulated at two levels each (2x2x2 between-groups factorial design). Postage paid, self-addressed envelopes and questionnaires (600 copies) were distributed. Participants represented 15 religious and community service groups. All respondents were regular casual restaurant customers. Of 308 surveys returned, 286 cases were used for data analysis. In study 1, the proposed relationships were tested using the structural equation modeling. In study 2, multivariate analysis of variance and multivariate analysis of covariance tests were employed to test proposed hypotheses.

The three dimensions of justice had positive effects on recovery satisfaction. Recovery satisfaction had a significant positive effect on customers' trust. Trust in service providers had positive effect on commitment and overall satisfaction. Commitment had positive effects on overall satisfaction and behavioral intentions. This study indicated that, although a service failure might negatively affect customers' relationship with the service provider, effective service recovery reinforced attitudinal and behavioral outcomes. The results of this study emphasized that service recovery efforts should be viewed not only as a strategy to recover customers' immediate

satisfaction but also as a relationship tool to provide customers confidence that ongoing relationships are beneficial to them.

This study did not find recovery paradox in the experimental scenarios. The magnitude of service failure had significant negative effects on perceived justice and recovery satisfaction. Customers' rating of stability causation had significant negative effects on overall satisfaction, revisit intention, and word-of-mouth intention. The study findings indicated that positive recovery efforts could reinstate customers' satisfaction and behavioral intentions up to those of pre-failure. Restaurant managers and their employees need to provide extra efforts to restore the customers' perceived losses in serious failure situations. Service providers should reduce systematic occurrences of service failure so customer will not develop stability perception.

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CHAPTER I

INTRODUCTION

The importance of building long-term relationships with existing customers has been emphasized for varying reasons. The need for customer retention stems from the fact that the cost of attracting a new customer substantially exceeds the cost of retaining a present customer (Anderson & Fornell, 1994; Fornell & Wernerfelt, 1987; Kotler, Bowen, & Makens, 2003; Spreng, Harrell, & Mackoy, 1995). According to the Technical Assistance Research Program (1986), it costs 5 times more to attract a new customer than to keep an existing one. To uphold ongoing relationships and to facilitate future relationships with existing customers, it is imperative to satisfy them in an exchange (Oliver & Swan, 1989).

Despite persistent efforts to deliver exceptional service, zero defection is an unrealistic goal in service delivery (Collie, Sparks, & Bradley, 2000; Goodwin & Ross, 1992; Hart, Heskett, & Sasser, 1990; Kelley & Davis, 1994; McCollough, 2000; Reichheld & Sasser, 1990; Sundaram, Jurovski, & Webster, 1997; Webster & Sundaram, 1998). Intangibility (Collie et al., 2000; Palmer, Beggs, & Keown-McMullan, 2000), simultaneous production and consumption (Collie et al., 2000; Goodwin & Ross, 1992; Hess, Ganesan, & Klein, 2003), and high human involvement (Boshoff, 1997) are characteristics of service that make it difficult to achieve zero defection.

Although service failures are inevitable, most service defections, especially because of poor customer service, are largely controllable by service firms (Hoffman & Chung, 1999; Hoffman & Kelly, 2000). Defensive marketing strategies that focus on

customer retention through effective complaint management, managerial programs to prevent and recover from service failures, and continuous improvement in service performance (Halstead, Morash, & Ozment, 1996) will help to maintain long term relationships with customers (Fornell & Wernerfelt, 1987). Reichheld and Sasser (1990) reported that service industries could increase their profits up to 85% by reducing the customer defection rate by 5%. Gilly (1987) observed that if customers are satisfied with the handling of their complaints, dissatisfaction can be reduced and the probability of repurchase can be increased. Furthermore, effective complaint handling can have dramatic impacts on customer retention rate, avoid the spread of negative word-of-mouth, and improve profitability (Tax, Brown, & Chandrashekar, 1998).

Service failure can be viewed as customers' economic and/or social losses in an exchange; therefore, organizations endeavor to recover from negative effects by offering economic and social resources (Smith, Bolton, & Wagner, 1999). A three-dimensional view of the justice concept has evolved from the social exchange theory and the equity theory: distributional justice (perceived fairness of compensation, e.g., discounts, free meals), procedural justice (dealing with decision-making, e.g., response time), and interactional justice (interpersonal behavior in the enactment of procedure and delivery of outcomes, e.g., apology) (Blodgett, Hill, & Tax, 1997; Smith et al., 1999; Tax et al., 1998).

Appropriate service recovery efforts can convert a service failure into a favorable service encounter, achieving secondary satisfaction (Spreng et al., 1995) and enhancing repurchase intention (Blodgett et al., 1997; Gilly, 1997) and positive word-of-mouth (w-o-m) communication (Maxham & Netemeyer, 2002a&b). Exceptional service recovery

can produce a service “recovery paradox,” a situation where the levels of satisfaction of customers who received good or excellent recoveries actually are higher than those of customers who have not experienced any problem (Maxham & Netemeyer, 2002b; McCollough & Bharadwaj, 1992; Michel, 2001; Smith & Bolton, 1998). On the other hand, an inappropriate and/or inadequate response to service failure may result in magnification of negative evaluation, also referred to as “double deviation” (Bitner, Booms, & Tetreault, 1990). Furthermore, dissatisfied customers not only defect but also engage in negative word-of-mouth behavior (Mack, Muller, Crotts, & Broderick, 2000). It is, therefore, imperative for service firms to develop effective service recovery strategies to rectify service delivery mistakes and increase retention rates or decrease defection rates (Hoffman & Chung, 1999; Webster & Sundaram, 1998). Recovery strategy should be considered a means to reinstate and validate relationships with customers (Hoffman & Chung, 1999), not as an opportunity to create goodwill.

Although implementing service recovery strategies seems to increase costs, such strategies can improve the service system and result in relational benefits (Brown, Cowles, & Tuten, 1995). The systematic analysis of service failure and recovery can be used to identify common failures, to resolve the routine causes of failures, and to improve the effectiveness of recovery efforts through a proper training program (Brown et al., 1995; Hoffman, Kelley, & Rotalsky, 1995).

Statement of Problems

The majority of the customer dissatisfaction and complaint research has focused on why, who, and how consumers respond to dissatisfaction (Andreassen, 2000). Less attention has been directed to corporate responses to customers' voiced complaints and customers' subsequent attitudinal changes (Conlon & Murray, 1996; Good & Ross, 1992). Although service recovery is recognized as a critical element in building relationships with customers, few theoretical or empirical studies of service failure and recovery have been conducted (Blodgett et al., 1997; Hoffman et al., 1995; Smith & Bolton, 1998; Smith et al., 1999). Consequently, the followings are not well understood (McCollough, 1995; McCollough, 2000):

- What constitute a successful recovery effort?
- How do customers evaluate service recovery efforts?
- What impact does product/service failure followed by recovery have on customer satisfaction evaluations, service quality attitudes, and subsequent behavior intentions?

In addition, most of the existing service recovery studies focus on the short-term impact and the effectiveness of recovery efforts and various situational factors. Limited research has examined the relationship between service recovery strategies and relationship quality variables (Brown et al., 1996; Ruyter & Wetzels, 2000). Consequently, very little is known about the updating roles of relationship quality between recovery satisfaction and overall satisfaction and behavioral intentions.

Purposes and Objectives

The purposes of this study were to propose and test a theoretical model consisting of antecedents and consequences of recovery satisfaction and to examine the roles of situational and attributional factors in the evaluation of service recovery efforts and consequent overall satisfaction and behavioral intentions. The specific objectives of this study are:

1. To assess the effectiveness of the dimensions of justice (distributive, procedural, and interactional justice) on recovery satisfaction,
2. To test the roles of trust and commitment as mediators between recovery satisfaction and overall satisfaction and behavioral intentions,
3. To scrutinize the updating role of service recovery on overall satisfaction and behavioral intentions,
4. To investigate the recovery paradox effects on overall satisfaction and behavioral intentions,
5. To examine the effects of situational factors in the evaluation of service recovery efforts, and
6. To examine the effects of attributional factors in the forming of customer's overall satisfaction and behavioral intentions.

Significance of the Study

An organization's response to service failure has the potential to either restore customer satisfaction or aggravate customers' negative evaluations and drive them to switch to a competitor (Smith & Bolton, 1998). In reality, more than half of business

efforts to respond to customer complaints actually strengthen customers' negative evaluations of a service (Hart et al., 1990). Therefore, it is important to understand what constitutes a successful service recovery and how customers evaluate service providers' recovery efforts.

It is clear that what make customers dissatisfied is not a service failure alone, but the manner in which employees respond to their complaint(s) (Bitner et al., 1990; Spreng et al., 1995). Bitner et al. (1990) reported that 42.9% of unsatisfactory encounters stemmed from employees' inability or unwillingness to respond to service failures. Understanding the impact of each dimension of justice on post-complaint evaluations should allow management to develop more effective and cost efficient methods to resolve conflicts and, in turn, achieve higher levels of customer retention and profits (Blodgett et al., 1997).

Service recovery not only rectifies service failure, but also develops long-term relationships with customers. Understanding the role of service recovery efforts in developing relationship quality dimensions will strengthen recognition of the need for consistent efforts to provide customer satisfaction.

Hypotheses

To achieve the objectives of the study, the following hypotheses were investigated:

H1: Distributive justice has a positive effect on recovery satisfaction.

H2: Procedural justice has a positive effect on recovery satisfaction.

H3: Interactional justice has a positive effect on recovery satisfaction.

- H4. Recovery satisfaction has a positive effect on overall satisfaction.
- H5. Recovery satisfaction has a positive effect on trust.
- H6. Recovery satisfaction has a positive effect on commitment.
- H7. Trust has a positive effect on commitment.
- H8. Trust has a positive effect on overall satisfaction.
- H9. Commitment has a positive effect on overall satisfaction.
- H10. Trust has a positive effect on behavioral intentions.
- H11. Commitment has a positive effect on behavioral intentions.
- H12. Overall satisfaction has a positive effect on behavioral intentions.
- H13. Recovery satisfaction has a positive effect on behavioral intentions.
- H14. Customers' overall satisfaction after experiencing a service recovery is higher than satisfaction before experiencing a service failure.
- H15. Customers' revisit intentions after experiencing a service recovery are greater than initial customers' revisit intentions before experiencing a service failure.
- H16. Customers' word-of-mouth (w-o-m) intentions after experiencing service recovery are greater than customers' w-o-m intentions before experiencing service failure.
- H17a: Customers' perceived criticality of service consumption will be negatively related to customers' perceived justice.
- H17b: Customers' perceived criticality of service consumption will be negatively related to customers' service recovery satisfaction.

H18a: Customers' perceived magnitude of service failure will be negatively related to customers' perceived justice.

H18b: Customers' perceived magnitude of service failure will be negatively related to customers' service recovery satisfaction.

H19a: Customers' perception of controllability of causality will be negatively related to customers' overall satisfaction.

H19b: Customers' perception of controllability of causality will be negatively related to customers' w-o-m intentions.

H19c: Customers' perception of controllability of causality will be negatively related to customers' revisit intentions.

H20a: Customers' perceived stability will be negatively related to customers' overall satisfaction.

H20b: Customers' perceived stability will be negatively related to customers' w-o-m intentions.

H20c: Customers' perceived stability will be negatively related to customers' revisit intentions.

H21a: Customers' perceived locus of causality will be negatively related to customers' overall satisfaction.

H21b: Customers' perceived locus of causality will be negatively related to customers' w-o-m intentions.

H21c: Customers' perceived locus of causality will be negatively related to customers' revisit intentions.

Definition of Terms

Customer Satisfaction/Dissatisfaction: Customer satisfaction/dissatisfaction is the pleasure/displeasure emotional state resulting from the consumption-related adequate fulfillment/underfulfillment (Oliver, 1997).

Service Failure: A service failure is defined as “a flawed outcome that reflects a breakdown in reliability” (Berry & Parasuraman, 1991, p. 46).

Customer Complaint: A consumer complaint is defined as an action that involves negative communication about a product or service consumption or experience (Landon, 1980).

Service Recovery: Service recovery is defined as actions and activities that service providers take in response to service defections or failures in service delivery to return “aggrieved customers” to a state of satisfaction (Grönroos, 1988; Zemke & Bell, 1990).

Recovery Paradox: Recovery paradox refers to a situation where the levels of satisfaction rates of customers who received good or excellent recoveries are actually higher than those of customers who have not experienced any problem in the first place (McCullough & Bharadwaj, 1992).

Word-of-Mouth: W-O-M is defined as the extent to which a customer informs acquaintance about an event that has created a certain level of satisfaction (Soderlund, 1998).

Trust: Trust is defined as “confidence in an exchange partner’s reliability and integrity” (Morgan & Hunt, 1994).

Commitment: The study adapts the definition of commitment from Morgan and Hunt (1994). They defined commitment as “an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it.”

Behavioral Intentions: Though the definitions of behavioral intentions vary depending upon research context, this study considers behavioral intentions as customer’s willingness to provide positive word of mouth and their intention to repurchase (Oliver, 1997; Yi, 1990).

Limitations of the Study

Following are the limitations of the proposed study.

First, though the appropriateness of the experimental scenario method is justified, the generalizability of the study finding can be challenged. The use of written scenarios in the study may limit the emotional involvement of research participants. Thus, the respondents’ negative feelings may be substantially weaker than when they experience actual service failure (Hess et al., 2003; Mattila, 1999; Smith & Bolton, 2002; Sundaram et al., 1997)

Second, the study findings are from a single industry setting; its generalizability to other segments of the restaurant industry and to other service industries will be limited since data were collected from customers who dine in casual restaurants.

Third, the study used convenience sampling technique. It might result in selection bias (Kelley, Hoffman, & Davis, 1993). Though respondents are all restaurant patrons, generalizability of the study can be justified by collecting data from actual customers.

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CHAPTER II

REVIEW OF LITERATURE

This chapter reviews the theoretical background of customer satisfaction/dissatisfaction (CS/D) and service recovery. Reviews of customers' responses to dissatisfaction and service recovery strategies are presented. Other concepts discussed include trust, commitment, and behavioral intentions.

Customer Satisfaction/Dissatisfaction

Customer satisfaction and dissatisfaction have a rich literature dating back to the early 1970s (Myers, 1992). In recent years, the importance of the topic to business firms has increased because of increased buyer sophistication and intense competition. To uphold ongoing relationships and to facilitate future relationships with existing customers, it is imperative to satisfy them in an exchange (Oliver & Swan, 1989).

Despite persistent efforts to deliver exceptional service, zero defection is an unrealistic goal in service delivery (Collie, Sparks, & Bradley, 2000; Goodwin & Ross, 1992; Hart, Heskett, & Sasser, 1990; Kelley & Davis, 1994; McCollough, 2000; Reichheld & Sasser, 1990; Sundaram, Jurovski, & Webster, 1997; Webster & Sundaram, 1998). Service problems prompt a dissatisfied customer to use multiple options, namely, exit, voice, and loyalty (Hirschman, 1970). Complaints offer a service provider a chance to rectify the problem and positively influence subsequent consumer behavior (Colgate & Norris, 2001; Blodgett, Hill, & Tax, 1997).

Understanding service recovery efforts will allow the management to develop more effective and cost efficient methods to resolve conflicts and in turn achieve higher levels of customer retention and profits (Blodgett et al., 1997).

Service Failure

A service failure is defined as “a flawed outcome that reflects a breakdown in reliability” (Berry & Parasuraman, 1991, p. 46). Many researchers contend that service failure arises when service delivery performance does not meet a customer’s expectations (Kelley & Davis, 1994; Kelley, Hoffman, & Davis, 1993). Two types of service failures are recognized: outcome and process (Hoffman, Kelley, & Rotalsky, 1995; Smith & Bolton, 2002). An outcome failure occurs when the failure is related to the core service offerings. A process failure occurs when it is related to the manner in which the service is delivered (Smith & Bolton, 2002).

The type of service failure (outcome versus process failure) affects customers’ perceptions of the recovery evaluation. Customers who experienced a process failure were less satisfied after service recovery than those who experienced an outcome failure (Smith, Bolton, & Wagner, 1999). Smith et al. (1999) also found that compensation and quick action improved customers’ evaluation of perceived fairness when they experience an outcome failure. On the other hand, customers perceived that an apology or a proactive response was more effective when process failure occurred.

Mittal, Ross, and Baldasare (1998) reported an asymmetrical impact of negative and positive performance on satisfaction and behavioral intentions. The finding emphasizes the importance of systematic analysis of service failures and proper handling of service failures. The systematic analysis of service failures also can be used to

minimize the occurrence of service failures and improve service failure practices (Hoffman et al., 1995).

Customer Responses to Dissatisfaction and Customer Complaining Behavior

Hirschman's theory of exit, voice, and loyalty (1970) describes the types of potential behavioral responses that dissatisfied customers may take. Voice and exit are active negative responses (Hirschman, 1970; Colgate & Norris, 2001), and loyalty is a passive response (Boshoff, 1997). A dissatisfied customer may use multiple options when responding to dissatisfaction; the options are not mutually exclusive (Blodgett et al., 1997).

Voice occurs when the customer verbally complains and expresses his/her dissatisfaction to the company (Andreassen, 2000). The purpose of the voice option is "to retrieve restitution, to protect other consumers, or to assist the firm in correcting a problem" (Landon, 1980, p. 337). Complaints offer a service provider a chance to rectify the problem and positively influence subsequent consumer behavior (Colgate & Norris, 2001; Blodgett et al., 1997).

Exit involves customers who stop buying the company's service (Andreassen, 2000; Webster & Sundaram, 1998). It is a voluntary termination of an exchange relationship (Singh, 1990) and is often implemented if voice was not successful (Blodgett, Granbois, & Walters, 1993). Loyal customers are those who continue to stick with an unsatisfying product/seller with the hope that things will soon improve (Boshoff, 1997; Hirschman, 1970).

The Importance of Handling Complaints Well

The cost of attracting a new customer substantially exceeds the cost of retaining a current customer (Anderson & Fornell, 1994; Fornell & Wernerfelt, 1987; Spreng, Harrell, & Mackoy, 1995). Service entities could increase their profits up to 85% by reducing the customer defection rate by 5% (Reichheld & Sasser, 1990). Considering this, building long-term relationships with customers is imperative for successful businesses. Gilly (1987) observed that if customers are satisfied with how their complaints are handled, their dissatisfaction can be reduced, and the probability of repurchase is increased. Furthermore, effective complaint handling can have a dramatic impact on the customer retention rate, deflect the spread of negative word-of-mouth, and improve profitability (Tax, Brown, & Chandrashekar, 1998).

Inadequate and/or inappropriate company responses to service failures and mishandling of customer complaints influence not only the affected customers but also their friends and families via negative word-of-mouth communication (Hoffman & Chung, 1999; Hoffman & Kelly, 2000). Keaveney (1995) found that core service failures and unsatisfactory employee responses to service failure accounted for more than 60% of the all service switching incidents.

Service Recovery

Despite management's persistent efforts to deliver exceptional service, zero defection is an unrealistic goal in the service delivery (Collie et al., 2000; Goodwin & Ross, 1992; Sundaram et al., 1997; Webster & Sundaram, 1998). While consumers admit that service providers cannot eliminate errors completely, dissatisfied customers expect

service failures will be recovered when they complain (Sundaram et al., 1997). Although service failures are inevitable, most of the service defections are largely controllable by service firms (Hoffman & Kelly, 2000).

Definition of Service Recovery

Service recovery is defined as “the actions of a service provider to mitigate and/or repair the damage to a customer that results from the provider’s failure to deliver a service as is designed” (Johnston & Hewa, 1997, p. 467). In response to service defects or failures, service providers take actions and implement activities to return “aggrieved customers” to a state of satisfaction (Grönroos, 1988; Zemke & Bell, 1990). Service recovery may not always make up for service failures, but it can lessen its harmful impact when problems are properly handled (Colgate & Norris, 2001).

Complaint management and service recovery have been considered as retention strategies (Halstead, Morash, & Ozment, 1996). Service recovery, however, is different from complaint management in that service recovery strategies embrace proactive, often immediate, efforts to reduce negative effects on service evaluation (Michel, 2001). Service recovery embraces a much broader set of activities than complaint management, which focuses on customer complaints triggered by service failures (Smith et al., 1999). Considering the fact that most of dissatisfied customers tend not to complain about negative experiences (Blodgett, Wakefield, & Barnes, 1995; Singh, 1990), a proactive initiation of service recovery is worthwhile. In fact, satisfaction ratings were higher in organization or employee-initiated recovery than a customer-initiated recovery (Mattila, 1999).

Theoretical Foundations of Service Recovery

Theoretical frameworks used in studies of service recovery include the social exchange theory, equity theory, attribution theory, disconfirmation paradigm, and justice (fairness) theory. Blodgett et al. (1997) contend that the concept of justice provides a theoretical framework for the study of dissatisfied customers' postcomplaint behavior(s); other theories help to explain why dissatisfied customers seek redress.

Social Exchange Theory and Equity Theory

Studies exploring customer's evaluation of service recovery efforts have used the social exchange theory and the equity theory (Blodgett et al., 1993; Goodwin & Ross, 1992; Kelley & Davis, 1994). These two theories assert that the exchange relationship should be balanced (Adams, 1963, 1965). The social exchange perspective is based on the view of equal partners (e.g., spouses, coworkers) in an exchange (Oliver, 1997). In purchasing and consumption situations, a consumer's sense of injustice generally results from perceived unfairness compared with either one's expectations or other comparison standards (Oliver, 1997).

Service failures can be viewed as customers' economic loss (e.g., money, time) and/or social loss (e.g., status, esteem) in an exchange (Smith et al., 1999).

Consequently, customers consider the failure situation as a negative inequity and will attempt to balance equity with post-purchase behavior (Lapidus & Pinkerton, 1995).

Service providers attempt to recover the balance by offering customers economic value in the form of compensation (e.g., a discount) or social resources (e.g., an apology) (Smith et al., 1999). A summary of the equity/inequity of consumers' own inputs compared to the outputs leads to perceived justice. Then the consumer forms a

satisfaction/dissatisfaction judgment based on the level of perceived justice (Andreassen, 2000).

Attribution Theory

Customers' judgments about the cause and effect attribution influence their subsequent emotions, attitudes, and behaviors based on the three dimensions of causal attributions: locus, controllability, and stability (Swanson & Kelley, 2001; Weiner, 1980, 1985). Attribution theory has applied for explaining customer responses to product and service failures (Folkes, Koletsky, & Graham, 1987; Richins, 1983; Weiner, 1980). Researchers have emphasized the mediating roles of attributional influences (Folkes et al., 1987; Yi, 1990). In general, dissatisfied customers who consider the cause to have an external locus, and to be stable and controllable are more likely to exit and to engage in negative word-of-mouth behavior than those who consider that the problem is unlikely to recur and is uncontrollable (Blodgett et al., 1993; Folkes, 1984).

Confirmation/Disconfirmation Paradigm

Customer satisfaction/dissatisfaction is defined as the difference between an individual's pre-purchase expectations and post purchase performance of the product or service (Patterson, Johnson, & Spreng, 1997). The confirmation/disconfirmation paradigm (Oliver, 1980, 1997; Oliver & Bearden, 1995) has provided the conceptual framework for many customer satisfaction/dissatisfaction studies.

The paradigm consists of three basic elements: expectations, perceived performance, and whether performance meets expectations (Boshoff, 1997). Clow, Kurtz, and Ozment (1996) indicated that consumers develop expectations primarily through image, satisfaction with past service experience, word-of-mouth communications

received from others, tangible cues, and price structures. Perceived performance is the customer's recognition of performance (Vavra, 1992). There are two types of performance: objective and perceived. Perceived performance and objective performance are defined as the customer's recognition of performance and conformation to the specific design, respectively. Perceived performance is used most often because objective performance is not easily operationalized; it varies from customer to customer (Vavra, 1992). Positive disconfirmation occurs if the performance of products or services is better than expected. On the other hand, negative disconfirmation results when the performance is worse than expected, which in turn contributes to possible dissatisfaction (Boshoff, 1997; Oliver, 1980).

Disconfirmation paradigm also has been used in the evaluation of service recovery (McCollough, Berry, & Yadav, 2000; Oliver, 1980, 1981). Customers establish expectations for recovery efforts from service provider (Kelley & Davis, 1994; Ruyter & Wetzels, 2000). Once a dissatisfied consumer seeks redress, the evaluation of recovery efforts is dependent primarily upon the consumer's perception of justice or fairness (Blodgett et al., 1993). Justice or fairness is evaluated in terms of the other party's performance on the expected role dimensions (Oliver, 1997). Little attention has been given to equitable treatment in consumption because the comparison standards are individualistic in fairness judgments (Oliver, 1997).

Justice (Fairness) Theory

A three-dimensional view of the justice (or fairness) concept has evolved from the equity theory: distributional justice (the perceived fairness of tangible outcomes), procedural justice (the perceived fairness of the procedures delivering the outcomes), and

interactional justice (the perceived fairness of interpersonal manner in the enactment of procedures and delivery of outcomes) (Blodgett et al., 1993; Clemmer & Schneider, 1996; Smith et al., 1999; Tax et al., 1998). The notion of fairness is nearly indistinguishable from equity in that the consumer's sense of fairness is based on what they deserve compared to their input (Oliver, 1997).

Many earlier studies focused on the relationship between the inputs and the outcomes of a transaction (Collie et al., 2000; Goodwin & Ross, 1992). However, consumers are concerned not only with the perceived fairness of the outcome but also with the perceived fairness of the manner in which the complaint is handled (Blodgett et al., 1993) and the process by which resources or rewards are allocated (Conlon and Murray, 1996). The two other fairness dimensions, procedural and interactional fairness, have been used in service recovery evaluation (Goodwin & Ross, 1992; Ruyter & Wetzels, 2000). The other two forms of justice explain more of the variation in satisfaction (Oliver 1997). The three dimensions of justice accounted for more than 60% of the explained variation in service encounter satisfaction in both restaurant and hotel settings (Smith et al., 1999).

Distributive Justice. Distributive justice refers to the perceived fairness of the actual, tangible outcomes compared to inputs (Blodgett et al., 1997; Oliver, 1997; Palmer, Beggs, Keown-McMullan, 2000). In service recovery, distributive justice focuses on the specific outcome of the firm's recovery effort, such as discounts, coupons, free meals, replacement/reperformance, refunds, store credits, etc. (Blodgett et al., 1997; Hoffman & Kelley, 2000). Input and output in distributive justice evaluation can also include nonmonetary intangibles such as emotions, complaining costs and ego benefits

(McCollough, 2000). A positive relationship between the dollar amount and customer satisfaction with service recovery efforts was confirmed in many studies (Boshoff, 1997; Goodwin & Ross, 1992; Hoffman et al., 1995; Megehee, 1994; Tax et al., 1998). Hoffman et al. (1995) found that compensation (e.g., free food, discounts, coupons) was rated most effective in restaurant service failures. Using critical incident technique, Hoffman and Chung (1999) also found that compensatory responses were most favored by diners. In following other study findings, this research predicted the following hypothesis:

H1: Distributive justice has a positive effect on recovery satisfaction.

Procedural Justice. Consumers are concerned not only with the way resources or rewards are allocated, but also with the process used to resolve conflicts or dispense rewards (Conlon & Murray, 1996). Procedural justice often refers to the perceived fairness of the policies and procedures used by decision makers to arrive at an outcome (Blodgett et al., 1997). Tax et al. (1998) proposed that even though a customer may be satisfied with the type of service recovery strategies offered, the recovery evaluation might be poor due to the process endured to obtain the recovery outcome.

The speed of handling problems and complaints was identified as an important dimension of procedural justice (Blodgett et al., 1997; Palmer et al., 2000; Tax et al., 1998). On the other hand, Mattila (2001) found that procedural justice, measured as time taken to solve a problem and the flexibility used to deal with problem, was not a significant predictor in a restaurant setting. To test the main effect of procedural justice, this study hypothesized the following:

H2: Procedural justice has a positive effect on recovery satisfaction.

Interactional Justice. Tax et al. (1998) defined interactional justice as “dealing with interpersonal behavior in the enactment of procedures and the delivery of outcomes” (p.62). Interactional justice focuses on the manner in which the complaint was treated (Blodgett et al., 1993; McColl-Kennedy & Sparks, 2003). Interactional justice is often operationalized as a sincere apology versus rude behavior (Blodgett et al., 1997). An apology from the service provider delivers politeness, courtesy, concern, effort, dignity, and empathy to customers who experience service failure, enhancing customers’ perception of fairness of the service encounter (Goodwin & Ross, 1992; Kelley et al., 1993; Tax et al., 1998). Apologies should be incorporated into all service recovery strategies as the minimum that would be offered by a service provider (McDougall & Levesque, 1999). Research findings have consistently demonstrated the importance of interpersonal treatment. Consequently, the researcher hypothesized the following:

H3: Interactional justice has a positive effect on recovery satisfaction.

Relative Effectiveness of Dimensions of Justice

Although the three dimensions of justice are considered to be independent, the complainers’ overall perceptions of justice and their subsequent behavior stem from the combination of all three dimensions (Blodgett et al., 1997). Consequently, considering the relative importance of service recovery dimensions is worthwhile, especially when resources for service recovery efforts are limited. Businesses may be able to develop more efficient and cost effective methods that would result in higher levels of customer retention and profits (Blodgett et al., 1997).

Interactional justice was the strongest predictor of trust and overall satisfaction among the three justice dimensions (Tax et al., 1998). Blodgett et al. (1997) found that

interactional justice was the major determinant of subjects' repatronage (accounted for 38.5% of the total variance) and negative word-of-mouth intentions (accounted 37.5% of the total variance). On the other hand, Boshoff (1997) and Smith et al. (1999) found that distributive justice was the strongest predictor of recovery satisfaction. Which dimension of justice has the largest impact on service recovery evaluation is still controversial. Hence, this study determined the relative importance of each dimension of justice.

Recovery Satisfaction

An individual consumer's state of satisfaction based on a single observation or transaction is called encounter- or transaction-specific satisfaction (Oliver, 1997). However, a consumer aggregates evaluations over many occurrences and develops accumulated satisfaction, often referred to as long-term, summary, or overall satisfaction (Oliver, 1997).

Figure 1 portrays the flow of satisfaction in the service failure and service recovery context. Customers have an initial summary satisfaction evaluation toward service providers. When customers experience service failures, their post-failure satisfaction or pre-recovery satisfaction – transaction specific satisfaction will be lower to some degree than previous overall satisfaction. Not all frustrated customers will complain, but some of them will give service providers chances to correct any problems. Sometimes, service providers may find service failures before customers recognize them and initiate service recovery. An appropriate service recovery will mitigate harmful effects and raise satisfaction (recovery satisfaction – transaction specific satisfaction) (Tax et al., 1998).

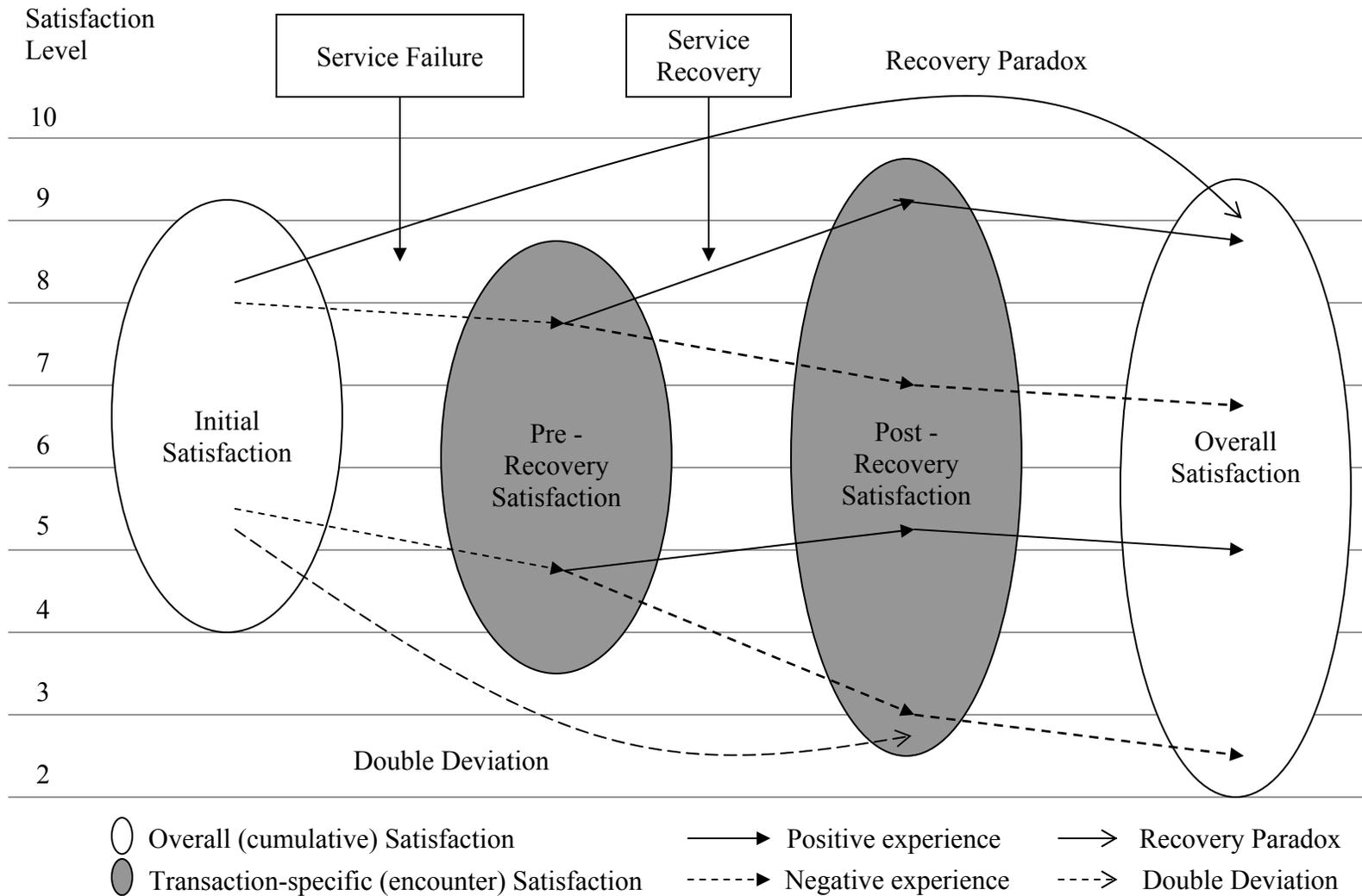


Figure 1. Flow of Satisfaction in Service Failure and Service Recovery Context

Exceptional service recovery efforts can produce a service “recovery paradox,” a situation where the levels of satisfaction rates of customers who received good or excellent recoveries are actually higher than those of customers who have not experienced any problems (Gilly, 1987; Maxham & Netemeyer, 2002b; McCollough, 2000; McCollough & Bharadwaj, 1992; Michel, 2001; Smith & Bolton, 1998). On the other hand, it is clear that an inappropriate response or no response to a service failure complaint will magnify negative evaluation, also referred to as “double deviation” (Bitner, Booms, & Tetreault, 1990; Hart et al., 1990).

Recovery Satisfaction and Overall Satisfaction

Most existing service recovery studies have focused on the short-term benefits and effectiveness of service recovery efforts and various situational factors. Evaluating the effects of customer evaluations of service failure and service recovery on overall (cumulative) satisfaction and behavior intentions is limited (Smith & Bolton, 1998). Customers revise and update their satisfaction and behavioral intentions based on integration of prior assessment and new information (Smith & Bolton, 1998, 2002; Tax et al., 1998). Smith and Bolton (1998) proposed that customers who experienced good or excellent recovery (new information) would exhibit enhanced levels of satisfaction and increased future visit intentions. The importance of building long-term relationships with existing customers through relationship marketing has become more important, making studies of service recovery efforts and they affect overall satisfaction necessary (Maxham & Netemeyer, 2002a).

Smith and Bolton (1998) found that excellent service recovery could lead to increased customer satisfaction. However, this result was only obtained at the very

highest levels of customers' recovery ratings. To test the role of service recovery satisfaction on overall satisfaction, this research proposed the following hypothesis:

H4. Recovery satisfaction has a positive effect on overall satisfaction.

Trust and Commitment (Relationship Quality)

The importance of developing a mutually beneficial ongoing buyer-seller relationship is emphasized in marketing literature (Crosby, Evans, & Cowles, 1990; Dwyer, Schurr, & Oh, 1987; Gwinner, Gremler, & Bitner, 1998; Gundlach, Achrol, & Mentzer, 1995; Hennig-Thurau, Gwinner, & Gremler, 2002). However, relationship quality and key constructs proposed by researchers have not been fully defined. A major goal of relationship marketing studies is to identify and understand key variables that drive relational outcomes (Hennig-Thurau et al., 2002). Researchers have been focused on two determinant variables, trust and commitment, in the development of long-term relationship (Dwyer et al., 1987; Morgan & Hunt, 1994; Tax et al., 1998). Morgan and Hunt (1994) theorized that successful relationship marketing requires relationship commitment and trust. Relationships between service recovery actions and the two variables have rarely been examined (Ruyter & Wetzels, 2000).

Tax et al. (1998) found that recovery satisfaction is strongly associated with both trust and commitment. They demonstrate empirical support for the proposition that complaint handling and service recovery is tied closely to relationship marketing (Tax et al., 1998). However, most of the existing service recovery studies focused on the short-term impact and the effectiveness of recovery efforts and various situational factors. Little research has examined the relationship between service recovery strategies and

relationship quality variables (Brown, Cowles, & Tuten, 1996; Ruyter & Wetzels, 2000); consequently, very little is known about the updating roles of relationship quality between recovery satisfaction and overall satisfaction and behavioral intentions.

Trust

Moorman, Deshpande, and Zaltman (1993, p.82) defined trust as the “willingness to rely on an exchange partner in whom one has confidence.” Similarly, Morgan and Hunt (1994) conceptualized trust as “confidence in an exchange partner’s reliability and integrity.” Both definitions emphasize the importance of confidence in exchange partners. One distinct difference between the two definitions is that Morgan and Hunt (1994) viewed “willingness to rely” as an outcome of trust. Sirdeshmukh, Singh, and Sabol (2002) characterized trust as the expectations a customer has of a service provider for dependability and reliability in delivering on its promises. To develop an exchange partner’s trust in a business relationship, a service provider must consistently meet the expectation of competent performance (Sirdeshmukh et al., 2002).

Trust has frequently been studied as an antecedent of the process of relationship development (Bejou & Palmer, 1998; Crosby et al., 1990; Dwyer et al., 1987; Morgan & Hunt, 1994). Trust also can be seen as an outcome measure in service recovery settings. Considering the fact that confidence benefits among the three relational benefits are the most important in customers’ perspectives (Gwinner et al., 1998), it is of importance to see how effective recovery efforts influence a customer’s perception of the trustworthiness, reliability, and integrity of the company. Ruyter and Wetzels (2000) argue that the feeling of inequity followed by a service failure could be eased in a successful recovery and renew customer confidence in the service provider. This

research hypothesizes that successful service recovery will reinforce the perceived reliability and integrity of the service provider.

H5. Recovery satisfaction has a positive effect on trust.

Morgan and Hunt (1994) stated that trust was a major determinant of relationship commitment. Confidence in one's reliability and integrity in exchange relationships are important enough to warrant maximum efforts at maintaining them (Morgan & Hunt, 1994). Hennig-Thurau et al. (2002) combined confidence benefit and trust into a single construct because of their close ties and found that the combined construct had a strong relationship with satisfaction: however, they found the relationship between the two constructs are insignificant. This study hypothesized that favorable actions during conflict resolution that demonstrate reliability and trustworthy will build customer commitment.

H7. Trust has a positive effect on commitment.

Research on trust in customer relationships is still lacking, especially in a service recovery context (Ruyter & Wetzels, 2000). In the context of service failure and recovery, a demonstration of reliability and trustworthiness through responsible service recovery efforts will increase a favorable evaluation of a service provider. Morgan and Hunt (1994) argued, "Genuine confidence that a partner can rely on another indeed will imply the behavioral intention to rely." They contended that trust is a function of one's behavioral intention. Thus, this study explored the effects of trust on overall satisfaction and behavioral intentions.

H8. Trust has a positive effect on overall satisfaction.

H10. Trust has a positive effect on behavioral intentions.

Commitment

Commitment is a vital component for building a successful long-term relationship (Gundlach et al., 1995; Morgan & Hunt, 1994). Moorman, Zaltman, and Deshpande (1992) defined commitment as “an enduring desire to maintain a valued relationship” (p.316). Similarly, Morgan and Hunt (1994) defined commitment as “an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it.”

Kelley and Davis (1994) suggested that a customer’s perceived service recovery may function as a channel for updating the customer’s organizational commitment. They found that satisfied health club members were more committed to the organization. Tax et al. (1998) also confirmed that satisfaction with complaint handling is positively related to customer commitment. A positive service recovery encounter, although initially failing to meet a customer’s expectation but successfully meeting the service recovery expectation, may improve the customer’s commitment. This research proposes that successful service recovery (recovery satisfaction) reinforces commitment.

H6. Recovery satisfaction has a positive effect on commitment.

Oliver (1997) refers to commitment as conative loyalty. Bowen and Shoemaker (1998) stated that commitment to a relationship resulted in increased product use and voluntary partnership activities. The research also suggests that higher levels of customer commitment lead to higher levels of overall satisfaction and behavioral intentions. Hennig-Thurau et al. (2002) found a significant direct relationship between commitment and word-of-mouth. To test these relationships, the following hypotheses were tested:

H9. Commitment has a positive effect on overall satisfaction.

H11. Commitment has a positive effect on behavioral intentions.

Behavioral Intentions

Customers' behavioral intentions as consequences of satisfaction/dissatisfaction have a significant influence on customers' future relationship with a business and have been one of the central constructs in consumer behavior study (Weun, 1997). Zeithaml, Berry, and Parasuraman (1996) described behavioral intention as "a signal whether customer will remain with or defect from the company" (p.33). Though the definitions of behavioral intentions seem to vary depending upon research context, researchers view behavioral intentions as customer's willingness to provide positive or negative word of mouth and their intention to repurchase (Boulding, Kalra, Staelin, & Zeithaml, 1993; Oliver, 1997; Spreng et al., 1995; Yi, 1990).

Once a dissatisfied customer seeks remedy, subsequent word-of-mouth behavior and repatronage intentions are primarily dependent upon the customer's perception of justice (Blodgett et al., 1997). Effective service recovery efforts may greatly affect recovery satisfaction (Bitner et al., 1990). Similarly, effective service recovery efforts can make an unfavorable service experience into a favorable one, consequently enhancing repurchase intention and positive word-of-mouth intention (Spreng et al., 1995). Smith and Bolton (1998) also noted that customers revise and update their satisfaction judgments and repatronage intentions based on prior overall satisfaction and new information.

Word-of-Mouth Intention

Word-of-mouth behavior has been identified as an important post purchase behavior. Mangold, Miller, and Brockway (1999) emphasized that interpersonal communication has a significant impact on consumer purchasing behavior. Because potential customers perceive word-of-mouth communication credible, it might have a substantial impact (Yi, 1990). Furthermore, its importance as a source of information is significant in service consumption because of intangibility.

Researchers have examined (positive or negative) word-of-mouth as one of the consequences of customer satisfaction/dissatisfaction following a consumption experience. Customers who experienced favorable service recovery demonstrated a strong propensity to share positive information about their experience (Blodgett et al., 1993; Mangold et al., 1999; Swanson & Kelly, 2001).

Revisit Intention

Continued purchasing by current customers is an important concern because the cost of obtaining a new customer usually greatly exceeds the cost of retaining a customer (Spreng et al., 1995). Researchers have found that customer satisfaction/dissatisfaction is a critical factor affecting repurchase intention (Oliver, 1981; Anderson & Sullivan, 1993). However, a direct casual effect has not been found (Tax et al., 1998; Hoffman et al., 1995). The following hypotheses were explored:

H12. Overall satisfaction has a positive effect on behavioral intentions.

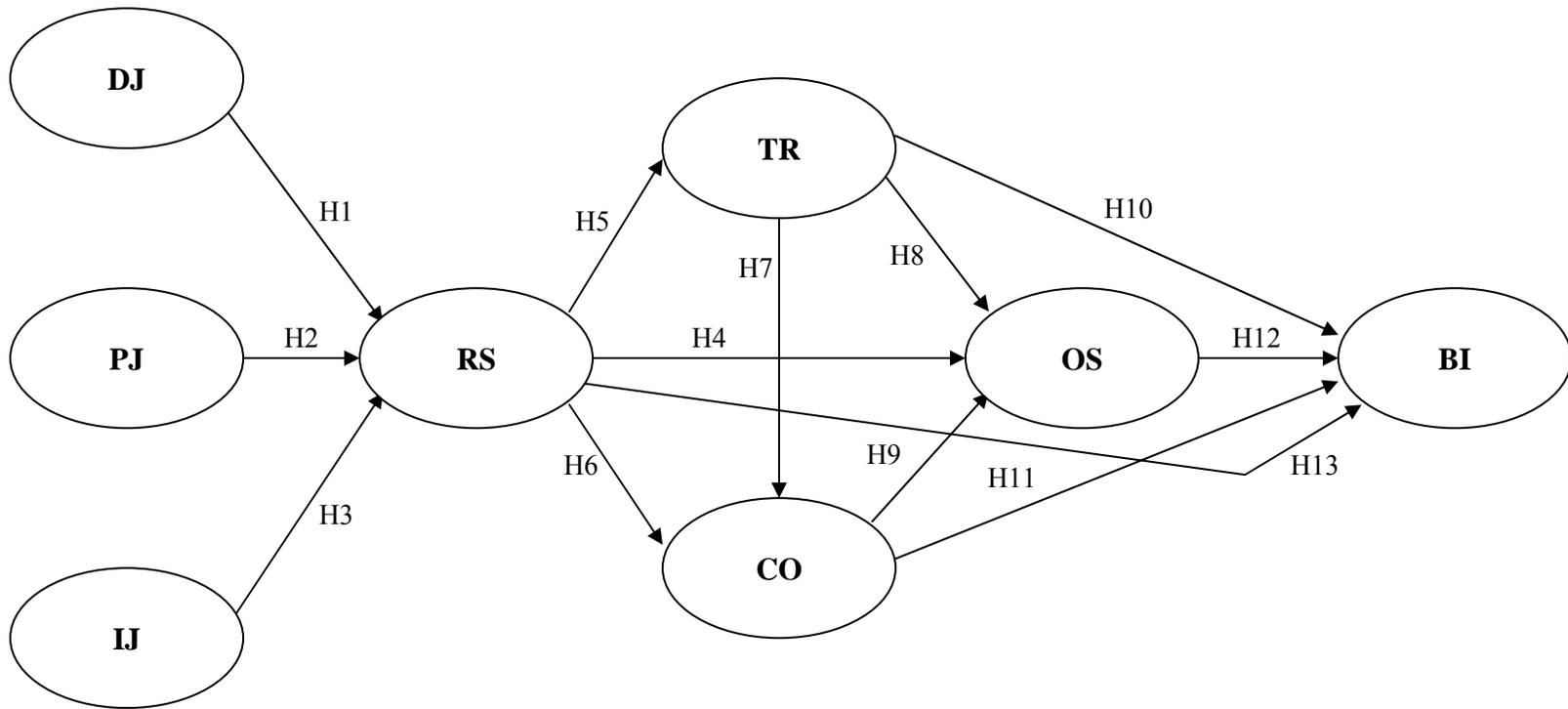
H13. Recovery satisfaction has a positive effect on behavioral intentions.

Mediating Roles of Trust and Commitment

Researchers have found that customer satisfaction/dissatisfaction is an antecedent affecting behavioral intentions (Oliver, 1981; Anderson & Sullivan, 1993). At the same time, findings in many studies contradict the traditional view of a direct causal relationship between satisfaction/dissatisfaction and behavioral consequences (Hoffman et al., 1995). These findings suggest that satisfaction is not a single driving force for customers to behave positively toward a service provider. Therefore, identifying mediating variables between customer satisfaction and behavioral intentions is of interest. The research also suggests that customer's trust and/or commitment mediate between service recovery and overall satisfaction and behavioral intentions.

Proposed Model

Figure 2 illustrates the focus of the study. Procedural justice, interactional justice, and distributive justice are the exogenous variables. Recovery satisfaction, trust, commitment, overall satisfaction, and behavioral intentions are endogenous variables for the study.



DJ: Distributive Justice
 RS: Recovery Satisfaction

PJ: Procedural Justice
 TR: Trust CO: Commitment

IS: Interactional Justice
 OS: Overall Satisfaction BI: Behavioral Intentions

Figure 2. Conceptual Model of Service Recovery

Attribution and Contingency Approach

An individual consumer's state of satisfaction based on a single observation or transaction is called encounter- or transaction-specific satisfaction (Oliver, 1997). Consumers aggregate evaluations over many occurrences and develop accumulated satisfaction referred to as long-term, overall satisfaction (Oliver, 1997). Customers revise and update their satisfaction and behavioral intentions based on prior assessment and new information (Smith & Bolton, 1998; Tax et al., 1998). In a service failure situation, a customer's level of satisfaction (pre-recovery satisfaction – transaction specific satisfaction) will be lower than previous overall satisfaction. Appropriate service recovery will mitigate harmful effects and level up the satisfaction (post-recovery satisfaction – transaction specific satisfaction) (Tax et al., 1998). On the other hand, inappropriate service recovery will magnify the negative evaluation, resulting in a significant drop in the overall satisfaction. An organization's response to service failure has the potential to either restore customer satisfaction or aggravate customers' negative evaluation and drive them to switch to a competitor (Smith & Bolton, 1998).

Service Recovery Paradox

Exceptional service recovery efforts can produce a service “recovery paradox,” a situation where the levels of satisfaction rates of customers who received good or excellent recoveries are actually higher than those of customers who have not experienced any problem (Gilly, 1987; Maxham & Netemeyer, 2002b; McCollough, 2000; McCollough & Bharadwaj, 1992; Michel, 2001; Smith & Bolton, 1998). On the other hand, it is clear that an inappropriate response or no response to a service failure

complaint will result in a magnification of negative evaluation, also referred to as “double deviation” (Bitner et al., 1990; Hart et al., 1990).

Researchers criticized the service recovery paradox because it should not be viewed as an opportunity to impress customers and achieve positive evaluations (Maxham & Netemeyer, 2002b; Oh, 2003; Smith & Bolton, 1998). A longitudinal study of customer complaints and business recovery efforts found that paradoxical increases diminished after more than one failure despite effective service recovery (Maxham & Netemeyer, 2002b).

The service recovery paradox on satisfaction, word-of-mouth (w-o-m), and repurchase intention was observed in many studies (Gilly, 1987; Maxham & Netemeyer, 2002b; McCollough & Bharadwaj, 1992; Smith & Bolton, 1998). However, other researchers did not find any recovery paradox effects (Boshoff, 1997; Bolton & Drew, 1991; McCollough et al., 2000; Oh, 2003). Several reasons may explain these mixed findings.

First, the researchers did not compare the levels of satisfactions properly. Recovery satisfaction (transaction-specific or encounter satisfaction) and overall satisfaction (cumulative satisfaction) should be considered separately in evaluating the effectiveness of service recovery (Maxham & Netemeyer, 2002b; Ruyter & Wetzels, 2000). Ruyter and Wetzels (2000) emphasized that encounter and overall satisfaction should be clearly distinguished in the measurement because respondents might answer construct measurements without distinguishing them. In addition, if an objective of the research is to estimate behavioral intentions, then the most updated evaluation after the consumption experience(s), or the overall satisfaction, should be measured.

Second, data analysis should be based on customers' evaluation of service recovery efforts. It is important to consider the definition of recovery paradox. The recovery paradox is defined as a situation where the levels of satisfaction rates of customers who received good or excellent recoveries are actually higher than those of customers who have not experienced any problem (Gilly, 1987; Maxham & Netemeyer, 2002b; McCollough, 2000; McCollough & Bharadwaj, 1992; Michel, 2001; Smith & Bolton, 1998). Many service providers believe that their service recovery strategy is effective, but customers may not see it that way. Analysis should be separated into satisfactory recovery and unsatisfactory recovery based on customers' evaluations. To test the paradox effects on satisfaction and behavioral intentions, this research evaluated the following hypotheses using MANOVA:

H14. Customers' overall satisfaction after experiencing a service recovery is higher than satisfaction before experiencing a service failure.

H15. Customers' revisit intentions after experiencing a service recovery are greater than initial customers' revisit intentions before experiencing a service failure.

H16. Customers' w-o-m intentions after experiencing a service recovery are greater than customers' w-o-m intentions before experiencing a service failure.

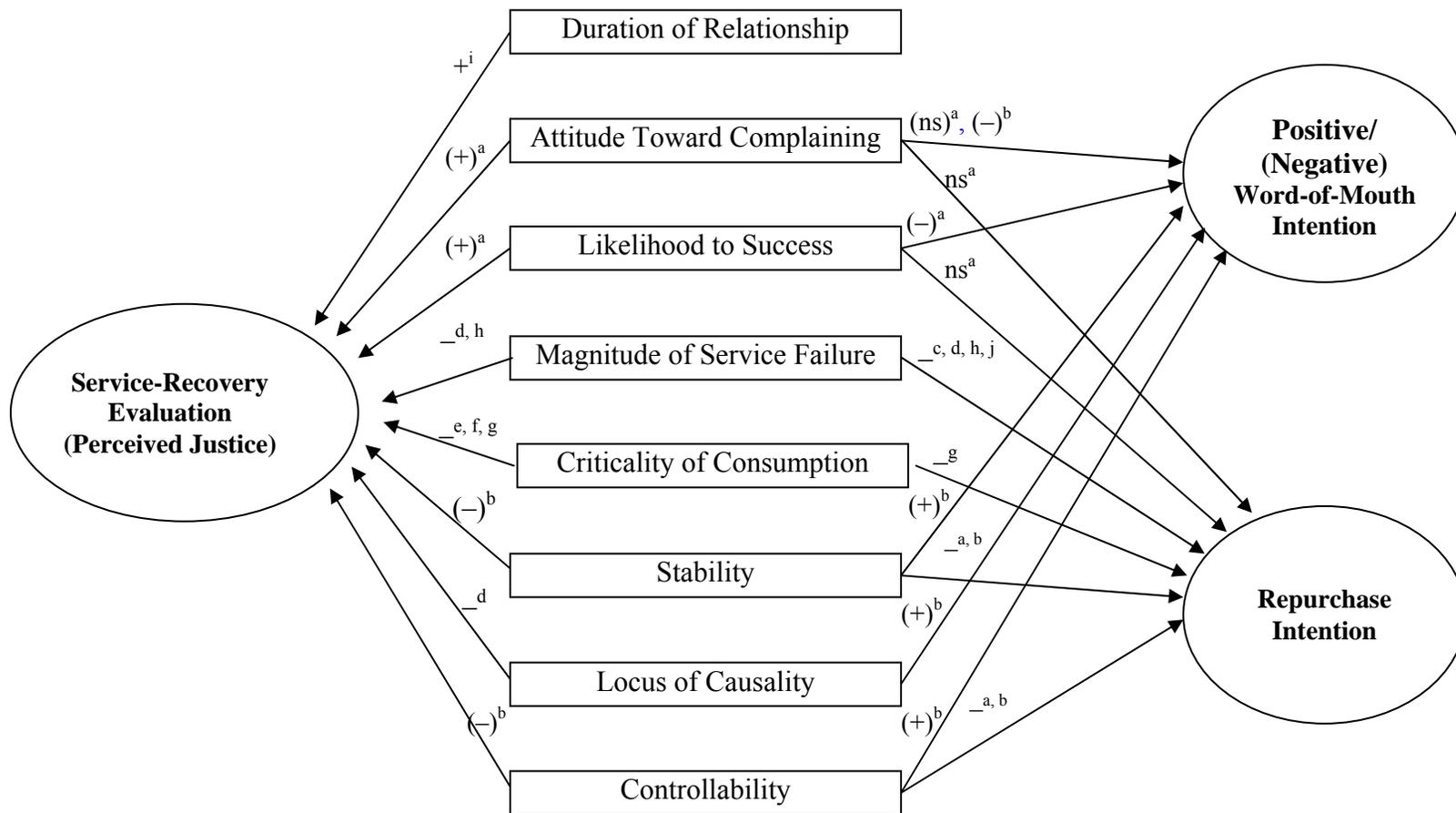
Contingency Approach (Considering Situation Factors)

Hoffman and Kelley (2000) indicated that not all service recoveries are equally effective in resolving customer complaints in different situations. Hoffman and Kelley (2000) emphasized the need for a contingency approach to service recovery. They proposed that the evaluation of service recovery depends upon a variety of unforeseen, situational factors. Colgate and Norris (2001), in a qualitative study of bank customers, found that satisfaction with recovery, loyalty, and barriers to exit are the major factors influencing whether customers remain or exit a business.

Situational factors that have been investigated in the service recovery studies include criticality of service consumption (Matilla, 1999, 2001; Ostrom & Iacobucci, 1995; Sundaram et al., 1997; Webster & Sundaram, 1998), magnitude (severity) of service failure (Kelley & Davis, 1994; Hoffman et al., 1995; Matilla, 1999, 2001; Smith & Bolton, 1998; Conlon & Murray, 1996; McColloch, 2000), types of service failure (Bitner et al., 1990; Goodwin & Ross, 1992), and the person who perceived the failure (Boshoff & Leong, 1998; Mattila, 1999). Figure 3 presents research findings and proposed situational factors (including attributional factors) that are often mentioned in service failure and recovery setting.

Criticality (perceived importance) of Service Consumption

Consumers are likely to view service failure more seriously when the service consumption situation is very important than when the consumption situation is less important (Sundaram et al., 1997). Consequently, the perceived importance or criticality of service consumption impacts the customers' evaluations of service encounters (Ostrom & Iacobucci, 1995). Sundaram et al. (1997) and Webster and Sundaram (1998) found



ns: not significant

^a Blodgett et al. (1993). ^b Blodgett et al. (1995). ^c Mack et al. (2000). ^d Mattila (1999). ^e Sundaram et al. (1997). ^f Webster & Sundaram (1998). ^g Ostrom & Iacobucci (1995). ^h Conlon & Murray (1996). ⁱ Hoffman & Kelley (2000). ^j Smith et al. (1999).

Figure 3. Effects of Situational and Attributional Factors in the Evaluation of Service Recovery

that the criticality of the service consumption situation significantly influenced customers' perceptions of service failure recovery efforts. This finding suggests that the customers' attitudes toward service failure recovery vary according to service consumption situations. Thus this study explored the effects of criticality of service consumption on customers' perceived justice and recovery satisfaction.

H17a: Customers' perceived criticality of service consumption will be negatively related to customers' perceived justice.

H17b: Customers' perceived criticality of service consumption will be negatively related to customers' service recovery satisfaction.

Magnitude (Severity) of Service Failure

Both customers' perceived justice and recovery satisfaction will vary depending upon the perception of the magnitude of the service failure. Researchers have hypothesized that the more serious the failure the more difficult it will be for management to achieve recovery satisfaction (Hoffman et al., 1995; Mattila, 1999; Smith & Bolton, 1998). These researchers found a negative relationship between failure ratings and service recovery rating. Hart et al. (1990) stated that understanding the effect of the severity or magnitude of service failure is critical in determining an appropriate recovery strategy.

This research explored the effects of the magnitude of service failure on customers' perceived justice and recovery satisfaction.

H18a: Customers' perceived magnitude of service failure will be negatively related to customers' perceived justice.

H18b: Customers' perceived magnitude of service failure will be negatively related to customers' service recovery satisfaction.

Attribution Approach

Customers' judgments about the cause and effect attribution influence their subsequent emotions, attitudes, and behaviors based on the three dimensions of causal attributions: locus, controllability, and stability (Weiner, 1980, 1985; Swanson & Kelley, 2001). The attribution theory has applied for explaining customer responses to product and service failures (Folkes et al., 1987; Richins, 1983; Weiner, 1980). Researchers emphasized the mediating roles of attributional influences (Folkes et al., 1987; Yi, 1990). In general, dissatisfied customers who consider the cause to be external, stable, and controllable are more likely to exit and to engage in negative word-of-mouth behavior than those who consider the cause to be internal, unlikely to recur in the future, and uncontrollable (Blodgett et al., 1993; Folkes, 1984). Figure 3 presents research findings and proposed attributional and situational factors that are often mentioned in service failure and recovery setting.

Controllability

Controllability refers to the customer's belief that the service provider can prevent the problem and control the outcomes (Blodgett et al., 1995; Bowen, 2001). Customers who perceive that a problem is controllable are more likely to engage in negative word of mouth behavior and less likely to return the business than customers who do not perceive that a problem is controllable (Blodgett et al., 1995; Swanson & Kelley, 2001).

H19a: Customers' perception of controllability of causality will be negatively related to customers' overall satisfaction.

H20a: Customers' perception of controllability will be negatively related to customers' w-o-m intentions.

H21a: Customers' perception of controllability will be negatively related to customers' revisit intentions.

Stability

Stability refers to the perceived probability that similar problems will arise in the future (Blodgett et al., 1995; Swanson & Kelley, 2001). The perceived probability of another failure in the future also can affect the evaluation of service recovery (Blodgett et al., 1993; Folkes, 1984; Smith & Bolton, 1998). Customers who experienced similar failures rated the recovery efforts lower than those who experienced distinct failures (Maxham & Netemeyer, 2002b). Stability also had a significant effect on overall satisfaction (Smith & Bolton, 1998) and revisit intentions (Blodgett et al., 1993; Folkes et al., 1987; Smith & Bolton, 1998). Smith and Bolton (1998) found customers' overall satisfaction and revisit intentions were lower when customers believe that the service failure in restaurant is likely to occur again.

H19b: Customers' perceived stability will be negatively related to customers' overall satisfaction.

H20b: Customers' perceived stability will be negatively related to customers' w-o-m intentions.

H21b: Customers' perceived stability will be negatively related to customers' revisit intentions.

Locus of Causality

Locus of causality relates consumers' perception of who is responsible for the service failure (Folkes, 1984, 1988; Hess, Ganesan, & Klein, 2003; Swanson & Kelley, 2001). What causes an unsatisfactory experience is likely to cause different behavioral consequences (Yi, 1990). Buyers are more likely to attribute the cause of problems to the seller and blame the seller for the failure (Folkes & Kotsos, 1986). Customers who attributed the cause of service failures to service providers – external locus – rated recovery evaluation significantly lower than those who attributed the cause to themselves – internal locus (Swanson & Kelly, 2001). Thus the study proposed that customers' perceived locus of causality will significantly influence customers' overall satisfaction toward the service provider and behavioral intentions.

H19c: Customers' perceived locus of causality will be negatively related to customers' overall satisfaction.

H20c: Customers' perceived locus of causality will be negatively related to customers' w-o-m intentions.

H21c: Customers' perceived locus of causality will be negatively related to customers' revisit intentions.

Interaction Effects of Controllability and Stability

Blodgett et al. (1993) found that the interaction effects of controllability and stability had a significant, negative effect on complaints' perceived justice and repatronage intention. However, the interaction did not have a significant impact on word of mouth intention (Blodgett et al., 1993). The proposed model presented in Figure 4 depicts the focus of the study..

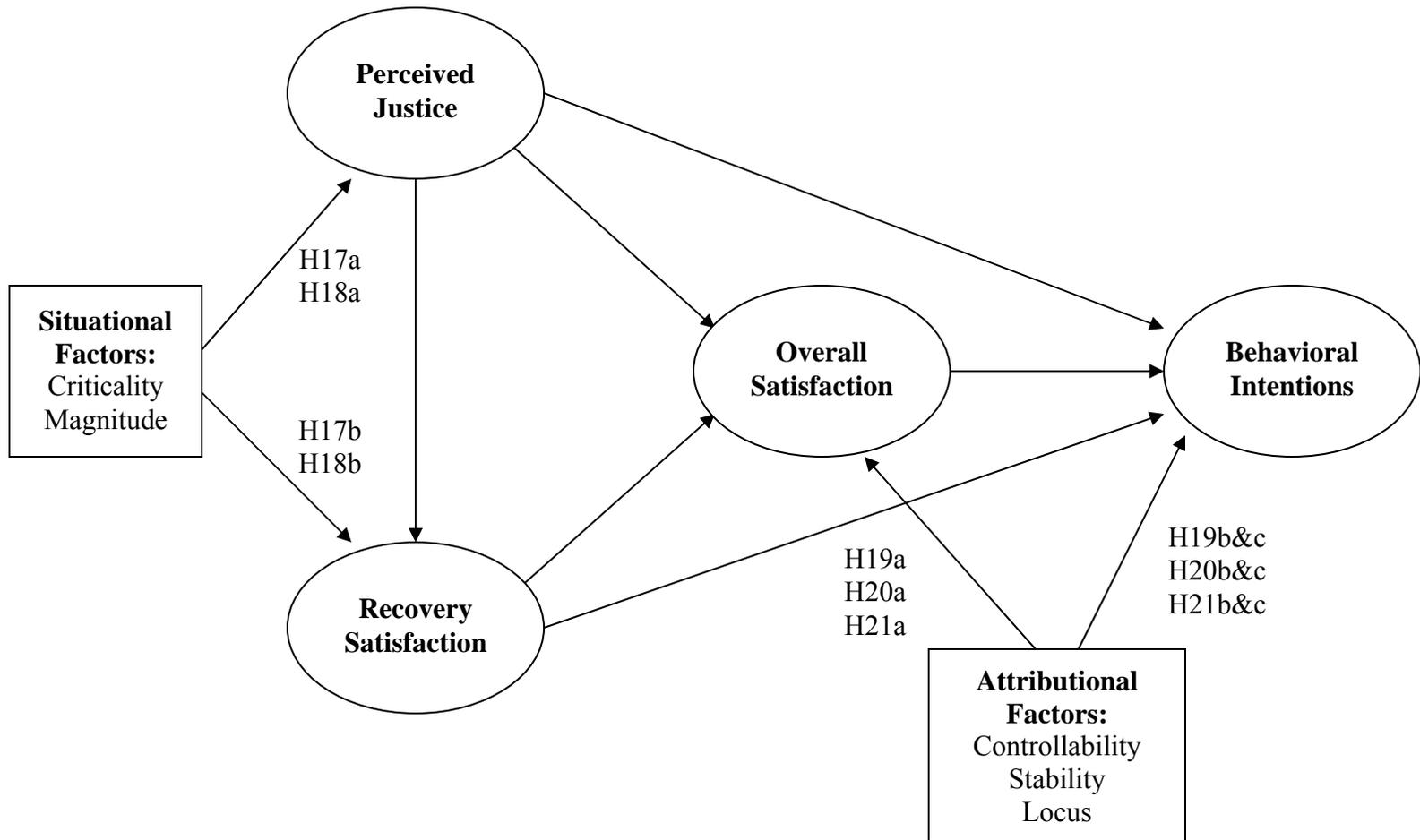


Figure 4. Role of Situational and Attributional Factors in the Evaluation of Service Recovery

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CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the research design and the procedures used to achieve the research objectives. The first section reviews research methods for the study of service recovery and presents the research design for the study. The second section discusses the population and sample for the study. The third section discusses instrument development, measurement of variables, and a description of the pilot test. Descriptions of the data collection procedures and data analyses are then presented.

Research Design

Methodological issues involving measurement of antecedents, process, and outcomes of service recovery strategies remain controversial (Michel, 2001). Since service recovery efforts are triggered by service failures, conducting empirical research in either a laboratory or a field environment is challenging (Smith & Bolton, 1998; Smith, Bolton, & Wager, 1999). An experimental approach, a critical incident technique, and a recall-based survey are the three methods that are most frequently used.

Experimental scenarios have been extensively used in service recovery studies and services marketing (Blodgett, Hill, & Tax, 1997; Mattila, 1999; Sundaram, Jurovski, & Webster, 1997). The nature of service, the extent of the problem, and situational factors can be easily manipulated by providing different levels of the stimuli (Singh & Widing, 1991). This study used a quasi-experimental design. Participants were provided

failure and recovery scenarios, and then they were asked to evaluate the service encounters.

Experimental Design

Experimental researchers attempt to discover the causal relationship between treatment variable and dependent variable (Cook & Campbell, 1979; Perdue & Summers, 1986). Therefore, ruling out extraneous factors (background factors) is an important task for a rigorous theory test (Cook & Campbell, 1979; Calder, Phillips, & Tybout, 1982). An experimental approach provides better control over independent variables and excludes extraneous variables (Bitner, Booms, & Tetreault, 1990; Blodgett et al., 1997; Cook & Campbell, 1979; Smith & Bolton, 2002) to rule out possible alternative explanations of the relationship between cause and effect (Mitchell, 1985). Table 1 lists studies that utilized the experimental design in the study of service recovery.

The Use of Written Scenario

Written scenarios to evaluate the effects of service recovery on satisfaction, relationship quality, and behavioral intentions have been used extensively (e.g., Boshoff, 1997; Collie, Sparks, & Bradley, 2000; Dube, Renaghanm, & Miller, 1994; Goodwin & Ross, 1992; Mittila, 1999; McCollough, 2000; McDougall & Levesque, 1999; Smith & Bolton, 2002; Sundaram et al., 1997; Swanson & Kelley, 2001; Webster & Sundaram, 1998). Field studies are limited because of expense and time involved, ethical concerns, and managerial unwillingness to intentionally pose service failure to customers among other things (Smith & Bolton, 1998; Smith et al., 1999). Bitner (1990) asserted that the use of written scenarios permits better control of the manipulation of variables of interest.

Table 1

Service Recovery Studies Utilized the Experimental Scenarios

Author(s)	Subjects	Research Setting	Independent (Exogenous) Variables	Comments
Boshoff (1996)	540 travelers	Airline	3 (who) x 3 (time) x 3 (how)	Respondents were international tourists who traveled during last six months.
Collie, Sparks, & Bradley (2000)	176 students (Psychology)	Restaurant	2 (IJ) x 4 (others' outcomes)	High believability (6.3 out of 7) of scenario was reported.
Goodwin & Ross (1992)	285 students	Various services	2 (outcome) x 2 (apology) x 2 (voice) x 4 (type of service)	Potential compounding effect of voice and outcome was discussed.
Hess, Ganesan, & Klein (2003)	346 students (Business)	Restaurant	2 (severity of failure) x 2 (quality of past service experience) x 2 (number of past encounters) x 3 (quality of recovery performance)	η^2 was reported for compounding check.
Mattila (1999)	246 Singaporean (alumni of a university)	Restaurant	2 (criticality of consumption) x 2 (magnitude of failure) x 2 (first perceiver of failure)	10-point Likert scale was used to check manipulation.
Mattila (2001)	441 students	Restaurant and other services	3 (service type) x 2 (compensation) x 2 (magnitude of failure)	A 45 minutes wait for meal for restaurant setting
McCollough (2000)	128 students (Business)	Hotel	2 (stability of failure) x 2 (stability of recovery)	Service quality attitudes were incorporated in the model.
McCollough, Berry, & Yadav (2000)	615 airline passengers	Airline travel	Study1: 2 (recovery expectation) x 3 (service performance) Study2: 3 (DJ) x 3 (IJ)	Intercepting airline passengers & mail (for who cannot finish the survey) were used.

Table 1 Continued

Author(s)	Subjects	Research Setting	Independent (Exogenous) Variables	Comments
O'Neill & Mattila (2004)	316 hotel guests	Hotel	2 (stability of failure) x 2 (stability of recovery)	The study used scenarios developed by McCollough (2000)
Ruyter & Wetzels (2000)	N/A	Dining café and other services	2 (outcome) x 2 (apology) x 2 (voice) x 4 (type of service)	Other services were hairdresser, department store, and bank.
Smith & Bolton (1998)	375 students 520 business travelers	Restaurant Hotel	2 (type of failure) x 2 (magnitude) x 3 (compensation) x 2 (responses speed) x 2 (apology) x 2 (recovery initiation)	Researchers asked customers to name any restaurant to achieve variability in loyalty and frequency of visit.
Smith & Bolton (2002)	355 students 549 business travelers	Restaurant Hotel	2 (type of failure) x 2 (magnitude of failure) x 2 (response speed) x 2 (presence of apology) x 2 (recovery initiation) x 3 (compensation)	To capture customers' emotional responses, verbal protocols were used instead of manipulation.
Sundaram, Jurowski, & Webster (1997)	160 students (Business)	Restaurant	2 (criticality) x 4 (compensation)	The levels of compensation were an apology, 25% & 50% discount, and re-perform.
Webster & Sundaram (1998)	480 students	Restaurant and other services	4 (recovery efforts) x 2 (criticality) x 3 (service type)	Wave analysis t-tests were performed to determine if cell size has an impact on the results.

Note: students are undergraduate students

Furthermore, this method prevents undesirable response biases due to memory lapses (Smith & Bolton, 1998; Smith et al., 1999). For example, variables that may influence outcome, such as severity of service failure, can be magnified if recovery is not satisfactory or understated if recovery is satisfactory. Scenario experimentation also allows the systematic investigation of more representative and inclusive sets of service failure and recovery (Smith & Bolton, 2002).

The use of written scenarios, however, may limit the researcher's ability to capture the emotional involvement of respondents (Hess, Ganesan, & Klein, 2003; Mattila, 1999; Smith & Bolton, 2002; Sundaram et al., 1997) and the attitude of service providers (Sundaram et al., 1997). Furthermore, written scenarios cannot adequately test long-term relationships because those are built up over time (Sundaram et al., 1997). Most importantly, the method is challenged for external validity at the cost of internal validity (Bitner, 1990; Brown, Cowles, & Tuten, 1996; Michel, 2001; Ruyter & Wetzels, 2000). Research findings may also not generalize to real service consumption situations (Collie et al., 2000; Ruyter & Wetzels, 2000).

Experimental Manipulation and Scenario Development

The research design for the study was a 2x2x2 between-groups factorial design.

The three dimensions of justice were manipulated as follows:

- Distributive justice (2 levels) – low and high,
- Procedural justice (2 levels) – low and high,
- Interactional justice (2 levels) – low and high.

A total of 8 scenarios (see Table 2), in which a service failure and the subsequent service recovery efforts of the restaurant operation were described, were developed (see

Appendix A & B). Each scenario was identical except for manipulations of the three independent variables. The subjects were randomly assigned to 1 of the 8 treatments.

Table 2
Experimental Scenarios for the Study

	DJ Low		DJ High	
	PJ Low	PJ High	PJ Low	PJ High
IJ Low	Ver I	Ver III	Ver V	Ver VII
IJ High	Ver II	Ver IV	Ver VI	Ver VIII

Participants were asked to read the scenario and to assume that the situation had just happened to them in a restaurant. Figure 5 illustrates the research procedures of the study. Typology of service failures (e.g., Hoffman, Kelley, & Rotalsky, 1995) and recovery efforts in restaurant setting were reviewed from previous studies (see Appendix A for a service failure scenario). The typical service recovery activities employed by the restaurant service providers to recover service failure situations generally include one or a combination of the following activities: an apology, a discount, free food, or an offer to reperform the service immediately (Sundaram et al., 1997). To develop realistic experimental scenarios, 43 undergraduate students in a hospitality program were asked to describe service failure and recovery efforts that they had experienced at casual dining restaurants.

Interactional justice incorporates apology, explanation, and concern into all recovery scenarios. McDougall and Levesque (1999) emphasized that explanation be the minimum that would be offered by a service provider. Procedural justice includes

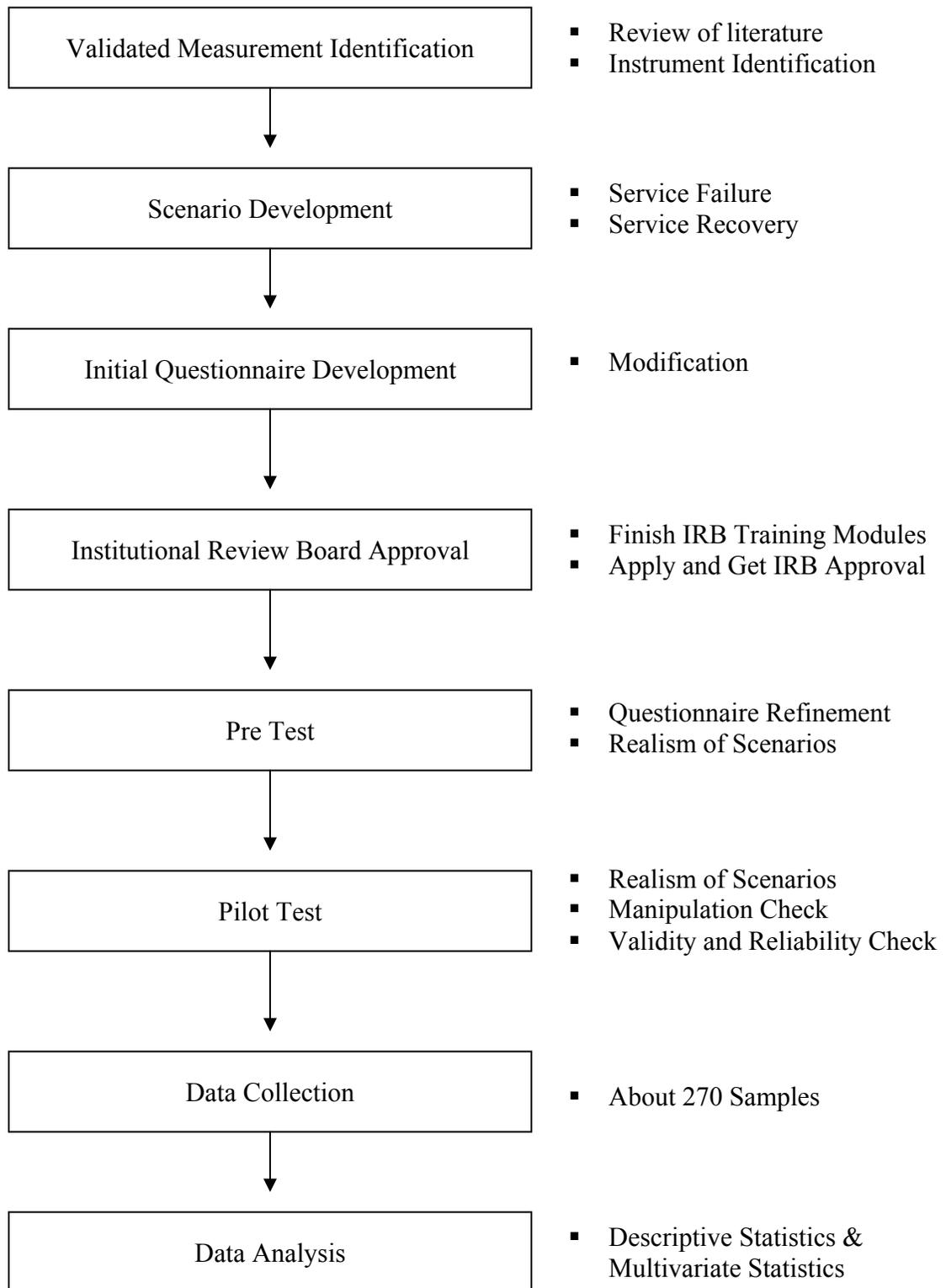


Figure 5. Research Procedures of the Study

response time and responsiveness. Distributional justice incorporates compensation.

Table 3 describes the experimental manipulation of exogenous variables.

Table 3

Description of Experimental Manipulation

Interactional Justice	
Low	The server simply apologized. The manager did not apologize for the problem. The manager did not provide an explanation for the problem. The manager did not ask if there was anything else that she could do to serve you better.
High	The server sincerely apologized. The manager apologized for the problem. The manager provided an explanation for the problem. The manager asked if there was anything else that she could do to serve you better.
Procedural Justice	
Low	The server said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you. The manager asked you what the problem was and you had to explain again what the problem was.
High	The server said that he could take care of the problem and took the dish back. After 2-3 minutes, the manager approached you. The manager knew the problem and you didn't have to re-explain the problem.
Distributional Justice	
Low	Another steak was served. No compensation was offered.
High	Another steak was served. 100% discount on the item was offered.

Population and Sample

The study involved convenience samples of casual restaurant customers. No single definite criterion in deciding sample size was proposed for structural equation modeling. A sample size of 200 was proposed as being the “critical sample size.” (Hair, Anderson, Tatham, & Black, 1998). However, for the purpose of the analysis of variance and multivariate analysis of variance, a sample size of 308 was collected.

Instrument Development

The questionnaire consisted of three sections (see Appendix C). The first section included questions about respondents’ initial satisfaction and behavioral intentions toward the casual restaurant that they recently visited. The second section consisted of a service failure scenario and a recovery scenario and measurements of customer recovery satisfaction, trust, commitment, overall satisfaction, and behavior intentions. The last section asked subjects to provide demographic data, such as gender, age, household income, and racial/ethnic background.

Measurement of Variables

The use of a single-item scale was criticized for several reasons despite the apparent advantage of simplicity. It cannot discretely evaluate various dimensions and thus may not entirely capture complicated customer satisfaction domains (Yi, 1990). Researchers recommended using multi-item measures of cognitive constructs (Nunnally, 1978; Yi, 1990). Each construct was measured using multi-items for the study. Multi-item scales that were validated in the previous study were adapted and modified to fit the study setting.

Measurements of dimensions of justice were adapted from those of Blodgett et al. (1997), Maxham and Netemeyer (2002), and Smith et al. (1999). Distributive justice was measured as the perceived outcome (compensation) fairness. Procedural justice was measured as the perceived fairness of policies and procedures and timely responsiveness. Interactional justice was measured as apology, explanation, and concern toward customers.

Satisfaction items were adapted from Oliver and Swan's measure (1989). Satisfaction was measured at three intervals (pre-failure overall satisfaction, recovery satisfaction, and post-recovery overall satisfaction). Transaction specific satisfaction (recovery satisfaction) was measured after a service failure scenario and a service recovery scenario were presented.

Trust was measured as confidence in reliability and integrity of service provider (Morgan & Hunt, 1994). Commitment was measured as the willingness to maintain the relationship (Morgan & Hunt, 1994).

Behavioral intentions were evaluated by assessing the respondents' willingness to revisit and to recommend the restaurants to others. Behavioral intention measurement was adapted from Maxham and Netemeyer's (2002) and Blodgett et al.' (1997) scales.

All independent (exogenous) and dependent (endogenous) variables were measured on 7-point Likert Scale anchoring from 1) strongly disagree to 7) strongly agree. Table 4 lists the descriptions of measurement of constructs for the study. The perceived realism of the scenarios was checked by asking participants to estimate realism of scenarios on a 7-point scale anchoring 1) very unrealistic to 7) very realistic or 1) very unlikely to 7) very likely depending on the statements.

Table 4

Descriptions of Measurement of Constructs for the Study

Dimensions	Measures	Source
Distributive Justice	<ul style="list-style-type: none"> • Although this event caused me problems, the restaurant's efforts to resolve it resulted in a very positive outcome of me. • Given the inconvenience caused by the problem, the outcome I received from the restaurant was fair. • The service recovery outcome that I received in response to the problem was more than fair. • Given the circumstances, I feel that the restaurant offered adequate compensation. 	Maxham & Netemeyer (2002) & Blodgett, Hill, & Tax (1997)
Procedural Justice	<ul style="list-style-type: none"> • Despite the hassle caused by the problem, the restaurant responded quickly. • I feel the restaurant responded in a timely fashion to the problem. • I believe the restaurant has fair policies and practices to handle problems. • With respect to its policies and procedures, the employee(s) handled the problem in a fair manner. 	Maxham & Netemeyer (2002)
Interactional Justice	<ul style="list-style-type: none"> • In dealing with the problem, the restaurant personnel treated me in a courteous manner. • During effort to resolve the problem, the restaurant employee(s) seemed to care about the customers. • The restaurant employee(s) were appropriately concerned about my problem. • While attempting to solve the problem, the restaurant personnel considered my views. 	Maxham & Netemeyer (2002) & Smith, Bolton, & Wagner (1999)
Recovery Satisfaction	<ul style="list-style-type: none"> • In my opinion, the restaurant provided a satisfactory resolution to the problem on this particular occasion. • I am satisfied with the restaurant's handling of this particular problem. • I am satisfied with this particular dining experience. 	Maxham & Netemeyer (2002) & Brown, Cowles, & Tuten (1996)

Dimensions	Measures	Source
Overall Satisfaction	<ul style="list-style-type: none"> • I am satisfied with my overall experience with the restaurant. • As a whole, I am happy with the restaurant. • Overall, I am pleased with the service experiences with this restaurant. 	Oliver & Swan (1989) & Maxham & Netemeyer (2002)
Trust	<p>Experiencing this situation in this restaurant,</p> <ul style="list-style-type: none"> • I think the restaurant can be trusted. • I have confidence in the restaurant. • I think the restaurant has high integrity. • I think the restaurant is reliable. 	Morgan & Hunt (1994)
Commitment	<p>Experiencing this situation in this restaurant,</p> <ul style="list-style-type: none"> • I am very committed to the restaurant. • I intend to maintain relationship definitely. • I think the restaurant deserves my effort to maintain relationship. • I can develop warm feeling toward the restaurant. 	Morgan & Hunt (1994)
Revisit Intention	<ul style="list-style-type: none"> • I would dine out at this restaurant in the future. • There is likelihood that I would eat at this restaurant in the future. • I <i>will not</i> eat at this restaurant in the near future. 	Maxham & Netemeyer (2002) & Blodgett, Hill, & Tax (1997)
Word of Mouth Intention	<ul style="list-style-type: none"> • I will spread positive word-of-mouth about this restaurant. • I will recommend this restaurant to my friends. • If my friends or relatives were looking for a restaurant, I would tell them to try at this restaurant. 	Maxham & Netemeyer (2002)

Pre-test and Pilot Test

A pre-test was conducted to refine the research instrument. Graduate students and faculty members (approximately 15) in a hospitality program were asked to evaluate the survey instrument (four versions of the experimentation survey: Version I, IV, VI, and VIII). Participants were asked to identify any ambiguity of questions, measurements, and scenarios. Modifications were made accordingly (e.g., wording, deleting unnecessary questions, and underlining negative verbs).

Following the pre-test, a pilot test of the survey instrument was conducted as a preliminary test of the final survey questionnaire. The major purposes of the pilot test were to ensure manipulations of exogenous variables and to assess the reliability and validity of the measurements.

A convenience sample of 96 undergraduate students (46 female and 50 male) taking a class in a hospitality program was randomly assigned to one of the eight scenarios. The mean age of the participants was 20.89 years ($SD = 2.09$). Participants were majoring over 20 different fields. Approximately 31% of the respondents were hospitality majors (30 respondents).

Reliability of Measurement

Reliability of the measurements was estimated using Cronbach's coefficient alpha. Table 5 presents the results. Values were well above the suggested cut-off .70 indicating internal consistency (Nunnally, 1978).

Table 5

Reliability of Measurements

Construct	Alpha
Interactional Justice	.94
Procedural Justice	.93
Distributive Justice	.92
Recovery Satisfaction	.95
Overall Satisfaction	.97
Trust	.97
Commitment	.97
Revisit Intention	.86
Word of Mouth Intention	.97

Manipulation and Confounding Checks

Researchers 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 within experimental treatments (convergent validity), and to check if the manipulation of a factor is independent of the manipulations of another factor (discriminant validity) (Blodgett et al., 1997; Cook & Campbell, 1979; Perdue & Summers, 1986; Sundaram, et al., 1997). For example, McCollough, Berry, and Yadav (2000) identified a confounding effect of a mechanical problem of an airplane on safety and changed to crew unavailability in the pretest.

Realism of Scenarios. To assess the realism of the service failure and recovery scenarios student participants were asked to respond to the following items: “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 & Ross, 1992; Sundaram et al., 1997). Mean scores of 5.86 (failure scenario)

and 5.60 (recovery scenarios) on the 7-point scale suggest that the respondents perceived the scenario as highly realistic. Table 6 lists means and standard deviations of realism of scenarios.

Table 6

Realism of Scenarios

	Mean	Standard Deviation
Failure Scenario	5.86	0.99
Recovery Scenarios	5.60	1.15

Convergent Validity. Convergent validity check was conducted using full-factorial ANOVA models (2x2x2 ANOVA) to assess if respondents perceived the levels of each dimension of justice differently in the scenarios (Perdue & Summers, 1986; Blodgett et al., 1997). Means of high and low groups of manipulated scenarios in terms of interactional, procedural, and distributive justice were compared to see if research participants perceive high conditions more favorably and low conditions less favorably as intended (main effects for the manipulation of factors). Respondents perceived dimensions of justice significantly differently as intended (see Table 7). Students who were exposed to high conditions of each justice perceived more favorably than those who were exposed in low conditions.

Table 7

Convergent Validity of Manipulations

Manipulation	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>
Interactional Justice	Perceived IJ			
High	5.47	1.06	58.61	.000
Low	3.92	1.24		
Procedural Justice	Perceived PJ			
High	5.40	1.08	55.74	.000
Low	3.78	1.34		
Distributive Justice	Perceived DJ			
High	5.22	1.23	25.41	.000
Low	4.04	1.26		

Discriminant Validity

A discriminant validity check is recommended to ensure the manipulation of a construct did not change in measures of related but different constructs (Perdue & Summers, 1986). Perdue and Summers (1986) argued,

What if, however, the manipulations themselves are confounded (i.e., manipulations that are meant to represent a particular independent variable can be interpreted plausibly in terms of more than one construct, each at the same level of reduction)? In such a situation confidence in the investigator's causal explanation (expressed in theoretical terms) of the experimental results is greatly reduced because the construct validity of the manipulations as operationalizations of the independent variables would be questionable (p. 317).

Discriminant validity will be established if none of the manipulations of independent variables confound one another (Blodgett et al., 1997; Perdue & Summers, 1986). In situations where the main and interaction effects of manipulated factors have

statistically significant effects on other independent variables, discriminant validity turns out to be unsure (Perdue & Summers, 1986). No interaction effects had confounding effects on other independent variables; however, main effects of manipulation of factors had significant effects on other independent variables (see Table 8).

Table 8

Confounding Checks of Manipulations

Effects of Manipulation	Perceived IJ		Perceived PJ		Perceived DJ	
	<i>p</i>	ω^2	<i>p</i>	ω^2	<i>p</i>	ω^2
IJ	.000	.309	.000	.109	.001	.073
PJ	.000	.095	.000	.305	.005	.055
DJ	.000	.095	.003	.046	.000	.179
IJ x PJ	.838	.000	.792	.000	.550	.000
IJ x DJ	.759	.000	.122	.008	.439	.000
PJ x DJ	.284	.001	.175	.005	.299	.000
IJ x PJ x DJ	.878	.000	.403	.000	.342	.000

When confounding is present, Perdue and Summers (1986) suggest that researchers evaluate if the degree of confounding is serious enough to mislead results. An indicator of effect size, ω^2 , was calculated (Perdue & Summers, 1986) to analyze the proportion of variance in the dependent variable accounted for by each main and interaction effect. The ω^2 formula is illustrated in equation 1 below.

$$\omega^2 = (SS_{\text{effect}} - (df_{\text{effect}})(MS_{\text{error}})) / SS_{\text{total}} + MS_{\text{error}} \quad (1)$$

Perdue and Summers (1986) indicated that a sufficiently large ω^2 associated with the main effect of manipulated variable for any given measure that is being analyzed is desirable; however, a near-zero ω^2 is desirable for other main and interaction effects.

Manipulation of interactional justice accounted for 30.9% of the variance of interactional justice and were minimal for other justice dimensions (9.5% of distributive and procedural justice). Procedural manipulation explained 30.5% of the variance of procedural justice, 10.9% of interactional justice, and 4.6% of distributive justice. Manipulation of distributive justice accounted for 17.9% of the variance of distributive justice and minimal for other justice dimensions (7.3% of interactional and 5.5% of procedural justice).

Data Collection Procedure

To comply with the mandate of the KSU Institutional Review Board (IRB), the researcher finished the training and education modules designed for researchers conducting research involving human subjects. Then the researcher applied for and received approval for this research from IRB before conducting the pilot test.

Sample Selection and Data Collection

Data were collected from various groups: community service groups, religious groups in a city of 45, 000 population, and a faculty and staff group at a Midwestern university during their fund raising events, monthly meetings, etc. The researcher first contacted leaders of various groups and asked them to consider participating in the study. Upon getting approval, the researchers either attended a scheduled meeting of the group and explained the purpose of the study and administered the survey or the researchers briefly explained the research protocol to the leaders of the groups who administered the survey. The groups ranged from 10 to 60 members. Six hundred copies of the questionnaire (Appendix C); cover letter (Appendix D); postage paid, self-addressed

envelopes were distributed to participants at the end of the meetings. A total of 308 completed questionnaires (51% respondent rate) were returned from 18 different groups. The majority (about 87%) of the questionnaires were returned by mail.

Incentive for Participants. Participants were informed that the researcher would donate one dollar to the charitable organization that they indicated for their returned questionnaires.

Anonymity and Confidentiality. The researcher marked dots in different colors in various locations to track response rate. No identification numbers or other information were placed on the questionnaires before they were distributed. Confidentiality and anonymity were guaranteed.

Data Analysis

Statistical analyses were performed using SPSS for Windows 11.0 and LISREL 8.54 . Figure 6 illustrates the data analysis procedure for the study.

Hypothesis Test: Study 1

Structural equation modeling is widely used in marketing research since theoretical constructs are difficult to operationalize with a single measure, and often measurement errors are unavoidable (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). The proposed model was analyzed following the two-step approach suggested by Anderson and Gerbing (1988). The measurement model was examined first, followed by the structural equations model.

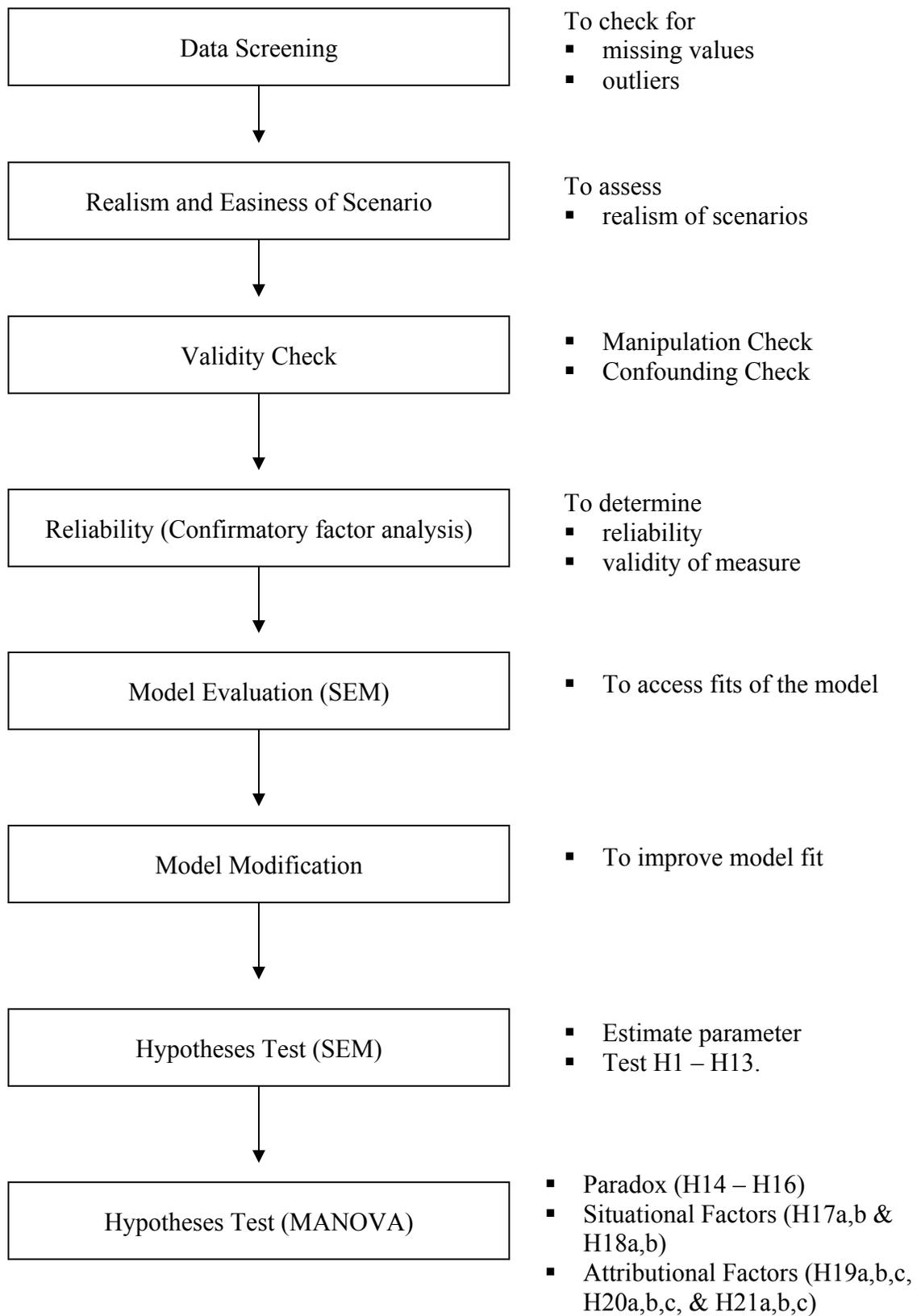


Figure 6. Data Analysis Procedure of the Study

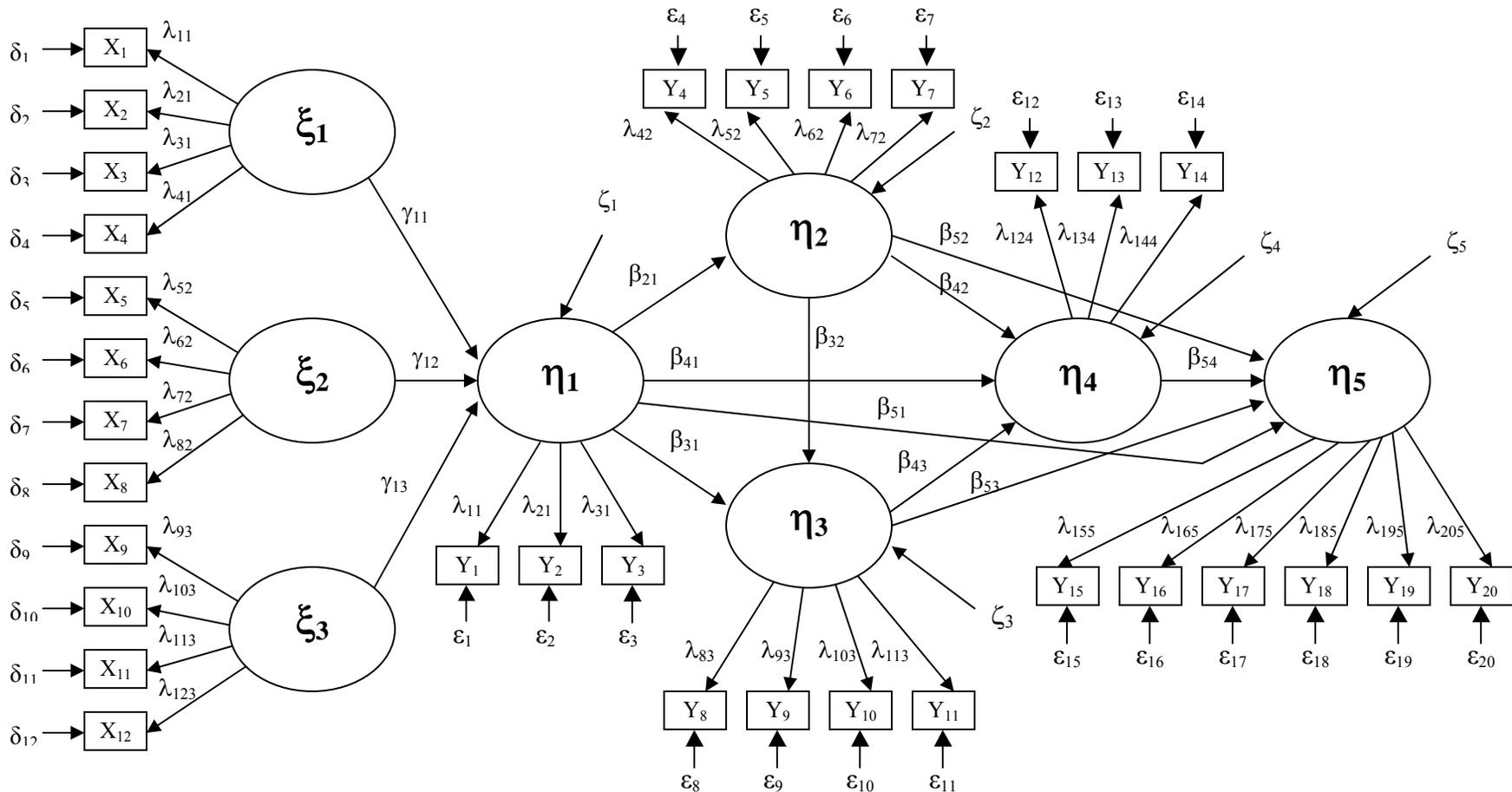
Evaluation of Measurement Model.

A measurement model connects latent variables in a structural model to one or more observed measurement variables (Bollen, 1989). The function of a measurement model is to clarify how well the observed indicators serve as a measurement instrument for the latent variables (Jöreskog, Sörbom, & Jhoreskog, 1998). If the specified indicators do not respond to that construct, it means that they measure something other than the construct they are supposed to measure (Jöreskog et al., 1998). A satisfactory level of validity and reliability of measurement model has to be met before testing for significant relationships in the structure model (Fornell & Larcker, 1981).

The measurement model for the study included 32 items measuring 8 constructs. The measurement model was evaluated to refine the measurement. A confirmatory factor analysis using LISREL was conducted to assess the reliability and validity of the measurements. Coefficient alpha of .70 was the minimum standards for reliability (Hair et al., 1995; Nunnally, 1978). Factor loadings of the observed variables for each latent variable were significant at $p = .05$, confirming convergent validity (Anderson & Gerbing, 1988). Discriminant validity was assessed by comparing the average variance extracted with the squared correlation between the two constructs (Anderson & Gerbing 1988). The measurement model was modified, and the overall fit of measurement fit was assessed through the fit indices provided by the LISREL. Figure 7 represents the measurement model of service recovery for the study.

Structural Model Fit

Structural equation modeling using LISREL 8.54 was used to determine the relationships among constructs (parameter estimators) proposed in the model of service



ξ ₁ : Distributive Justice	ξ ₂ : Procedural Justice	ξ ₃ : Interactional Justice
η ₁ : Recovery Satisfaction	η ₂ : Trust	η ₃ : Commitment
	η ₄ : Overall Satisfaction	η ₅ : Behavioral Intentions

Figure 7. Measurement Model of Service Recovery

recovery. The maximum likelihood procedure was used to estimate parameter estimators (Anderson & Gerbing, 1988). The overall fit of the structural model was assessed through the fit indices provided by the LISREL, such as χ^2 statistic, the root mean squared error of approximation (RMSEA), the Non-Normed Fix Index (NNFI), Comparative Fix Index (CFI), and the standardized root mean square residual (SRMR). A structural model was tested based on the following equations. The hypotheses were supported if *t*-values were significant at $p = .05$ (*t*-value greater than 1.96).

$$\text{Equation 1: } \eta_1 = \gamma_{11}\xi_1 + \gamma_{12}\xi_2 + \gamma_{13}\xi_3 + \zeta_1$$

$$\text{Equation 2: } \eta_2 = \beta_{21}\eta_1 + \zeta_2$$

$$\text{Equation 3: } \eta_3 = \beta_{31}\eta_1 + \beta_{32}\eta_2 + \zeta_3$$

$$\text{Equation 4: } \eta_4 = \beta_{41}\eta_1 + \beta_{42}\eta_2 + \beta_{43}\eta_3 + \zeta_4$$

$$\text{Equation 5: } \eta_5 = \beta_{51}\eta_1 + \beta_{52}\eta_2 + \beta_{53}\eta_3 + \beta_{54}\eta_4 + \zeta_5$$

Where: ξ_1 : Distributive Justice
 ξ_2 : Procedural Justice
 ξ_3 : Interactional Justice
 η_1 : Recovery Satisfaction
 η_2 : Trust
 η_3 : Commitment
 η_4 : Overall Satisfaction
 η_5 : Behavioral Intentions
 $\zeta_1 \dots \zeta_5$: Structural Errors

Hypothesis Test: Study 2

A paired-samples t-test has been used in many studies to test service paradox. This analytical technique provides a simple conclusion to the research question. However, the results provide only a limited implication for industry practices because the results only indicate that service paradox is achieved or not. In addition, dependent variables (overall satisfaction and behavioral intentions) are assumed to be highly correlated, so analysis using multivariate analysis of variance (MANOVA) is more appropriate.

The MANOVA test was used to test the service recovery paradox effects on overall satisfaction and consequent behavioral intentions (H14, H15, & H16). Because the study compares the mean of a control group against the means of all treatment groups, Dunnett's t-test was used (Hair et al., 1998) to discover in which recovery scenario recovery paradox can be achieved.

To test the effects of criticality of service consumption and magnitude of service failure on recovery satisfaction (H17a, b & H18a, b), MANCOVA was employed. Interaction effects of criticality and magnitude on recovery satisfaction also were checked. To test the effects of attributional factors (controllability, stability, and locus) on overall satisfaction (H19a, H20a, & H21a), w-o-m intention (H19b, H20b, & H21b) and revisit intention (H19c, H20c, & H21c), MANCOVA were conducted because the dependent variables were highly correlated. Interaction effects of attributional factors on overall satisfaction and behavioral intentions also were checked.

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CHAPTER IV:
**THE ROLE OF SERVICE RECOVERY IN BUILDING LONG-TERM
RELATIONSHIPS WITH CUSTOMERS**

Abstract

The purpose of this study was to propose and test a theoretical model consisting of antecedents and consequences of recovery satisfaction. The study employed scenario experimentation with the dimensions of justice manipulated at two levels. The research design for the study was 2x2x2 between-groups factorial design. Of 308 surveys returned, 286 cases were used to test the hypotheses using structural equation modeling. The three dimensions of justice had positive effects on recovery satisfaction. Recovery satisfaction had a significant positive effect on customers' trust. Trust in service providers had positive effect on commitment and overall satisfaction. Commitment had positive effects on overall satisfaction and behavioral intentions. The study found that, although a service failure might negatively affect customers' relationship with the service provider, effective service recovery reinforced attitudinal and behavioral outcomes. The study findings emphasized that service recovery efforts should be viewed not only as a strategy to recover customers' immediate satisfaction but also as a relationship tool to provide customers confidence that ongoing relationships are beneficial to them.

KEYWORDS: Service Recovery, Justice Theory, Recovery Satisfaction, Trust, Commitment, Overall Satisfaction, Behavioral Intentions.

INTRODUCTION

The importance of developing a mutually beneficial ongoing buyer-seller relationship has been emphasized in marketing literature (Crosby, Evans, & Cowles, 1990; Dwyer, Schurr, & Oh, 1987; Gwinner, Gremler, & Bitner, 1998; Gundlach, Achrol, & Mentzer, 1995; Hennig-Thurau, Gwinner, & Gremler, 2002). Satisfying customers in exchange relationships is the ultimate goal of all businesses that desire to build repetitive business. Nevertheless, product/service failure is inevitable. When service is not delivered as expected, customers' negative disconfirmation prompt dissatisfied customers to exhibit multiple options, namely exit, voice, and loyalty (Hirschman, 1970). Among them, complaints offer service providers chances to rectify the problems and positively influence subsequent consumer behavior (Colgate & Norris, 2001; Blodgett, Hill, & Tax, 1997).

The importance of handling service failures effectively has been demonstrated in many studies. Gilly (1987) observed that if customers are satisfied with the handling of their complaints, dissatisfaction can be reduced and the probability of repurchase can be increased. Furthermore, effective complaint handling can have a dramatic impact on customer retention rate, deflect the spread of negative word-of-mouth, and improve profitability (Tax, Brown, & Chandrashekar, 1998). Service entities could increase their profits up to 85% by reducing the customer defection rate by 5% (Reichheld & Sasser, 1990).

It is clear that what make customers dissatisfied is not a service failure alone but the manner in which employees respond to the complaint(s) (Bitner, Boom, & Tetreault, 1990; Spreng, Harrell, & Mackoy, 1995). Bitner et al. (1990) reported that 42.9% of

unsatisfactory encounters stemmed from employees' inability or unwillingness to respond to service failure. Understanding the impact of each dimension of justice on post-complaint evaluations should allow management to develop more effective and cost-efficient methods to resolve conflicts and, in turn, achieve higher levels of customer retention and profits (Blodgett et al., 1997). In addition, service recovery not only rectifies service failure but also develops long-term relationships with customers. Understanding the role of service recovery efforts in developing relationship quality dimensions will strengthen recognition of the need for consistent efforts to provide customer satisfaction.

Purpose

The majority of the customer dissatisfaction and complaint research has focused on why, who, and how consumers respond to dissatisfaction (Andreassen, 2000). Less attention has been directed to corporate responses to customers' voiced complaints and customers' subsequent attitudinal and behavioral changes (Conlon & Murray, 1996; Goodwin & Ross, 1992). Further, most of the existing service recovery studies focus on the short-term impact and the effectiveness of recovery efforts and various situational factors. Limited research has examined the relationship between service recovery strategies and relationship quality variables (Brown, Cowles, & Tuten, 1996; Ruyter & Wetzels, 2000). Consequently, very little is known about the updating roles of relationship quality between recovery satisfaction and overall satisfaction and behavioral intentions (Brown et al., 1996; Ruyter & Wetzels, 2000).

The purposes of this study were to propose and test a theoretical model consisting of antecedents and consequences of recovery satisfaction. The specific objectives of this

study were to assess the effectiveness of the dimensions of justice (distributive, procedural, and interactional justice) on recovery satisfaction, to test the updating role of service recovery on overall satisfaction and behavioral intentions, and to test the mediating roles of trust and commitment in the relationship among recovery satisfaction, overall satisfaction, and behavioral intentions.

THEORETICAL FOUNDATION AND HYPOTHESES

Definition of Service Recovery

Dissatisfied customers expect that service failures will be recovered when they complain (Sundaram, Jurovski, & Webster, 1997). In response to customers' complaints about service failures, service providers take actions and implement activities to return "aggrieved customers" to a state of satisfaction (Grönroos, 1988; Zemke & Bell, 1990). Complaint management and service recovery have been considered as retention strategies (Halstead, Morash, & Ozment, 1996). Service recovery, however, is different from complaint management in that service recovery strategies embrace proactive, often immediate, efforts to reduce negative effects on service evaluation (Michel, 2001).

Social Exchange Theory and Equity Theory

The social exchange theory and the equity theory provided the theoretical framework for the studies exploring customer's evaluation of service recovery efforts (Blodgett, Granbois, & Walters, 1993; Goodwin & Ross, 1992; Kelley & Davis, 1994). The two theories assert that the exchange relationship should be balanced (Adams, 1963, 1965). Service failures can be viewed as customers' economic loss and/or social loss in an exchange (Smith, Bolton, & Wagner, 1999). Consequently, customers consider the

failure situation as a negative inequity and attempt to balance equity with post-purchase behavior (Lapidus & Pinkerton, 1995). Service providers endeavor to recover the balance by offering customers economic value in the form of compensation (e.g., a discount) or social resources (e.g., an apology) (Smith et al., 1999). A summary of the equity/inequity of consumers' own inputs compared to the outputs leads the perceived justice.

Justice (Fairness) Theory

The concept of justice provided a theoretical framework for the study of dissatisfied customers' postcomplaint behaviors (Blodgett et al., 1997; Oliver, 1997). A consumer's sense of injustice generally results from perceived unfairness compared with one's expectations or other comparison standards (Oliver, 1997). Many early research studies focused on the relationship between the inputs and the outcomes of a transaction. However, consumers are concerned not only with the perceived fairness of the outcome but also with the perceived fairness of the manner in which the complaint is handled (Blodgett et al., 1993) and the process by which resources or rewards are allocated (Conlon and Murray, 1996).

A three-dimensional view of the justice (or fairness) concept has evolved from the equity theory: distributional justice, procedural justice, and interactional justice (Blodgett et al., 1993; Clemmer & Schneider, 1996; Smith et al., 1999; Tax et al., 1998). Procedural and interactional fairness have been considered in service recovery evaluation (Blodgett et al., 1997; Goodwin & Ross, 1992; Ruyter & Wetzels, 2000). The additional two forms of justice (procedural and interactional justice) explain more of the variance in satisfaction (Oliver 1997). Smith et al. (1999) reported that the three dimensions of

justice accounted for more than 60% of the explained variation in service encounter satisfaction in both restaurant and hotel settings (Smith et al., 1999).

The Effect of Recovery Efforts on Recovery Satisfaction

Distributive justice refers to the perceived fairness of the actual, tangible outcomes compared to inputs (Blodgett et al., 1997; Oliver, 1997; Palmer, Beggs, Keown-McMullan, 2000). In service recovery, distributive justice focuses on the specific outcome of the firm's recovery effort, such as discounts, coupons, free meals, replacement/reperform, refund, store credits, etc. (Blodgett et al., 1997; Hoffman & Kelley, 2000). A positive relationship between the dollar amount and customer satisfaction with service recovery efforts was confirmed in many studies (Boshoff, 1997; Goodwin & Ross, 1992; Hoffman, Kelley, & Rotalsky, 1995; Megehee, 1994; Tax et al., 1998).

Procedural justice often refers to the perceived fairness of the policies and procedures used by decision makers to arrive at an outcome (Blodgett et al., 1997). Tax et al. (1998) proposed that even though a customer may be satisfied with the type of service recovery strategies offered, the recovery evaluation might be poor due to the process endured to obtain the recovery outcome. The speed of handling problems and complaints was identified as an important dimension of procedural justice (Blodgett et al., 1997; Palmer et al., 2000; Tax et al., 1998). On the other hand, Mattila (2001) found that procedural justice, measured as time taken to solve a problem and the flexibility used to deal with the problem, was not a significant predictor in a restaurant setting.

Interactional justice focuses on the manner in which the complaint was treated (Blodgett et al., 1993; McColl-Kennedy & Sparks, 2003). Tax et al. (1998) defined

interactional justice as “dealing with interpersonal behavior in the enactment of procedures and the delivery of outcomes” (p.62). Interactional justice is often operationalized as a sincere apology versus rude behavior (Blodgett et al, 1997; Goodwin & Ross, 1992). An apology from the service provider delivers politeness, courtesy, concern, effort, dignity, and empathy to customers who experience service failure and can enhance customers’ perception of fairness of the service encounter (Goodwin & Ross, 1992; Kelley, Hoffman, & Davis, 1993; Tax et al., 1998). Research findings have consistently demonstrated the importance of interpersonal treatment.

To test the effects of distributive justice, procedural justice, and interactional justice on recovery satisfaction, this study proposed the following hypotheses:

H1: Distributive justice has a positive effect on recovery satisfaction.

H2: Procedural justice has a positive effect on recovery satisfaction.

H3: Interactional justice has a positive effect on recovery satisfaction.

The Role of Recovery Satisfaction and Relationship Quality on Overall Satisfaction and Behavioral Intentions

Customers revise and update their satisfaction and behavioral intentions based on prior assessment and new information (Smith & Bolton, 1998; 2002). They proposed that customers who experienced good or excellent recovery (new information) would exhibit enhanced levels of satisfaction and increased future visit intentions.

Researchers have focused on two determinant variables, trust and commitment, in the development of a long-term relationship (Dwyer et al., 1987; Morgan & Hunt, 1994; Tax et al., 1998). Morgan and Hunt (1994) theorized that successful relationship

marketing requires trust and commitment. Trust has frequently been studied as an antecedent of the process of relationship development (Bejou & Palmer, 1998; Crosby et al., 1990; Dwyer et al., 1987; Morgan & Hunt, 1994). Moorman, Deshpande, and Zaltman (1993) defined trust as the “willingness to rely on an exchange partner in whom one has confidence.” Similarly, Morgan and Hunt (1994) conceptualized trust as “confidence in an exchange partner’s reliability and integrity.” The two definitions emphasize the importance of confidence in exchange partners. Commitment is a vital component for building a successful long-term relationship (Gundlach et al., 1995; Morgan & Hunt, 1994). Moorman, Zaltman, and Deshpande (1992) defined commitment as “an enduring desire to maintain a valued relationship.” Similarly, Morgan and Hunt (1994) defined commitment as “an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it.”

To develop an exchange partner’s trust in a business relationship, a service provider must consistently meet the expectations of competent performance (Sirdeshmukh, Sigh, & Sabol, 2002). Service failure arises when service delivery performance does not meet a customer’s expectations (Kelley & Davis, 1994; Kelley et al., 1993). A service failure may result in a breakdown in reliability (Berry & Parasuraman, 1991). Gwinner et al. (1998) indicated that among the three relational benefits confidence benefits are the most important from customers’ perspectives. Therefore, it is of importance to see how effective recovery efforts influence a customer’s perception of the trustworthiness, reliability, and integrity of the company. Trust can be seen as an outcome measure in service recovery settings. Ruyter and Wetzels (2000)

argue that the feeling of inequity followed by a service failure could be eased in a successful recovery and renew customer confidence in the service provider.

Morgan and Hunt (1994) stated that trust was a major determinant of relationship commitment. Reliability and integrity in exchange relationships are important enough to warrant maximum efforts at maintaining them (Morgan & Hunt, 1994). Kelley and Davis (1994) suggested that a customer's perceived service recovery might function as a channel for updating the customer's organizational commitment. Tax et al. (1998) confirmed that satisfaction with complaint handling is positively related to customer commitment. Although a service delivery initially failed to meet a customer's expectation, a positive service recovery that successfully met the customer's service recovery expectation may improve the customer's commitment.

Though the definitions of behavioral intentions seem to vary depending upon research context, researchers view behavioral intentions as a customer's willingness to provide positive or negative word of mouth and his/her intention to repurchase (Boulding, Kalra, Staelin, & Zeithaml, 1993; Oliver, 1997; Spreng et al., 1995; Yi, 1990). Word-of-mouth behavior has been identified as an important post-purchase behavior. Researchers have examined (positive or negative) word-of-mouth intention as one of the consequences of customer satisfaction/dissatisfaction following a consumption experience. Mangold, Miller, and Brockway (1999) emphasized that interpersonal communication has a significant impact on consumer purchasing behavior. Because potential customers perceive word-of-mouth communication as credible, it might have a substantial impact (Yi, 1990). Furthermore, its importance as a source of information is significant in service consumption because of the intangible nature of service. Continued

purchasing by current customers is an important concern because the cost of obtaining a new customer usually greatly exceeds the cost of retaining a customer (Spreng et al., 1995). Researchers have found that customer satisfaction/dissatisfaction is a critical factor affecting repurchase intention (Oliver, 1981; Anderson & Sullivan, 1993).

Morgan and Hunt (1994) argued, “Genuine confidence that a partner can rely on another indeed will imply the behavioral intention to rely.” They contended that trust is a function of one’s behavioral intention. Bowen and Shoemaker (1998) stated that commitment to a relationship leads to higher levels of overall satisfaction and behavioral intentions. Hennig-Thurau et al. (2002) found a significant direct relationship between commitment and word-of-mouth. In the context of service failure and recovery, a demonstration of reliability and trustworthiness through responsible service recovery efforts will increase a favorable evaluation of a service provider. Researchers suggest that customer’s trust and/or commitment mediate between service recovery and overall satisfaction and behavioral intentions. Once a dissatisfied customer seeks remedy, subsequent word-of-mouth behavior and repatronage intentions are primarily dependent upon the customer’s perception of justice (Blodgett et al., 1997). Effective service recovery efforts may greatly affect recovery satisfaction (Bitner et al., 1990). Similarly, effective service recovery efforts can make an unfavorable service experience into a favorable one, consequently enhancing repurchase intention and positive word-of-mouth intention (Spreng et al., 1995). Customers who experienced favorable service recovery demonstrated a strong propensity to share positive information about their experience (Blodgett et al., 1993; Mangold et al., 1999; Swanson & Kelly, 2001).

A theoretical model of service recovery consisting of antecedents and consequences of service recovery satisfaction was proposed. To test the effect of service recovery satisfaction on trust, commitment, overall satisfaction and behavioral intentions, this research proposed the following hypotheses:

- H4. Recovery satisfaction has a positive effect on overall satisfaction.
- H5. Recovery satisfaction has a positive effect on trust.
- H6. Recovery satisfaction has a positive effect on commitment.
- H7. Trust has a positive effect on commitment.
- H8. Trust has a positive effect on overall satisfaction.
- H9. Commitment has a positive effect on overall satisfaction.
- H10. Trust has a positive effect on behavioral intentions.
- H11. Commitment has a positive effect on behavioral intentions.
- H12. Overall satisfaction has a positive effect on behavioral intentions.
- H13. Recovery satisfaction has a positive effect on behavioral intentions.

METHODOLOGY

Research Design

Experimental scenarios have been extensively used in service recovery studies and services marketing (Blodgett et al., 1997; Mattila, 1999; Sundaram et al., 1997). The compelling advantage of using experimental scenarios is that the nature of service, the extent of the problem, and situational factors can be easily manipulated by providing different levels of the stimuli (Bitner, 1990; Singh & Widing, 1991). Furthermore, this

method prevents undesirable response bias due to memory lapses (Smith & Bolton, 1998; Smith et al., 1999).

The use of written scenarios, however, may limit the researcher's ability to capture the emotional involvement of respondents (Hess, Ganesan, & Klein, 2003; Mattila, 1999; Smith & Bolton, 2002; Sundaram et al., 1997) and the attitude of service providers (Sundaram et al., 1997). Most importantly, the method is challenged for external validity at the cost of internal validity (Bitner, 1990; Brown et al., 1996; Michel, 2001; Ruyter & Wetzels, 2000).

This study used scenario experimentation in favor of having better control over exogenous variables and excluding extraneous variables (Bitner et al., 1990; Blodgett et al., 1997; Cook & Campbell, 1979; Smith & Bolton, 2002) to rule out possible alternative explanations of the relationship between cause and effect (Mitchell, 1985). A 2x2x2 between-groups factorial design was employed for the study. Each participant was provided the same failure and a recovery scenario (see Appendix A), and then they were asked to evaluate the service encounters.

Instrument Development

Typology of service failures (e.g., Kelley et al., 1993; Hoffman et al., 1995) and recovery efforts in restaurant settings were reviewed from previous studies. The typical service recovery activities employed by the restaurant service providers to recover service failure situations generally include one or a combination of the following activities: an apology, a discount, free food, or an offer to reperform the service immediately (Sundaram et al., 1997). To develop more realistic scenarios, 43 undergraduate students were asked to report service failures and recovery efforts that they

experienced during their dining experiences. Similar to the finding of Bitner et al. (1990), product defect (undercooked and overcooked food item) was most frequently reported. No charge on the item was offered more frequently than the authors expected. Each dimension of justice was manipulated into two levels (high vs low). Table 1 illustrates the experimental manipulation of exogenous variables for the study.

Insert Table 1

Researchers recommended using multi-item measures of cognitive constructs (Nunnally, 1978; Yi, 1990). Multi-item scales that were validated in previous studies were identified and modified to fit the study setting. All exogenous and endogenous variables were measured on 7-point Likert scale anchoring from 1) strongly disagree to 7) strongly agree.

Distributive justice was evaluated as the perceived outcome (compensation) fairness. Procedural justice was measured as the perceived fairness of procedures and timely responsiveness. Interactional justice was appraised as apology, explanation, and concern toward customers. Recovery satisfaction was measured after a service failure scenario and a service recovery scenario were presented. Trust was appraised as confidence in reliability and integrity of the service provider. Commitment was evaluated as the willingness to maintain the relationship. Behavioral intentions were measured by assessing the respondents' willingness to revisit and to recommend the

restaurants to others. Appendix B lists the descriptions of measurement of constructs for the study.

Pre and Pilot Test

Modifications were made based on feedback from a pre-test. The survey was administered to a convenience sample of 96 undergraduate students in a hospitality class. Each participant was randomly assigned to one of the scenarios. The mean age of the participants was 20.89 years ($SD = 2.09$). Participants were majoring in 20 different fields. Approximately 31% of the respondents were hospitality majors (30 respondents). Reliability of measurements was estimated using coefficient alpha. Values were well above the suggested cut off .70 indicating internal consistency (Nunnally, 1978). Participants perceived that the scenarios were realistic ($M = 5.87$, $SD = 1.13$ for the failure scenario and $M = 5.40$, $SD = 1.40$ for recovery scenarios). Manipulation of low distributive justice was found to be higher than other low justice dimensions in the pilot study. The authors decided not to lower the level because serving another steak for the overcooked steak should be the minimum for recovery efforts.

Sample and Data Collection

Members of community service and religious groups in a city with a population of 45,000 and a faculty and staff group at a Midwestern university were the sampling frames for the study. Data were collected during their fund raising events, educational programs, or monthly meetings. The size of the groups ranged from 10 to 60 members. The researchers first contacted leaders of various groups and asked them to consider participating in the study. Upon getting approval, the researchers either attended a scheduled meeting of the group and explained the purpose of the study and administered

the survey, or the researchers briefly explained the research protocol to the leaders of the groups who administered the survey. Participants were asked to name a casual restaurant that they visited recently to have more various initial attitudes toward restaurants (Smith & Bolton, 1998). Each participant was provided with a failure and a recovery scenario, and then he/she was asked to evaluate the service encounter. As a small reward for participating in the study, respondents were informed that the researcher would donate one dollar to a charitable organization of their choice for their returned questionnaires.

Postage paid, self-addressed envelopes; cover letters; and questionnaires (600 copies) were distributed to the members at the end of the meetings. A total of 308 completed questionnaires were returned from 15 different groups. The majority (about 87%) of the questionnaires were returned by mail. Responses that contained missing values (mean was replaced for a missing value only in multi scales), named quick service restaurants, or responded at the same level of agreement systematically were excluded from data analysis. After eliminating unusable responses, 286 responses were coded for data analysis, resulting in a usable response rate of 48%.

DATA ANALYSIS AND RESULTS

Sample Characteristics

Of the 286 responses, the majority were female (60.5%, $n = 173$) and Caucasian/white (84.3%, $n = 241$). The respondents in the age category of 45 to 54 (22.7%) and ≥ 65 (9.4%) accounted for the highest and the lowest number of responses, respectively.

Manipulation Checks

Researchers 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 et al., 1997; Cook & Campbell, 1979; Perdue & Summers, 1986; Sundaram, et al., 1997). To evaluate the perceived realism of scenarios, participants were asked to respond to two items: “I think that a similar problem would occur to someone in real life (1-very unlikely to 7-very likely)” and “I think the situations given in the scenario are: (1-very unrealistic to 7-very realistic).” Respondents perceived the scenarios as highly realistic with mean scores of 5.87 ($SD = 1.15$) for failure scenario and 5.42 ($SD = 1.38$) for recovery scenarios.

Respondents perceived high conditions more favorably and low conditions less favorably as intended in each dimension of justice (see Table 2). To ensure the manipulation of a justice dimension did not change in measures of related but different justice dimensions constructs, ω^2 was calculated (Perdue & Summers, 1986). A sufficiently large ω^2 associated with the main effect of a manipulated variable for any given measure that is being analyzed is desirable; however, a near-zero ω^2 is desirable for other main and interaction effects (Perdue & Summers, 1986). Interaction effects had no confounding effects on other independent variables; however, main effects had minimal to moderate compounding effects on other independent variables (see Table 2).

The calculated ω^2 for other variables were much smaller than the ω^2 of the variable that was intended to be manipulated, indicating manipulation was tolerable (Perdue & Summers, 1986).

Insert Table 2

Measurement Model

The proposed model was analyzed following the two-step approach. The measurement model was examined first, followed by the structural equations model (Anderson & Gerbing, 1988; Fornell & Larcker, 1981). Confirmatory factor analysis using LISREL 8.54 evaluated the measurement model to refine the manifest variables, measuring the eight latent variables.

Composite reliabilities of constructs were computed to assess the reliability of indicators representing each construct in the measurement model. Composite reliability of indicators exceeded the cut off value of .70 (Hair, Anderson, Tatham, & Black, 1995; Nunnally, 1978). Table 3 presents standardized loadings and composite reliability of measurement items. The extracted variance of constructs were over the suggested value of .50, indicating a large portion of variances is explained by constructs (Fornell & Larcker, 1981; Hair et al., 1998). Factor loadings of the observed variables for each latent variable were significant at .05, confirming convergent validity (Anderson & Gerbing, 1988).

Insert Table 3

Discriminant validity was assessed by comparing the average variance extracted (AVE) with the squared correlation between constructs (Fornell & Larcker, 1981). The squared correlations between pairs of constructs (see Table 4) were less than the AVE, suggesting discriminant validity (Fornell & Larcker, 1981). No changes were made, and the final measurement model included 32 measurement items for 8 constructs.

The measurement model was estimated from covariance matrix and modified based on suggested modification indices. Goodness of fit of the measurement model was evaluated using indices produced by LISREL output. Chi-square fit of the measurement model was significant ($\chi^2 = 1511.42$, $df = 430$, $p < .001$). However, it is often reported that χ^2 is sensitive to sample size (Bagozzi & Yi, 1988). Other practical fit indices demonstrated that the measurement model fits the data reasonably well [The root mean squared error of approximation (RMSEA) = .08; the non-normed fit index (NNFI) = .98; the comparative fit index (CFI) = .98; the standardized root mean square residual (SRMR) = .04].

Structural Model and Hypotheses Testing

The hypothesized relationship translated into five structural equations (see Table 5). The initial model had significant χ^2 statistic ($\chi^2 = 2428.20$, $df = 448$, $p < .001$). Modifications were made based on suggested modification indices. Measurement items were allowed to covary within constructs in sequence. The χ^2 statistic of the structural

model was significantly improved, but was still significant ($\chi^2 = 1,307.44$, $df = 441$, $p < .001$). RMSEA decreased significantly from .12 to .08. Other goodness-of-fit statistics were slightly improved as well. Table 5 lists the final goodness-of-fit statistics of the structural model.

Insert Table 5

Fit indices demonstrated that the model fits the data reasonably and no further modifications were made to improve the fit of the models. The parameter estimates were assessed by the maximum likelihood estimation. Though a normal distribution of data is ideal for the maximum likelihood estimation, researchers reported the robustness of the maximum likelihood procedure to non-normal distributions (Anderson & Gerbing, 1988). The t-values, indicating parameter estimates are statistically significant (Fornell & Larcker, 1981), were used for hypothesis tests. Figure 1 presents path coefficients and t-values for the service recovery model.

Insert Figure 1

The t-values between each dimension of justice and recovery satisfaction were all significant, demonstrating strong positive relationships ($\gamma_{11} = .26$, $t = 4.67$ for distributive justice; $\gamma_{12} = .53$, $t = 6.37$ for procedural justice; $\gamma_{13} = .26$, $t = 2.94$ for interactional

justice). Thus, hypotheses 1 through 3 were supported. The three dimensions of justice accounted for 89% of variance in service recovery satisfaction. Procedural justice was the most significant predictor followed by distributive justice.

Recovery satisfaction had significant positive effect on trust and overall satisfaction ($\beta_{21} = 0.78, t = 18.26$; $\beta_{41} = .12, t = 2.11$, respectively). Hypotheses 4 and 5 were supported. Recovery satisfaction had no positively significant direct effects on commitment and behavioral intentions ($\beta_{31} = -.10, t = -2.17$; $\beta_{51} = -.07, t = -1.68$, respectively). Hypotheses 6 and 13 were not supported. Trust had positive effect on commitment and overall satisfaction ($\beta_{32} = .99, t = 19.96$; $\beta_{42} = 0.34, t = 3.09$, respectively), but not on behavioral intentions ($\beta_{52} = -.12, t = -1.45$). Hypotheses 7 and 8 were supported. Significant t-values ($\beta_{43} = .44, t = 4.71$; $\beta_{53} = 0.46, t = 6.00$, respectively) showed that commitment had positive effect on overall satisfaction and behavioral intentions. Results supported hypotheses 9 and 11. Overall satisfaction had a positive effect on behavioral intention ($\beta_{54} = .69, t = 13.78$), thus, hypothesis 12 was supported.

Mediating Effects of Trust and Commitment

Further analyses were conducted to investigate mediating effects of trust and commitment. To test the mediating effect of trust between recovery satisfaction and overall satisfaction, the structural equation was re-estimated by constraining the direct effect of trust, not to affect overall satisfaction (set to zero). The first three conditions suggested by Baron and Kenny (1986) were met from the original structural model (β_{21} , β_{41} , and β_{42} were significant). The fourth condition is satisfied if the parameter estimate between recovery satisfaction and overall satisfaction (β_{41}) in the mediating model become insignificant (full mediation) or less significant (partial mediation) than the

parameter estimate ($\beta'_{rs\ to\ os}$) in the constrained model. A partial mediating role of trust on overall satisfaction was observed ($\beta_{41} = .12, t = 2.11$ and $\beta'_{rs\ to\ os} = .31, t = 4.65$). In addition, the χ^2 of the non-mediating model ($\chi^2 = 1,316.73, df = 442, p < .001$) was higher than the full mediating model.

In the same way (β_{32}, β_{42} , and β_{43} were significant, and the path from commitment to overall satisfaction was set to 0), a partial mediating role of commitment between trust and overall satisfaction was observed ($\beta_{42} = 0.34, t = 3.09$, and $\beta'_{tr\ to\ os} = .79, t = 13.78$). In addition, the χ^2 of the constrained model ($\chi^2 = 1,325.86, df = 442, p < .001$) was higher than that of the mediating model. Mediating roles of commitment on overall satisfaction were confirmed.

Indirect and Total Effects

The proposed model tested direct effects in hypothesized relationships in a failure and recovery situation. Indirect and total effects were examined for a clear interpretation of the updating role of service recovery. All indirect and total effects were significant at .01, but indirect and total effects of interactional justice on trust, commitment, overall satisfaction, and behavioral intention were significant at .05. Table 6 lists indirect and total effects among constructs. Though direct positive effects were not observed in some of the hypothesized relationships, the significant indirect effects emphasized the role of recovery efforts in relationship building and consequent overall satisfaction and behavioral intentions.

Insert Table 6

DISCUSSIONS AND IMPLICATIONS

The study found that the three dimensions of justice had positive effects on recovery satisfaction. This finding implies that though customers experienced service failure during the dining experience, proper handling of the particular problem led to customer satisfaction. Significant main effects of distributive and interactional justice were observed in previous studies (e.g., Blodgett et al., 1995; Goodwin & Ross, 1992; Hoffman et al., 1995; Tax et al., 1998). However, in many studies, procedural justice, measured as timeliness, often was least significant or did not have a significant main effect on recovery evaluation (e.g., Blodgett et al., 1997; Mattila, 2001). This study manipulated procedural justice in terms of not only timeliness but also flexibility in the recovery process. The procedural justice had a significant main effect on recovery satisfaction. The results indicate that empowering frontline employees to recover service failures conveys responsiveness and fair policy and practice to handle service problems. Management should give frontline employees authority to recover service failures. They are the ones who may know what the problem was initially, can respond most instantly, and can recover the failure most effectively.

Though procedural justice had the most significant effect on recovery satisfaction followed by distributive justice, the importance of one dimension of justice should not be emphasized solely. Rather, the three dimensions of justice should be taken into consideration together since the combination of the dimensions of justice determines overall perceived justice and succeeding behavior (Blodgett et al., 1997). In addition, the interaction effects between justice dimensions were reported in previous studies (Blodgett et al., 1997; Goodwin & Ross, 1992; McCollough, Berry, & Yadav, 2000; Tax et al.,

1998). Blodgett et al. (1997) emphasized that a certain level of interactional justice should be presented for distributive justice to be meaningful. In other words, wherein a low level of interactional justice was provided, the amount of atonement was not significant. Recovery evaluation is a “two-stage process,” that is, interactional justice should be adequately offered first and the secondary criteria will be taken into consideration (Blodgett et al., 1997).

One may be interested in the non-significant relationship between recovery satisfaction and behavioral intentions. Researchers argue that recovery satisfaction is an encounter evaluation of a transaction (Brown et al., 1996; Oliver, 1997). Customers attitudinal and behavioral evaluations are additive (Brown et al., 1996; Maxham & Netemeyer, 2002a&b; Oliver, 1997). Consequently, customers’ initial (pre-failure) overall satisfaction and behavioral intentions along with recovery satisfaction may play a key role in determining their post-recovery overall satisfaction and behavioral intentions. Therefore, recovery satisfaction should not be considered as the sole direct predictor of post-recovery overall attitudinal and behavioral outcomes. The argument is not to discourage recovery effort. Rather, it is to emphasize the mediating role of service recovery through relationship quality dimensions. This study confirmed that successful service recovery reinforces customers’ trust. Further, the recovered customers’ confidence in dependability and reliability toward service providers had a positive effect on intention to maintain relationships. These results support findings from previous studies (Morgan & Hunt, 1994; Sirdeshmukh et al., 2002; Tax et al., 1998). In turn, customers’ commitment will provide a strong basis of overall satisfaction and will result

in increased produce/service use and enhanced willingness to spread positive word of mouth (Kelly & Davis, 1994; Bowen & Shoemaker, 1998).

The three dimensions of justice also had significant indirect effects on trust, commitment, overall satisfaction, and behavioral intentions. The study findings (direct and indirect effects in the relationships) emphasize that service recovery efforts should be viewed not only as a strategy to recover customers' immediate satisfaction but also as a relationship tool to provide customers confidence that an ongoing relationship is beneficial to them. To build a long-term relationship with customers, service providers should do their best to deliver the service as expected. Admitting the fact no service is perfect, service providers have to strive to recover service failure so as not to harm customers' confidence in reliability toward service providers. Although a service failure may result in harm on service quality and customer satisfaction initially, effective complaint handling through service recovery may reinforce the reliability perception and relationship continuity.

Relationship quality studies have focused on the mediating roles of trust and commitment between customer satisfaction and behavioral intentions. Limited research has examined the relationship between service recovery strategies and relationship quality variables (Brown et al., 1996; Ruyter & Wetzels, 2000). Kelley and Davis (1994) suggested that a customer's perceived service recovery may function as a channel for updating the customer's organizational commitment. Tax et al. (1998) demonstrated that complaint handling and service recovery are tied closely to relationship marketing (Tax et al., 1998). Findings of this study will contribute to the further understanding the role of

service recovery in relationship building with customers by extending consequences of service recovery satisfaction.

Though service recovery includes a proactive approach to service failures, it may not be able to identify all the service failures since customers' expectation on service delivery vary. Consequently, it is important that service providers encourage customers to seek redress when they encounter dissatisfied experience so as to give service providers a chance to remedy the negative attitude of dissatisfied customers (Blodgett et al., 1995). It is important for service providers to make sure that customers believe that the service provider is willing to remedy the problem.

LIMITATIONS AND SUGGESTIONS FOR FUTURE STUDY

Characteristics of respondents, methodological limitations, and the nature of service limited the depth of study in other important considerations. The study suggests the following for the future study:

First, the study tested the proposed model using data from primarily one ethnicity. Understanding differences in customers from various cultural and ethnical backgrounds will be useful to develop effective service recovery since those background factors may have effects on service recovery evaluation (Mueller, Palmer, & McMullan, 2003; Palmer et al., 2000).

Second, though the appropriateness of using experimental scenarios is justified in theoretical tests, the generalizability of the study findings can be challenged. The use of written scenarios in the study might limit the emotional involvement of research

participants (Hess et al., 2003; Mattila, 1999; Smith & Bolton, 2002; Sundaram et al., 1997) and the attitude of service providers (Sundaram et al., 1997).

Third, in this study, customers were given an outcome failure (overcooked steak) rather than a process failure. Customers' perceptions of effectiveness of recovery may depend on the type of service failure they experienced. Smith et al. (1999) found that compensation and quick action improved customers' evaluation of perceived fairness when they experienced an outcome failure. On the other hand, customers perceived that an apology or a proactive response was more effective when a process failure occurred. The findings are meaningful to the hospitality industry since failures in a symbolic exchange are as critical as or more critical than in a utilitarian exchange (Smith et al., 1999). Future study may include a process failure to see how customers evaluate recovery effort and which dimensions of justice are more effective in recovery efforts.

Fourth, this study considered the antecedents and consequences of service recovery in a restaurant setting. Research has found that service recovery evaluation is context specific (Hoffman & Kelley, 1996; Mattila, 2001). Replication of studies in other service industries is necessary to understand the effect of service recovery on service quality dimensions in different types of services.

Finally, consumers may differ in their recovery expectations. Researchers reported contradictory opinions about the recovery expectation. For example, Kelley and Davis (1994) argued that recovery expectation tends to be high for committed customers, particularly loyal customers; consequently, it is hard to achieve a favorable evaluation on recovery efforts. On the contrary, Hess et al. (2003) found that customers who hold a strong relationship continuity had lower service recovery expectations after experiencing

service failure. This study did not consider consumers' past experience and recovery expectations. Further study is needed to clarify how customers develop recovery expectation over time.

**Appendix A:
Service Failure Scenario and Examples of Recovery Scenarios**

Service Failure Scenario

On Friday evening, you and your family went out for dinner at *the restaurant you named* to celebrate one of your family member's graduation from high school or college. After waiting about 15 minutes, a hostess seated your group. Shortly after, a waiter took your order. You ordered a steak and requested it to be cooked "medium." When your meal was served, you noticed that your steak was "overcooked." You stopped eating and informed your server that your steak was overcooked.

Examples of Recovery Scenarios

After you explained the problem to the server, he sincerely apologized for the problem. He said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you and apologized for the problem. The manager asked you what the problem was and you had to re-explain the problem. She explained why the problem happened. She informed you that another steak would be served and you would not be charged for it. She also asked if there was anything else that she could do to serve you better.
(High IJ – Low PJ – High DJ)

After you explained the problem to the server, he simply apologized for the problem. He said that he could take care of the problem and removed the steak. After 2-3 minutes, the manager approached you but did not apologize for the problem. She said she was informed about the problem from the server and you didn't have to re-explain the problem. She did not provide an explanation for the problem. She informed you that another steak would be served. No other compensation was offered. She did not ask if there was anything else that she could do to serve you better.
(Low IJ – High PJ – Low DJ)

**Appendix B:
Measurement Items for Constructs**

Construct and Measurement Items	Source
<p>Interactional Justice</p> <ul style="list-style-type: none"> • In dealing with the problem, the restaurant personnel treated me in a courteous manner. • During effort to resolve the problem, the restaurant employee(s) seemed to care about the customers. • The restaurant employee(s) were appropriately concerned about my problem. • While attempting to solve the problem, the restaurant personnel considered my views. 	<p>Maxham & Netemeyer (2002a) & Blodgett et al. (1997)</p>
<p>Procedural Justice</p> <ul style="list-style-type: none"> • Despite the hassle caused by the problem, the restaurant responded quickly. • I feel the restaurant responded in a timely fashion to the problem. • I believe the restaurant has fair policies and practices to handle problems. • With respect to its policies and procedures, the employee(s) handled the problem in a fair manner. 	<p>Maxham & Netemeyer (2002a)</p>
<p>Distributive Justice</p> <ul style="list-style-type: none"> • Although this event caused me problems, the restaurant's efforts to resolve it resulted in a very positive outcome of me. • Given the inconvenience caused by the problem, the outcome I received from the restaurant was fair. • The service recovery outcome that I received in response to the problem was more than fair. • Given the circumstances, I feel that the restaurant offered adequate compensation. 	<p>Maxham & Netemeyer (2002a) & Blodgett, Hill, & Tax (1997)</p>
<p>Recovery Satisfaction</p> <ul style="list-style-type: none"> • In my opinion, the restaurant provided a satisfactory resolution to the problem on this particular occasion. • I am satisfied with the restaurant's handling of this particular problem. • I am satisfied with this particular dining experience. 	<p>Maxham & Netemeyer (2002a) & Brown et al. (1996)</p>
<p>Trust</p> <p>Experiencing this situation in this restaurant,</p> <ul style="list-style-type: none"> • I think the restaurant can be trusted. • I have confidence in the restaurant. • I think the restaurant has high integrity. • I think the restaurant is reliable. 	<p>Morgan & Hunt (1994)</p>

Commitment

Experiencing this situation in this restaurant,

- I am very committed to the restaurant.
- I intend to maintain relationship definitely.
- I think the restaurant deserves my effort to maintain relationship.
- I can develop warm feeling toward the restaurant.

Morgan & Hunt (1994)

Overall Satisfaction

- I am satisfied with my overall experience with the restaurant.
- As a whole, I am happy with the restaurant.
- Overall, I am pleased with the service experiences with this restaurant.

Oliver & Swan (1989)

Behavioral Intentions**Revisit Intention**

- I would dine out at this restaurant in the future.
- There is likelihood that I would eat at this restaurant in the future.
- I *will not* eat at this restaurant in the near future.

Maxham & Netemeyer (2002a) & Blodgett et al. (1997)

W-O-M Intention

- I will spread positive word-of-mouth about this restaurant.
- I will recommend this restaurant to my friends.
- If my friends or relatives were looking for a restaurant, I would tell them to try at this restaurant.

Maxham & Netemeyer (2002a)

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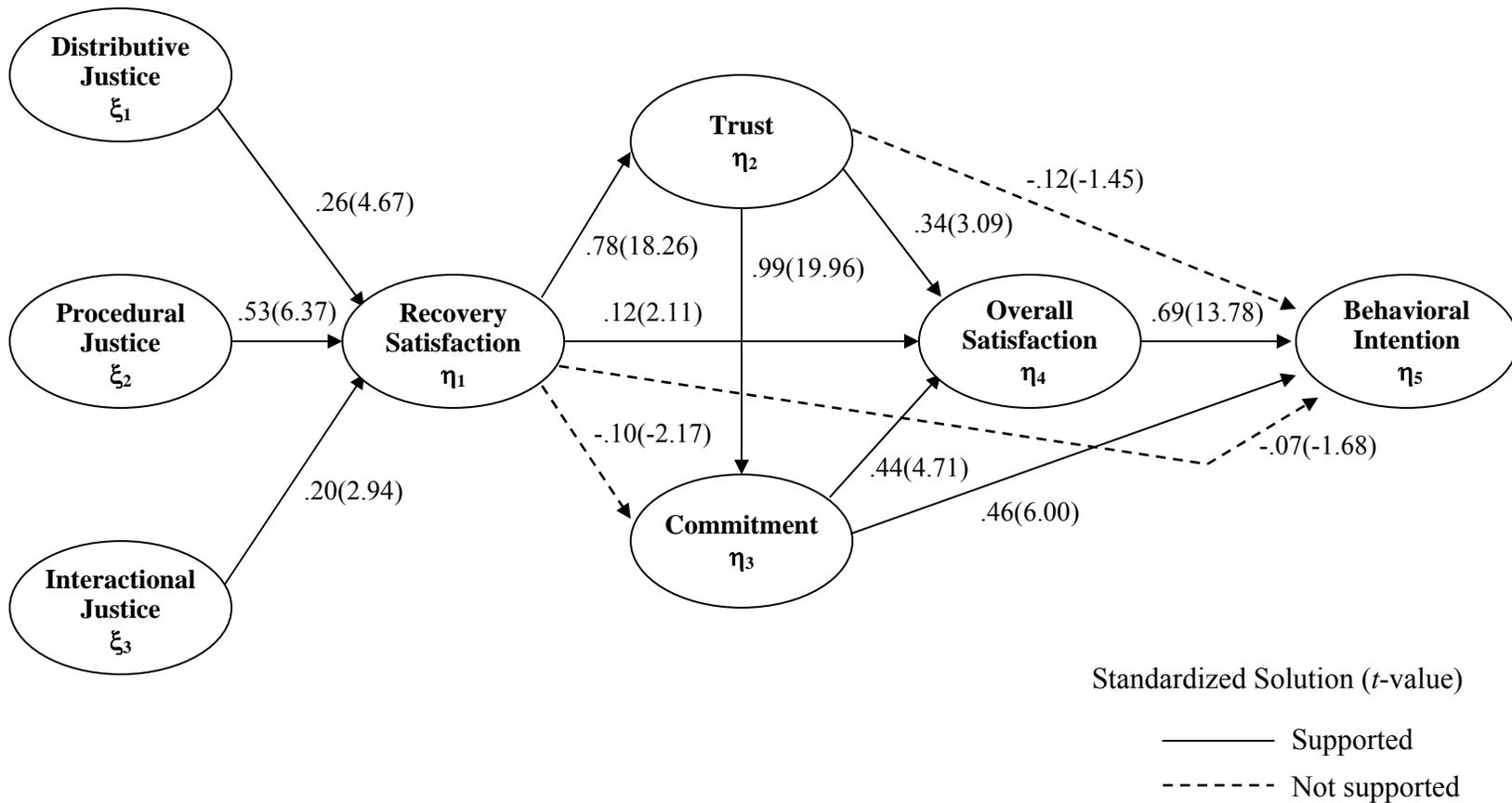


Figure 1. Service Recovery Model with Parameter Estimates

Table 1
Description of Experimental Manipulation

Interactional Justice	
Low	<p>The server simply apologized. The manager did not apologize for the problem. The manager did not provide an explanation for the problem. The manager did not ask if there was anything else that she could do to serve you better.</p>
High	<p>The server sincerely apologized. The manager apologized for the problem. The manager provided an explanation for the problem. The manager asked if there was anything else that she could do to serve you better.</p>
Procedural Justice	
Low	<p>The server said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you. The manager asked you what the problem was, and you had to explain again what the problem was.</p>
High	<p>The server said that he could take care of the problem and took the dish back. After 2-3 minutes, the manager approached you. The manager knew the problem, and you didn't have to re-explain the problem.</p>
Distributional Justice	
Low	<p>Another steak was served. No compensation was offered.</p>
High	<p>Another steak was served. 100% discount on the item was offered.</p>

Table 2
Convergent and Discriminant Validity of Manipulation

Manipulation	Convergent Validity				Discriminant Validity		
	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	ω^2	ω^2	ω^2
Interactional Justice (IJ)	Perceived IJ				P_IJ	P_PJ	P_DJ
High/Low	5.68/4.24	1.09/1.55	104.50	.000	.230	.087	.050
Procedural Justice (PJ)	Perceived PJ				P_IJ	P_PJ	P_DJ
High/Low	5.74/3.94	1.05/1.55	159.91	.000	.058	.321	.053
Distributive Justice (DJ)	Perceived DJ				P_IJ	P_PJ	P_DJ
High/Low	5.62/4.22	1.07/1.49	100.41	.000	.082	.055	.221

Note. The mean differences are significant in all perceived justice at the .05 level.

Table 3
Reliabilities and Variance Extracted

Construct	Standardized Loadings	Composite Reliability	AVE
Interactional Justice (IJ) INT1/INT2/INT3/INT4	.93/.96/.97/.91	.97	.89
Procedural Justice (PJ) PRO1/PRO2/PRO3/PRO4	.99/.98/.83/.77	.93	.77
Distributive Justice (DJ) DIS1/DIS2/DIS3/DIS4	.91/.95/.88/.88	.95	.82
Recovery Satisfaction (RS) RS1/RS2/RS3	.97/.99/.87	.95	.87
Trust (TR) TRS1/TRS2/TRS3/TRS4	.95/.98/.96/.97	.98	.93
Commitment (CO) COM1/COM2/COM3/COM4	.92/.95/.95/.93	.96	.87
Overall Satisfaction (OS) OS1/OS2/OS3	.98/.99/.96	.98	.95
Behavioral Intention (BI) OB_R1/OB_R2/OB_R3/ OB_W1/OB_W2/OB_W3	.98/.98/.87/ .88/.90/.90	.97	.84

Note: Composite reliability and variance extracted for constructs were computed based on the following formulas (Fornell & Larcker, 1981; Hair et al., 1998).

$$\text{Composit Reliability} = \frac{(\sum \text{standardized loadings})^2}{(\sum \text{standardized loadings})^2 + (\sum \text{indicator measurement error})}$$

$$\text{Variance Extracted} = \frac{(\sum \text{squared standardized loadings})}{(\sum \text{squared standardized loadings}) + (\sum \text{indicator measurement error})}$$

Table 4
Correlation Matrix, Means and Standard Deviation of Measurement Model

	IJ	PJ	DJ	RS	TR	CO	OS	BI	M	SD
IJ	1.00								4.98	1.52
PJ	.78	1.00							4.84	1.60
DJ	.79	.70	1.00						4.93	1.47
RS	.84	.77	.84	1.00					4.91	1.57
TR	.61	.56	.62	.73	1.00				5.34	1.28
CO	.53	.49	.53	.63	.91	1.00			4.86	1.43
OS	.54	.49	.54	.64	.83	.83	1.00		5.37	1.35
BI	.48	.44	.49	.58	.80	.85	.90	1.00	5.36	1.37

Table 5
Parameter Estimates and Fit Indices

Hypothesized Path	Standardized Solution	t-value
H1: Distributive Justice → Recovery Satisfaction (γ_{11})	.26	4.67**
H2: Procedural Justice → Recovery Satisfaction (γ_{12})	.53	6.37**
H3: Interactional Justice → Recovery Satisfaction (γ_{13})	.20	2.94**
H4: Recovery Satisfaction → Overall satisfaction (β_{41})	.12	2.11*
H5: Recovery Satisfaction → Trust (β_{21})	.78	18.26**
H6: Recovery Satisfaction → Commitment (β_{31})	-.10 ^b	-2.17 ^{a*}
H7: Trust → Commitment (β_{32})	.99	19.96**
H8: Trust → Overall satisfaction (β_{42})	.34	3.09**
H9: Commitment → Overall satisfaction (β_{43})	.44	4.71**
H10: Trust → Behavioral Intention (β_{52})	-.12 ^b	-1.45 ^{ns}
H11: Commitment → Behavioral Intention (β_{53})	.46	6.00**
H12: Overall Satisfaction → Behavioral Intention (β_{54})	.69	13.78**
H13: Recovery Satisfaction → Behavioral Intention (β_{51})	-.07 ^b	-1.68 ^{ns}
		R ²
Goodness-of-fit statistics	$\eta_1 = \gamma_{11}\xi_1 + \gamma_{12}\xi_2 + \gamma_{13}\xi_3 + \zeta_1$.89
$\chi^2 = 1,307, df = 441 (p < .001)$	$\eta_2 = \beta_{21}\eta_1 + \zeta_2$.61
RMSEA = .08	$\eta_3 = \beta_{31}\eta_1 + \beta_{32}\eta_2 + \zeta_3$.83
NNFI = .98	$\eta_4 = \beta_{41}\eta_1 + \beta_{42}\eta_2 + \beta_{43}\eta_3 + \zeta_4$.72
CFI = .98	$\eta_5 = \beta_{51}\eta_1 + \beta_{52}\eta_2 + \beta_{53}\eta_3 + \beta_{54}\eta_4 + \zeta_5$.88
SRMR = .04	Where: ξ_1 : DJ, ξ_2 : PJ, ξ_3 : IJ	
	η_1 : RS, η_2 : TR, η_3 : CO, η_4 : OS, η_5 : BI	

Note: ^{ns} not significant, * significant at .05, ** significant at .01.

^a β_{31} were significant at $p = .05$, but the direction of the relationship was not hypothesized as being positive.

^b The negative coefficients associated commitment and behavioral intentions may be attributed to suppressor effects (Bollen, 1989). These misleading coefficients can also be artifacts of multicollinearity – redundancy in estimation (Cohen & Cohen, 1975). Three simple regression models were run without other predictor variables to estimate effects. In each regression, regression coefficient was significant at $p = .01$.

Table 6
Standardized Indirect and Total Effects

	Recovery Satisfaction		Trust		Commitment		Overall Satisfaction		Behavioral Intention	
	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total	Indirect	Total
DJ	-	.26	.20	.20	.17	.17	.17	.17	.15	.15
PJ	-	.53	.42	.42	.36	.36	.36	.36	.32	.32
IJ	-	.20	.16	.16	.14	.14	.14	.14	.12	.12
RS	-	-	-	.78	.77	.67	.56	.68	.67	.60
TR	-	-	-	-	-	.99	.43	.77	.98	.86
CO	-	-	-	-	-	-	-	.44	.30	.76
OS	-	-	-	-	-	-	-	-	-	.69

Note: All indirect and total effects were significant at .01, but indirect and total effects of IJ on trust, commitment, overall satisfaction, and behavioral intention were significant at .05.

CHAPTER V:
**THE EFFECTIVENESS OF SERVICE RECOVERY: ATTRIBUTION AND
CONTINGENCY APPROACH**

Abstract

The purpose of this study was to investigate the recovery paradox effects on overall satisfaction and behavioral intentions. This study further aimed to examine the effects of situational and attributional factors in the evaluation of service recovery efforts. This study did not find a recovery paradox in the experimental scenarios. The magnitude of service failure had significant negative effects on perceived justice and recovery satisfaction. Customers' perception of stable failure had significant negative effects on overall satisfaction, revisit intention, and word-of-mouth intention. The study findings emphasized that positive recovery efforts can reinstate customers' satisfaction and behavioral intentions up to those of pre-failure. Restaurant managers and their employees need to provide extra efforts to restore the customers' perceived losses in serious failure situations. Service providers should reduce systematic occurrences of service failure so customer will not develop stability perception.

KEYWORDS: service failure, service recovery, recovery paradox, contingencies, and attribution of causality

INTRODUCTION

The importance of building long-term relationships with existing customers has been emphasized for varying reasons. Customer retention is critical to a business' financial success since the cost of attracting a new customer substantially exceeds the cost of retaining a present customer (Anderson & Fornell, 1994; Spreng et al., 1995; Kotler et al., 2003). Reichheld and Sasser (1990) reported that companies could increase their profits up to 85% in the service industries by reducing the customer defection rate by 5%.

To maintain ongoing relationships and to facilitate future relationships with existing customers, it is imperative to satisfy them in exchanges (Oliver & Swan, 1989). Nevertheless, it is unrealistic to achieve zero defection because of characteristics of services: intangibility (Palmer et al., 2000; Collie et al., 2000), simultaneous production and consumption (Collie et al., 2000; Goodwin & Ross, 1992; Hess et al., 2003), and high human involvement (Boshoff, 1997).

Defensive marketing strategies that focus on customer retention through effective complaint management and managerial programs to prevent and recover from service failures (Halstead et al., 1996) will help to maintain long term relationships with customers (Fornell & Wernerfelt, 1987). Spreng et al. (1995) suggested that appropriate service recovery efforts can convert a service failure into a favorable service encounter and achieve secondary satisfaction. Positive service recovery also can enhance repurchase intention (Blodgett et al., 1997; Gilly, 1987) and positive word-of-mouth (w-o-m) communication (Maxham & Netemeyer, 2002a). In reality, more than half of businesses' efforts to respond to customer complaints actually strengthen customers'

negative evaluations of a service (Hart et al., 1990). Keaveney (1995) found that core service failures and unsatisfactory employee responses to service failures accounted for more than 60% of the all service switching incidents. Therefore, it is important to understand what constitutes a successful service recovery and how customers evaluate service providers' recovery efforts.

The purpose of this study was to investigate the recovery paradox effects on overall satisfaction and behavioral intentions. This study further aimed to examine the effects of situational factors in the evaluation of service recovery efforts and to assess the influence of attributional factors in forming customers' overall satisfaction and behavioral intentions after experiencing service failure and recovery.

LITERATURE REVIEW AND HYPOTHESES

Service Failure and Service Recovery

Service failure arises when service delivery performance does not meet a customer's expectations (Kelley & Davis, 1994; Kelley et al., 1993). Service failure can be viewed as customers' economic and/or social losses in an exchange; therefore, organizations endeavor to recover from negative effects by offering economic and social resources (Smith et al., 1999). Furthermore, dissatisfied customers not only defect but also engage in negative w-o-m behavior (Mack et al., 2000). It is, therefore, imperative for service firms to develop effective service recovery strategies to rectify service delivery mistakes and increase retention rates or decrease defection rates (Hoffman & Chung, 1999; Webster & Sundaram, 1998).

Service recovery is defined as “the actions of a service provider to mitigate and/or repair the damage to a customer that results from the provider’s failure to deliver a service as is designed” (Johnston & Hewa, 1997, p. 467). Service recovery efforts embrace proactive, often immediate, efforts to reduce negative effects on service evaluation (Michel, 2001). Service recovery may not always make up for service failures, but it can lessen its harmful impact when problems are properly handled (Colgate & Norris, 2001).

Justice (Fairness) Theory

Once a dissatisfied consumer seeks redress, the evaluation of recovery efforts is dependent primarily upon the consumer’s perception of justice compared to their recovery expectations (Blodgett et al., 1993; Kelley & Davis, 1994). Evolved from the social exchange theory and the equity theory, the justice theory implies that service recovery evaluation is based on the three dimensions of justice: distributional justice (the perceived fairness of tangible outcomes), procedural justice (the perceived fairness of the procedures delivering the outcomes), and interactional justice (the perceived fairness of interpersonal manner in the enactment of procedures and delivery of outcomes) (Blodgett et al., 1993; Smith et al., 1999; Tax et al., 1998). The consumer forms a satisfaction judgment and behavioral intentions based on the level of perceived justice (Andreassen, 2000; Blodgett et al., 1993).

Service Recovery Paradox

Customers revise and update their satisfaction and behavioral intentions based on prior assessment and new information (Smith & Bolton, 1998; Tax et al., 1998). An individual consumer’s state of satisfaction based on a single observation or transaction is

called an encounter- or transaction-specific satisfaction. Consumers aggregate evaluations over many occurrences and develop accumulated satisfaction, often referred to as long-term, summary, or overall satisfaction (Oliver, 1997).

When customers experience service failures, their post-failure satisfaction or pre-recovery satisfaction – transaction specific satisfaction will be lower to some degree than previous overall satisfaction. Not all frustrated customers will complain, but some of them will give service providers chances to correct the problems. An appropriate service recovery will mitigate harmful effects and raise satisfaction (post-recovery satisfaction – transaction specific satisfaction) (Tax et al., 1998). Figure 1 portrays the flow of satisfaction in service failure and service recovery context.

Insert Figure 1

Exceptional service recovery efforts can produce a service “recovery paradox,” a situation where the levels of satisfaction rates of customers who received good or excellent recoveries are actually higher than those of customers who have not experienced any problem (Gilly, 1987; Maxham & Netemeyer, 2002b; McCollough, 2000; McCollough & Bharadwaj, 1992; Michel, 2001; Smith & Bolton, 1998). On the other hand, it is clear that an inappropriate response or no response to a service failure complaint will magnify negative evaluation, also referred to as “double deviation” (Bitner et al., 1990; Hart et al., 1990).

Research findings on recovery paradox are mixed. The effect of service recovery paradox on satisfaction, w-o-m, and repurchase intention was observed in many studies (Gilly, 1987; Maxham & Netemeyer, 2002b; McCollough & Bharadwaj, 1992; Smith & Bolton, 1998). However, other researchers did not find any recovery paradox effects (Boshoff, 1997; Bolton & Drew, 1991; McCollough et al., 2000; Oh, 2003). Previous studies tested for recovery paradox effects in various ways. However, most of them did not specify the level of recovery efforts required so that the recovery paradox could be achieved. To test the paradox effects on satisfaction and behavioral intentions, this study evaluated the following hypotheses using an experimental approach:

H1. Customers' overall satisfaction after experiencing a service recovery is higher than satisfaction before experiencing a service failure.

H2. Customers' revisit intentions after experiencing a service recovery are greater than initial customers' revisit intentions before experiencing service failure.

H3. Customers' w-o-m intentions after experiencing a service recovery are greater than customers' w-o-m intentions before experiencing a service failure.

Contingency Approach (Considering Situation Factors)

The need for a contingency approach to service recovery was emphasized. Customers' cognitive and affective responses to recovery efforts depend upon a variety of unforeseen, situational factors (Ostrom & Iacobucci, 1995). Therefore, the service recoveries in resolving customer complaints are not equally effective in different situations (Hoffman & Kelley, 2000). Various situational factors have been investigated in the service recovery studies, including criticality of service consumption (Matilla,

1999, 2001; Ostrom & Iacobucci, 1995; Sundaram et al., 1997; Webster & Sundaram, 1998), magnitude (severity) of service failure (Kelley & Davis, 1994; Hoffman et al., 1995; Matilla, 1999, 2001; Smith & Bolton, 1998; Conlon & Murray, 1996; McCollogh, 2000), types of service failure (Bitner et al., 1990; Goodwin & Ross, 1992), and the person who perceived the failure (Boshoff & Leong, 1998; Mattila, 1999). This study investigated the effects of criticality and magnitude in the process and outcome of the service recovery efforts.

Criticality (perceived importance) of Service Consumption. Criticality implies the perceived importance of the service encounter (Ostrom & Iacobucci, 1995). Consumers are likely to view service failure more seriously when the service consumption situation is very important (Sundaram et al., 1997). Consequently, customers' perceived criticality of purchase situations impact the customers' evaluations of service encounters (Ostrom & Iacobucci, 1995). Thus, this study explored the effects of criticality of service consumption on customers' perceived justice and recovery satisfaction.

H4a: Customers' perceived criticality of service consumption will be negatively related to customers' perceived justice.

H4b: Customers' perceived criticality of service consumption will be negatively related to customers' service recovery satisfaction.

Magnitude (Severity) of Service Failure. The magnitude (severity) of the failure is defined as the size of loss caused by the failure (Hess et al., 2003; Smith et al., 1999). According to principles of resource exchange, customer satisfaction judgments

will differ by the size of the loss due to a failure. It is much more difficult to recover from serious failures than from failures that are minor (Smith & Bolton, 1998; Smith et al., 1999). Researchers reported a negative relationship between failure ratings and service recovery ratings (Hoffman et al., 1995; Mattila, 1999; Smith & Bolton, 1998). Using a critical incident technique, Mack et al. (2000) found that customers who had experienced a major mistake were more likely to judge the recovery effort as poor (57.7 %) than those had experienced a minor mistake (14.5 %). This research investigated the effects of the magnitude of service failure on customers' perceived justice and recovery satisfaction.

H5a: Customers' perceived magnitude of service failure will be negatively related to customers' perceived justice.

H5b: Customers' perceived magnitude of service failure will be negatively related to customers' service recovery satisfaction.

Attribution Approach

People process information with causal inferences and determine what to do based on inferred reason (Folkes, 1984). Customers' judgments about the cause and effect attribution influence their subsequent emotions, attitudes, and behaviors based on the three dimensions of causal attributions: locus, controllability, and stability (Weiner, 1980, 1985; Swanson & Kelley, 2001). The attribution theory has been applied to explain customer responses to product and service failures (Folkes et al., 1987; Richins, 1983; Weiner, 1980).

Controllability. Controllability refers to the customers' belief that the service provider can prevent the problem and control the outcomes (Blodgett et al., 1995; Bowen, 2001). When a controllable failure occurs, customers expect greater recovery efforts by service providers to restore equity (Hess et al., 2003). Further, customers who perceive that a problem is controllable are more likely to engage in negative w-o-m behavior and are less likely to return to the business than customers who do not perceive that a problem is controllable (Blodgett et al., 1995; Swanson & Kelley, 2001).

H6a: Customers' perception of controllability of causality will be negatively related to customers' overall satisfaction.

H6b: Customers' perception of controllability will be negatively related to customers' w-o-m intentions.

H6c: Customers' perception of controllability will be negatively related to customers' revisit intentions.

Stability. Stability refers to the perceived probability that similar problems will arise in the future (Blodgett et al., 1995; Swanson & Kelley, 2001). The perceived probability of another failure in the future also can affect the evaluation of service recovery (Folkes, 1984; Smith & Bolton, 1998) and revisit intention (Folkes et al., 1987; Smith & Bolton, 1998). In retail settings, Blodgett et al. (1993) found that only the interaction effects of controllability and stability had a significant, negative effect on complaints' perceived justice and repatronage intention; the interaction effect had no significant effect on word of mouth intention.

H7a: Customers' perceived stability will be negatively related to customers' overall satisfaction.

H7b: Customers' perceived stability will be negatively related to customers' w-o-m intentions.

H7c: Customers' perceived stability will be negatively related to customers' revisit intentions.

Locus of Causality. Locus of causality relates to consumers' perception of whether product/service failure is buyer related or seller related (Folkes, 1984, 1988; Hess et al., 2003; Swanson & Kelley, 2001). Buyers are more likely to attribute the cause of problems to the seller and blame the seller for the failure (Folkes & Kotsos, 1986). Thus, this study proposed that customers' perceived locus of causality will significantly influence customers' overall satisfaction toward the service provider and behavioral intentions.

H8a: Customers' perceived locus of causality will be negatively related to customers' overall satisfaction.

H8b: Customers' perceived locus of causality will be negatively related to customers' w-o-m intentions.

H8c: Customers' perceived locus of causality will be negatively related to customers' revisit intentions.

METHODOLOGY

Research Design

Since service recovery efforts are initiated by service failures, conducting empirical research in either laboratory or field environment is challenging (Smith & Bolton, 1998; Smith et al., 1999). Written scenarios, instead, have been used extensively to evaluate the effects of service recovery on satisfaction, relationship quality, and behavioral intentions (e.g., Boshoff, 1997; Collie et al., 2000; Dube et al., 1994; Goodwin & Ross, 1992; Mittila, 1999; McCollough, 2000; McDougall & Levesque, 1999; Smith & Bolton, 2002; Sundaram et al., 1997; Swanson & Kelley, 2001; Webster & Sundaram, 1998). Bitner (1990) asserted that the use of written scenarios permits better control of the manipulation of variables of interest. Experimental scenarios also create variability in customers' responses by providing inclusive sets of service failure and recovery desired (Smith & Bolton, 2002).

To develop realistic experimental scenarios, 43 undergraduate students in a hospitality program were asked to describe service failures and recovery efforts that they had experienced at casual dining restaurants. The results were similar to the typology of service failures and recovery efforts reported in previous studies (e.g., Kelley et al., 1995; Hoffman et al., 1995).

The research design for the study was a 2x2x2 between-groups factorial design utilizing written scenarios. The three dimensions of justice were manipulated into two levels (low and high). A total of 8 scenarios were developed (see Table 1). Each scenario was identical except for manipulations of the three independent variables. The subjects were randomly assigned to 1 of the 8 treatments. A failure scenario, description

of experimentation manipulation of justice dimensions, and sample of recovery scenarios are present in Appendix A.

Insert Table 1

Following the suggestion of Smith and Bolton (1998), participants were asked to name a causal restaurant that they visited recently rather than their favorite restaurant. By doing so, customers' initial attitude toward restaurants should be more varied. Participants were asked to read the scenario and to assume that the situation had just happened to them in a restaurant.

Multi-item scales that were validated in the previous studies were adapted and modified to fit the study setting. All variables were measured on 7-point Likert Scale anchoring from 1) strongly disagree to 7) strongly agree. Overall perceived justice was measured by the three dimensions of justice, and a composite score was used for the analysis. Satisfaction was measured at three intervals (initial satisfaction, recovery satisfaction, and overall satisfaction). Recovery satisfaction was measured after a service failure scenario and a service recovery scenario were presented. Behavioral intentions were evaluated by assessing the respondents' willingness to revisit and to recommend the restaurants to others.

Situational and attributional factors were measured on a single item. Magnitude of the service failure was measured as the perceived severity of the problem. Criticality

of service consumption was measured as the importance of the dining experience for the particular event. Controllability was measured as the degree to which the problem was preventable and controllable by the restaurant. Stability was measured as the likelihood that a similar problem could occur at the restaurant. Locus was measured as respondents' perception of who was responsible for the problem. Table 2 lists the measurement items used and sources adapted for the study.

Insert Table 2

Pre and Pilot Test

A pre-test was conducted to refine the research instrument. Graduate students and faculty members (approximately 15) in a hospitality program were asked to evaluate the survey instrument. Participants were asked to identify any ambiguous questions, measurements, and scenarios. Modifications were made accordingly (e.g., wording, deleting unnecessary questions, and underling of negative verbs).

Following the pre-test, a pilot test of the instrument was conducted to ensure manipulations of justice dimensions and to assess the reliability and validity of the measurements. A convenience sample of 96 undergraduate students (46 female and 50 male) taking a class in a hospitality program was randomly assigned to one of the eight scenarios. Reliability of measurement exceeded the conventional cut off .70 (Nunnally,

1978). Manipulation and confounding checks were performed. No changes were made in the instrument for the final study.

Sample and Data Collection

The study involved convenience samples of casual restaurant customers. Members of religious and community service groups in a city of 45,000 population and a faculty and staff group at a Midwestern university were the sampling frame for the study. Data were collected at community fund raising events, educational programs, and regular meetings of the groups. The majority of the questionnaires were collected through mail. The questionnaires and postage paid, self-addressed envelopes were distributed to participants who indicated willingness to participate in the study. Respondents were informed that researchers would make a donation to the charitable organization which they designated. Six hundred copies of the questionnaire were distributed to more than 20 groups and 308 questionnaires were returned. Of the 308 returned surveys, 22 cases (about 7 percent) were excluded because of missing values and/or not following instruction, such as naming quick service restaurants, yielding a 47.67% usable response rate.

DATA ANALYSIS AND RESULTS

Of the 286 respondents, 60.5% were female ($n = 173$) and 38.5% were male ($n = 110$). The majority of the respondents (84.3%, $n = 241$) were Caucasian/white. The age of respondents ranged from 18 to 91 years old. The age categories of 45 to 54 and 65 and over accounted for the highest and lowest numbers of respondents (22.7% and 9.7%,

respectively). Twenty percent of the respondents reported a household income between \$20,000 - \$39,999 and 19% had income between \$40,000 - \$59,999.

Outlier and Assumption Check

Multivariate outliers were detected using Mahalanobis D^2 measure. No case was below the threshold value of .001 (Hair et al., 1995). In addition, univariate outliers were assessed using standard z-score. A total of 19 responses were identified as outliers. Further analysis found that most cases were in low evaluations on recovery and consequent attitudinal and behavioral intentions. Hair et al. (1995) suggested data be analyzed with and without outliers; no significant differences were found in the relationships. Thus, all cases were retained for further analysis. Though dependent variables were negatively skewed, data were not transformed in favor of robustness of MANOVA test for multivariate normality.

Realism and Confounding Check

To assess the perceived realism of scenarios (Goodwin & Ross, 1992; Sundaram, et al., 1997), participants were asked to rate the likelihood that a similar problem would occur to someone in real life (1-very unlikely to 7-very likely) and the reality of recovery efforts given in the scenario (1-very unrealistic to 7-very realistic). Mean scores of 5.87 ($SD = 1.15$) for failure scenario and 5.42 ($SD = 1.38$) for recovery scenarios suggested that the respondents perceived the scenarios as highly realistic.

Reliability of measurements was estimated using coefficient alpha. Coefficients alpha were well above the suggested cut off .70, indicating measurements are reliable (Nunnally, 1978). A convergent validity check was conducted using full-factorial analysis of variance models (2x2x2 ANOVAs) to assess if respondents perceived the

levels of each dimension of justice differently as intended in the scenarios (Blodgett et al., 1997; Cook & Campbell, 1979; Perdue & Summers, 1986). Participants who were exposed to high conditions of each justice perceived the recovery efforts more favorably than those who were exposed to low conditions (see Table 3).

Insert Table 3

Discriminant validity will be established if none of the manipulations of the independent variables confound with one another (Blodgett et al., 1997; Cook & Campbell, 1979; Perdue & Summers, 1986). No two- and three-way interaction effects had confounding effects on other independent variables; however, the main effects of manipulated factors had significant effects on other independent variables. When confounding is present, Perdue and Summers (1986) suggested that researchers evaluate if the degree of confounding is serious enough to mislead results. An indicator of effect size, ω^2 , was calculated to assess the proportion of variance in the dependent variable accounted for by each main and interaction effect (Perdue & Summers, 1986).

Manipulation of interactional justice accounted for 23% of the variance of interactional justice, 5% for distributive, and 8.7% for procedural justice. Procedural manipulation explained 32.1% of the variance of procedural justice, 5.8% of interactional justice, and 5.3% of distributive justice. Manipulation of distributive justice accounted for 22.1% of the variance of distributive justice, 8.2% of interactional justice, and 5.5%

of procedural justice. The effect sizes for other variables were much smaller than the effect size of the variable that was intended to be manipulated (see Table 4). Therefore, the minimal to moderate ω^2 were acceptable (Perdue & Summers, 1986).

Insert Table 4

Recovery Paradox

To test recovery paradox effects on overall satisfaction, revisit intention, and word-of-mouth intention (H1 – H3), the study employed multivariate analysis of variance. Among the responses, 32 respondents were randomly picked and served as a control group (no failure condition). Their initial overall satisfaction and revisit and word-of-mouth intentions that were measured before they were given service failures and recovery scenarios were compared with those of post-recovery overall evaluations. The researchers believed that multivariate tests are appropriate since dependent variables were highly correlated (Pearson correlation among dependent variables ranged from .79 to .81 and were significant at $p = .01$ level).

Since restaurants that respondents visited may have potential effects that bias the results on dependent variables, the effects of a covariate were checked first. Restaurants were grouped first and were set as a covariate to rule out potential influence on dependent variables. Overall multivariate analysis of covariance (MANCOVA) test indicated that the multivariate main effect of named restaurants was not significant at $p = .05$ for dependent measures (Wilks' lambda = .999, $F_{3, 274} = .119$, $p = .949$). In addition, the

MANCOVA model did not improve statistical power (Hair et al., 1998). The covariate was eliminated. Because the study compares the mean of a control group against the means of all treatment groups, Dunnett's t-test was used (Hair et al., 1998).

Recovery efforts produced slightly higher ratings of post-recovery overall satisfaction and w-o-m intention than those of pre-failure in HHH, HHL, and HLH groups. However, no recovery scenarios resulted in significantly higher levels of overall satisfaction, revisit intention, and w-o-m intention than those of pre-failure at the significance level of .05. Thus, hypotheses 1 through 3 were not supported (see Table 5). Considering the objective of recovery efforts, that is, to mitigate the negative effect of service failure, it is also valuable to determine which scenarios' overall satisfaction and behavioral intentions after recovery efforts can have non-significant difference from initial satisfaction and behavioral intentions. In most the scenarios, significantly lower recovery satisfaction and behavioral intentions than those of pre-failure were not found. Post-recovery revisit intention was significantly lower in only the LLH scenario than pre-failure revisit intention at the significance level of .05.

Insert Table 5

The Role of Situational Factors

To test the effects of magnitude of service failure and criticality of service consumption on perceived justice and recovery satisfaction, MANCOVA test was used. MANCOVA test was incorporated since the two dependent variables were highly

correlated ($r = .87, p < .001$), and manipulations of dimensions of justice and respondents' initial satisfaction influenced the two dependent variables (all covariates in the model were significant at $p = .05$). The appropriateness of fitting covariates in the model was checked. Correlations between covariates and independent variables were not significant, and correlations between covariates and dependent variables were significant (Hair et al., 1998; Maxham & Netemeyer, 2002b).

Overall MANCOVA test indicated that the multivariate main effect of magnitude was significant (Wilks' lambda = .919, $F_{12, 494} = 1.778, p = .049$), but the effect of criticality was not significant (Wilks' lambda = .955, $F_{12, 494} = .951, p = .496$). As Table 6 illustrates, the univariate analysis of covariance (ANCOVA) tests found significant negative effects of magnitude on perceived justice and recovery satisfaction ($F = 2.812, p = .012$ and $F = 2.324, p = .033$, respectively). Hypotheses 5a and 5b were supported. Interaction effects of criticality and magnitude were not significant for either perceived justice or recovery satisfaction ($F = 1.148, p = .299$ and $F = .966, p = .506$, respectively).

Insert Table 6

The Role of Attributional Factors

The study confirmed the conventional agreement of attribution of causality (Folkes & Kotsos, 1986; Weiner, 1980) that buyers were more likely to perceive that the failure (overcooked steak) was seller related and controllable ($M = 6.06$ and $M = 6.15$, on 7-point Likert Scales respectively). Participants, however, did not perceive such

incidents happen frequently at the restaurants they visited ($M = 3.24$, where 1 indicates strongly disagree and 7 indicates strongly agree). To check the effects of customers' perception about locus, stability, and controllability on post-recovery overall satisfaction and subsequent behavioral intentions, MANCOVA were used. Correlations among three dependent variables were significant at $p = .01$ ($r = .82$ between overall satisfaction and w-o-m intention; $r = .83$ between w-o-m intention and revisit intention; and $r = .83$ between overall satisfaction and revisit intention). The manipulations of justice dimensions were used as covariates. Correlations between covariates and attributional factors were not significant at $p = .01$, and correlations between covariates and dependent variables were significant (Hair et al., 1998). The main effects of covariates on dependent variables were significant (see Table 7).

Overall MANCOVA tests indicated that the multivariate main effect of stability on dependent variables was significant (Wilks' lambda = .847, $F_{18, 589} = 1.977$, $p = .009$), but controllability and locus (Wilks' lambda = .913, $F_{15, 575} = 1.289$, $p = .204$ and Wilks' lambda = .926, $F_{18, 589} = .904$, $p = .574$, respectively) were not. The univariate ANCOVA tests examined the significance of the main effects of stability on overall satisfaction, revisit intention, and w-o-m intention ($F = 3.609$, $p = .002$, $F = 3.770$, $p = .001$, and $F = 4.253$, $p = .000$, respectively). Hypotheses 7a, 7b, and 7c were supported. Controllability and locus had no significant main effects on dependent variables. No two- and three-way interaction effects were significant (see Table 7).

Insert Table 7

DISCUSSIONS AND IMPLICATIONS

This study did not find recovery paradox effect, but found that recovery efforts produced a slightly higher overall satisfaction and behavioral intentions in some scenarios. In most scenarios, customers' post-recovery overall satisfaction and behavioral intentions (except in LLH for revisit intention) were not significantly lower than those of pre-failure evaluation.

Researchers agreed that customers weigh a negative experience more heavily than a positive experience (Maxham & Netemeyer, 2002b; Smith et al., 1999). Considering this asymmetric effect of positive/negative performance on satisfaction and purchase intentions (Mittal et al., 1998), it is hardly possible to recover satisfaction and behavioral intentions up to the levels of pre-failure in failure and recovery situations. However, many researchers observed similar results or even better results (recovery paradox). Two potential explanations can be considered about how these valuable opportunities for service providers are observable. First, since a service failure and a service recovery occur mostly during a service consumption, customers may consider the service failure and the recovery experiences as a transaction. That is, consumers' overall satisfaction after experiencing service failure and recovery may be based mainly on the initial satisfaction and perceived justice rather than the negative evaluation of service failure. Second, consumers may weigh the most recent events more heavily (recency effect) when they judge the overall sequence of outcomes (Maxham & Netemeyer, 2002b).

The goal of service recovery is to take customers' satisfaction back to normal instead of making them delighted. If customers' overall satisfaction after experiencing a failure and a recovery is equal to the initial satisfaction, it is worthwhile to invest the time

and efforts to recover the service problem. In addition, dissatisfied customers tell friends and/or acquaintances about their negative experiences. Regardless of whether or not it is possible to observe recovery paradox, service recovery efforts are imperative for service providers. If service providers do not show their concerns to dissatisfied customers, negative effects will be magnified (Bitner et al., 1990; Mattila, 1999), and it is virtually impossible to have the second chance.

Magnitude of service failure affected both customers' perceived justice and recovery satisfaction. The findings indicate that the effectiveness of recovery efforts may depend on customers' perceived seriousness of the problems. Service provider needs to exert extra efforts to recover satisfaction in serious failure situations since customers' perceived losses are greater in the major failure than in the minor failure. A standardized service recovery may fail to meet customers' recover expectations. Customer-contact employees may consider a service failure less serious than customers do since employees often hear customers' complaints about similar failures. In the case where a management intervention is necessary, clear communication about the problems between the employee who initially received customer complaints and the manager who recovers the failures is vital to respond customers' complaint effectively.

Unlike the results of previous studies (Sundaram et al., 1997; Webster & Sundaram, 1998; Ostrom & Iacobucci, 1995), this study found no significant negative effect of criticality on the perceived justice and recovery satisfaction. Giving only one service consumption that was not directly manipulated in the scenario may have caused this result.

Stability attribution is built when customers are uncertain about future outcomes and/or believe the problem will happen in the future (Folkes, 1984; Smith & Bolton, 1998). Similar to previous studies (Blodgett et al., 1993; Blodgett et al., 1995), this study found that customers who perceived that service problems happened frequently and/or would occur in the future were less likely to be satisfied, to revisit, and to spread positive word-of-mouth about restaurants. These findings indicate that customers' attribution of consistent failures impact reliability perception negatively so that perceived risk or uncertainty of future outcomes will result in negative attitudinal and behavioral outcomes. Therefore, it is critical for service providers to reduce systematic occurrences so that customers will not develop stability perception. Although service failures are inevitable, most service defections, especially because of poor customer service, are largely controllable by service firms (Hoffman & Chung, 1999; Hoffman & Kelly, 2000). Management should keep track of its service delivery routinely and analyze service failures to prevent the same problems from occurring overtime. Management should encourage employees, even managers themselves, to report customer complaints in order to identify the cause of the failures.

Although implementing service recovery strategies seems to increase costs, such strategies can improve the service system and result in relational benefits (Brown, Cowles, & Tuten, 1995). The systematic analysis of service failure and recovery can be used to identify common failures, to resolve the routine causes of failures, and to improve the effectiveness of recovery efforts (Brown et al., 1995; Hoffman, Kelley, & Rotalsky, 1995). To respond more effectively to customers' complaints, service providers should develop various recovery practices considering the importance of situational factors. In

addition, employees, especially frontline employees who handle customer complaints should be trained accordingly. Most importantly, in a service failure situation, the second loop of customer satisfaction evaluations (recovery satisfaction) starts with customers' complaints. This notion emphasizes the importance of creating an environment where customers are welcomed to complain. Chances are higher for retaining customers by encouraging them to complain (Spreng et al., 1995).

LIMITATIONS AND SUGGESTIONS FOR FUTURE STUDY

Though the appropriateness of using experimental scenarios is justified in several aspects, the method may limit capturing the emotional involvement of respondents (Hess et al., 2003; Mattila, 1999; Smith & Bolton, 2002; Sundaram et al., 1997). Thus, the respondents' negative feeling might be substantially weaker than when they experience actual service failure. Data collection in a field setting may increase external validity of the study findings.

The study used a convenience sampling technique that could result in selection bias (Kelley et al., 1993), such as limited ethnic diversity for the study. Though respondents in this study are all restaurant patrons, generalizability of the study findings can be justified by collecting data from a more diverse group of respondents.

The study findings are from a single industry setting. It is argued that service recovery evaluation is context specific: characteristics of services have significant influence on the evaluation of service recovery efforts (Hoffman & Kelley, 2000; Mattila, 2001). Generalizability of findings to other segments of service industry is limited. Replication of studies in multi-industry settings is necessary to understand the effect of

service recovery on attitudinal and behavioral consequences. Similarly, these efforts may incorporate other dimensions, such as level of customization, switching costs, and relational benefits. Cross-cultural studies are recommended to validate the generalizability across nations and/or cultural background (Mattila, 1999; Mueller et al., 2003; Palmer et al., 2000; Swanson & Kelley, 2001).

Appendix A

Service Failure Scenario

On Friday evening, you and your family went out for dinner at *the restaurant you named* to celebrate one of your family member’s graduation from high school or college. After waiting about 15 minutes, a hostess seated your group. Shortly after, a waiter took your order. You ordered a steak and requested it to be cooked “medium.” When your meal was served, you noticed that your steak was “overcooked.” You stopped eating and informed your server that your steak was overcooked.

Description of Experimental Manipulation

Interactional Justice	
Low	The server simply apologized. The manager did not apologize for the problem. The manager did not provide an explanation for the problem. The manager did not ask if there was anything else that she could do to serve you better.
High	The server sincerely apologized. The manager apologized for the problem. The manager provided an explanation for the problem. The manager asked if there was anything else that she could do to serve you better.
Procedural Justice	
Low	The server said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you. The manager asked you what the problem was, and you had to explain again what the problem was.
High	The server said that he could take care of the problem and took the dish back. After 2-3 minutes, the manager approached you. The manager knew the problem, and you didn’t have to re-explain the problem.
Distributional Justice	
Low	Another steak was served. No compensation was offered.
High	Another steak was served. 100% discount on the item was offered.

Samples of Recovery Scenarios

After you explained the problem to the server, he simply apologized for the problem. He said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you but did not apologize for the problem. The manager asked you what the problem was and you had to re-explain the problem. She did not provide an explanation for the problem. She informed you that another steak would be served and you would not be charged for it. She did not ask if there was anything else that she could do to serve you better.

(Low IJ x Low PJ x High DJ)

After you explained the problem to the server, he sincerely apologized for the problem. He said that he could take care of the problem and removed the steak. After 2-3 minutes, the manager approached you and apologized for the problem. She said she was informed about the problem from the server and you didn't have to re-explain the problem. She also explained why the problem happened. She informed you that another steak would be served. No other compensation was offered. She asked if there was anything else that she could do to serve you better.

(High IJ x High PJ x Low DJ)

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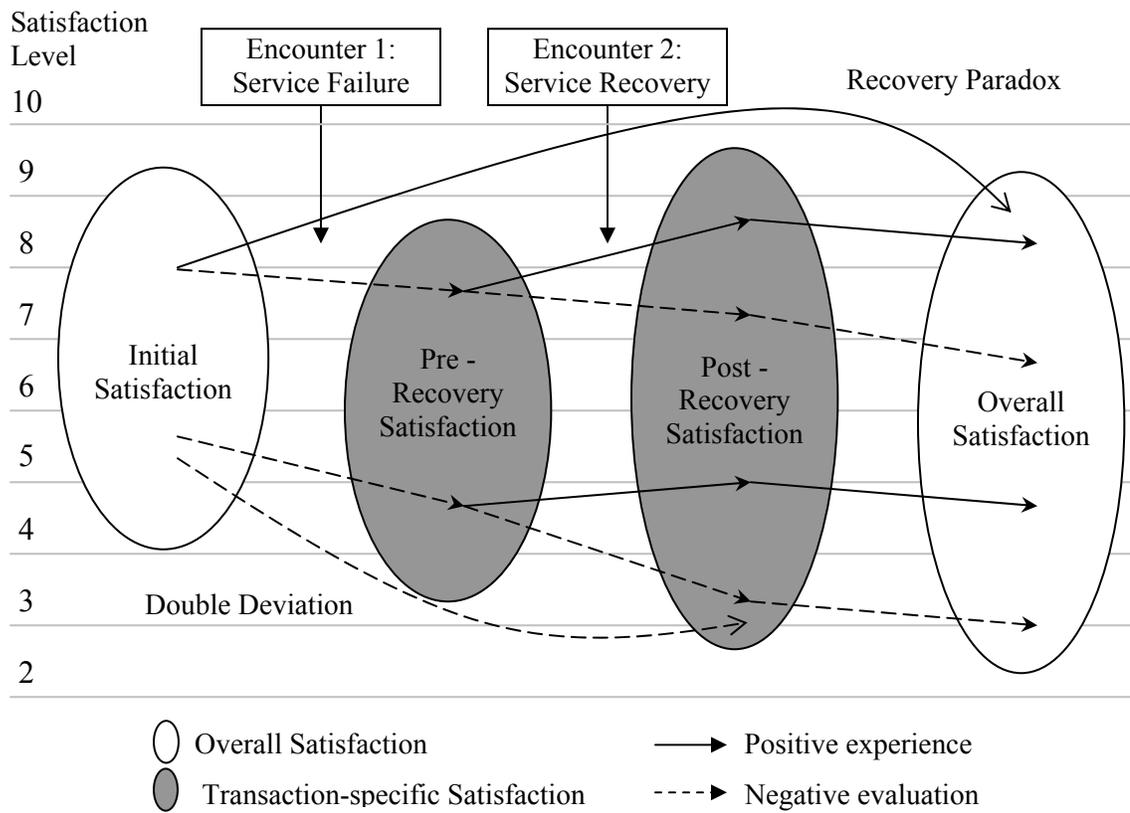


Figure 1. Flow of Satisfaction in Service Failure and Service Recovery Context

Table 1
Experimental Scenarios for the Study

	DJ Low		DJ High	
	PJ Low	PJ High	PJ Low	PJ High
IJ Low	LLL	LHL	LLH	LHH
IJ High	HLL	HHL	HLH	HHH

Table 2
Measurement Items and Reliability

Construct	Alpha	Source
Perceived Justice		Maxham & Netemeyer (2002a) & Blodgett et al. (1997)
• Interactional Justice	.96	
• Procedural Justice	.92	
• Distributive Justice	.93	
Recovery Satisfaction	.94	Maxham & Netemeyer (2002a) & Brown et al. (1996)
• In my opinion, the restaurant provided a satisfactory resolution to the problem on this particular occasion.		
• I am satisfied with the restaurant's handling of this particular problem.		
• I am satisfied with this particular dining experience.		
Overall Satisfaction (Initial Overall Satisfaction)	.97	
• I am satisfied with my overall experience with the restaurant.	(.95)	Oliver & Swan (1989)
• As a whole, I am happy with the restaurant.		
• Overall, I am pleased with the service experiences with this restaurant.		
Revisit Intention (Initial Revisit Intention)	.95	Maxham & Netemeyer (2002a) & Blodgett et al. (1997)
• I would dine out at this restaurant in the future.	(.96)	
• There is likelihood that I would eat at this restaurant in the future		
• I <i>will not</i> eat at this restaurant in the near future.		
W-O-M Intention (Initial W-O-M Intention)	.97	
• I will spread positive word-of-mouth about this restaurant.	(.97)	Maxham & Netemeyer (2002a)
• I will recommend this restaurant to my friends.		
• If my friends or relatives were looking for a restaurant, I would tell them to try at this restaurant.		
Criticality		
• The dining experience to celebrate the graduation is very important.		
Magnitude		Hess et al. (2003)
• If this incident really happened to me, I would consider the problem to be a major problem.		
Controllability		Hess et al. (2003)
• The problem is controllable by the restaurant.		
Stability		Blodgett et al. (1993)
• Such incidents happen frequently at this restaurant.		
Locus		
• The restaurant is responsible for the problem(s).		

Note. Values enclosed in parentheses represent alpha value of initial satisfaction and behavioral intentions.

Measurement items for initial and post-recovery overall satisfaction and behavioral intentions were same. Measurement items of justice dimensions were omitted (please refer to Maxham & Netemeyer (2002a) and Blodgett et al. (1997).

Table 3
Convergent Validity of Manipulation

Manipulation	Dependent Variable		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>		
Interactional Justice	Perceived IJ			
High	5.68 (5.47)	1.09 (1.06)	104.50	.000
Low	4.24 (3.92)	1.55 (1.24)	(58.61)	(.000)
Procedural Justice	Perceived PJ			
High	5.74 (5.40)	1.05 (1.08)	159.91	.000
Low	3.94 (3.78)	1.55 (1.34)	(55.74)	(.000)
Distributive Justice	Perceived DJ			
High	5.62 (5.22)	1.07 (1.23)	100.41	.000
Low	4.22 (4.04)	1.49 (1.26)	(25.41)	(.000)

Note. Values enclosed in parentheses represent those of the pilot test.

Table 4
Discriminant Validity of Manipulations

Effects of Manipulation	Perceived IJ		Perceived PJ		Perceived DJ	
	<i>p</i>	ω^2	<i>p</i>	ω^2	<i>p</i>	ω^2
IJ	.000	.230 (.309)	.000	.087 (.109)	.000	.050 (.073)
PJ	.000	.058 (.095)	.000	.321 (.305)	.000	.053 (.055)
DJ	.000	.082 (.095)	.000	.055 (.046)	.000	.221 (.179)

Note. Values enclosed in parentheses represent ω^2 of the pilot test.
No two- and three-way interaction effects were significant at $p = .05$.

Table 5
Mean Differences between Pre-Service Failure and Post-Recovery on Overall Satisfaction, Revisit Intention, and W-O-M Intentions

Recovery Scenario		Overall Satisfaction		Revisit Intention		W-O-M Intention	
		Mean Diff	<i>p</i>	Mean Diff	<i>p</i>	Mean Diff	<i>p</i>
CON	HHH	-.340	.866	.319	.916	-.144	1.000
	HHL	-.306	.324	.207	.992	-.181	.998
	HLH	-.247	.972	.099	1.000	-.123	1.000
	HLL	.411	.751	.866	.084	.388	.870
	LHH	-.110	1.000	.384	.807	.328	.927
	LHL	.216	.988	.349	.872	.159	.999
	LLH	.830	.323	1.015	.032*	.855	.145
	LLL	.835	.078	.854	.087	.606	.451

Note. Scenarios are abbreviated in accordance with Interactional Justice x Perceived Justice x Distributive Justice.

**p* < .05

CON represents the control group.

$M_{i_{os}}$ (Mean of overall satisfaction in control group) = 5.47, *SD* = 1.4

$M_{i_{ro}}$: (Mean of revisit intention in control group) = 6.19, *SD* = 1.14

$M_{i_{wom}}$ (Mean of word of mouth intention in control group) = 5.25, *SD* = 1.87

Table 6
Effects of Situational Factors

Source	MANCOVA				ANCOVA				
	Perceived Justice / Recovery Satisfaction				Perceived Justice			Recovery Satisfaction	
	<i>df</i>	<i>Wilks'</i> <i>Lambda</i>	<i>F</i>	<i>p</i>	<i>df</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
Intercept	2	.410	177.752	.000**	1	354.479	.000**	189.521	.000**
IJ_C	2	.752	40.783	.000**	1	81.897	.000**	50.023	.000**
PJ_C	2	.742	42.883	.000**	1	83.850	.000**	38.868	.000**
DJ_C	2	.830	25.207	.000**	1	50.438	.000**	33.938	.000**
IS_O	2	.944	7.285	.001**	1	9.940	.002**	14.560	.000**
Criticality	12	.955	.951	.496	6	1.678	.127	.853	.530
Magnitude	12	.919	1.778	.049*	6	2.812	.012*	2.324	.033*
Criticality*Magnitude	42	.865	.884	.681	21	1.148	.299	.966	.506

Note. * $p < .05$, ** $p < .01$.

Model: Intercept + IJ_C + PJ_C + DJ_C + IS_O + Criticality + Magnitude + Criticality *
Magnitude

Covariates: IJ_C (manipulation of interactional justice), PJ_C (manipulation of procedural
justice), DJ_C (manipulation of interactional justice), and IS_O (initial satisfaction).

Table 7
Effects of Attributional Factors

Factor	MANCOVA				ANCOVA						
	Dependent Variables				Overall Satisfaction		Revisit Intention		W-O-M Intention		
	<i>df</i>	<i>Wilks' Lambda</i>	<i>F</i>	<i>p</i>	<i>df</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
Intercept	3	.454	83.324	.000**	1	244.514	.000**	176.745	.000**	122.469	.000**
IJ_C	3	.960	2.896	.036*	1	5.060	.026*	.662	.417	2.896	.090
PJ_C	3	.949	3.757	.012*	1	10.852	.001**	5.479	.020*	4.537	.034*
DJ_C	3	.934	4.907	.003**	1	7.088	.008**	.582	.446	.279	.598
CON	15	.913	1.289	.204	5	.386	.858	.562	.729	1.352	.244
STAB	18	.847	1.977	.009**	6	3.609	.002**	3.770	.001**	4.253	.000**
LOC	18	.926	.904	.574	6	1.295	.261	.960	.454	1.265	.275
CON*STAB	42	.842	.878	.692	14	1.170	.300	1.366	.172	.809	.659
CON*LOC	24	.924	.693	.861	8	.651	.734	.450	.890	.271	.975
STAB*LOC	45	.781	1.190	.189	15	1.292	.209	.716	.767	1.280	.217
CON*STAB*LOC	33	.891	.742	.853	11	.780	.660	.754	.686	.276	.990

Note. * $p < .05$, ** $p < .01$

Model: Intercept + IJ_C + PJ_C + DJ_C + CON + STAB + LOC + CON*STAB + CON*LOC + STAB*LOC + CON*STAB*LOC

Dependent variables: Overall satisfaction, revisit intention, and w-o-m intention

Covariates: IJ_C, PJ_C, and DJ_C.

CON, STAB, and LOC represent controllability, stability, and locus, respectively.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Competition has intensified and customers have become more sophisticated and demanding (Mattila, 2001; Sundaram, Jurovski, & Webster, 1997). As the cost of attracting a new customer increases and substantially exceeds the cost of retaining a present customer, business entities are striving to build long-term relationships with existing customers (Anderson & Fornell, 1994; Spreng, Harrell, & Mackoy, 1995; Kotler, Bowen, & Makens, 2003). To maintain ongoing relationships and to facilitate future relationships with existing customers, it is imperative to satisfy them in exchanges (Oliver & Swan, 1989).

Despite persistent efforts to deliver exceptional service, error free service is an unrealistic goal in service delivery because of characteristics of service (Collie, Sparks, & Bradley, 2000; Goodwin & Ross, 1992; Hart, Heskett, & Sasser, 1990; Kelley & Davis, 1994; McCollough, 2000; Reichheld & Sasser, 1990). When service is not delivered as designed, service providers should take action to return customer satisfaction or at least to reduce negative effects toward the organizations through proper recovery efforts.

Although service recovery is recognized as a critical element in building relationships with customers, few theoretical or empirical studies of service failure and recovery have been conducted (Blodgett, Hill, & Tax, 1997; Hoffman, Kelley, & Rotalsky, 1995; Smith & Bolton, 1998; Smith, Bolton, & Wagner, 1999). In addition, limited research has examined the relationship between service recovery strategies and relationship quality variables (Brown, Cowles, & Tuten, 1996; Ruyter & Wetzels, 2000).

The purposes of this study were to propose and test a theoretical model consisting of antecedents and consequences of recovery satisfaction and to examine the roles of situational and attributional factors in the evaluation of service recovery efforts and consequent overall satisfaction and behavioral intentions.

This study employed a 2x2x2 between-groups factorial design. A failure scenario and 8 recovery scenarios were developed through an in-depth review of literature and from a class assignment report. The failure scenario was the same, and each recovery scenario was identical except for manipulations of the three dimensions of justice. The instrument was pre-tested to refine it. Modifications were made based on feedback from a pre-test, such as underlining a negative verb and deleting repetitive questions. A pilot-test was conducted with a convenience sample of 96 undergraduate students as a preliminary test of the final questionnaire to ensure the appropriateness of manipulations and measurements. The students were randomly assigned to one of the scenarios and completed the instrument in a class setting. Of the 96 students, taking a class in a hospitality program, 46 were female and 50 were male. The mean age of the participants was 20.89 years (SD = 2.086). Participants were studying over 20 different fields. Approximately 31% of the respondents were hospitality majors (30 respondents).

The researcher first contacted leaders of various groups to establish availability to distribute survey questionnaires. Upon getting approval, the researcher attended a scheduled meeting of the groups and explained the purpose of the study and survey completion. As an indication of appreciation, participants were informed that the researcher would donate one dollar to the charitable organization that they indicated on their returned questionnaires. Six hundreds copies of the research instrument along with

postage paid, self-addressed envelopes and questionnaires were distributed to the members at the end of the meetings. A total of 308 completed questionnaires (51% respondent rate) were returned from 15 different groups. About 13% of the questionnaire were collected on site. Of the 308 returned surveys, 286 cases were retained after data cleaning.

Major Findings

In study 1, 13 hypotheses were proposed. To test the hypothesized relationship, a conceptual model was developed and tested using structural equation modeling. The letter “S” indicates the hypothesis was supported and “NS” indicates the hypothesis was not supported.

H1: Distributive justice has a positive effect on recovery satisfaction. (S)

H2: Procedural justice has a positive effect on recovery satisfaction. (S)

H3: Interactional justice has a positive effect on recovery satisfaction. (S)

H4: Recovery satisfaction has a positive effect on overall satisfaction. (S)

H5: Recovery satisfaction has a positive effect on trust. (S)

H6: Recovery satisfaction has a positive effect on commitment. (NS)

H7: Trust has a positive effect on commitment. (S)

H8: Trust has a positive effect on overall satisfaction. (S)

H9: Commitment has a positive effect on overall satisfaction. (S)

H10: Trust has a positive effect on behavioral intentions. (NS)

H11: Commitment has a positive effect on behavioral intentions. (S)

H12: Overall satisfaction has a positive effect on behavioral intentions. (S)

H13. Recovery satisfaction has a positive effect on behavioral intentions. (NS)

The *t*-values between each dimension of justice and recovery satisfaction were all significant, demonstrating strong positive relationships ($\gamma_{11} = .26, t = 4.67$ for distributive justice; $\gamma_{12} = .53, t = 6.37$ for procedural justice; $\gamma_{13} = .20, t = 2.94$ for interactional justice). Thus, hypotheses 1 through 3 were supported. Recovery satisfaction had a significant positive effect on trust and overall satisfaction ($\beta_{21} = .78, t = 18.26$; $\beta_{41} = .12, t = 2.11$, respectively). Results supported hypotheses 4 and 5. Recovery satisfaction had no significant positive effects on commitment and behavioral intentions ($\beta_{31} = -.10, t = -2.17$; $\beta_{51} = -.07, t = -1.68$, respectively). Hypotheses 6 and 13 were not supported. Trust had positive effect on commitment and overall satisfaction ($\beta_{32} = .99, t = 19.96$; $\beta_{42} = 0.34, t = 3.09$, respectively), but did not have a positive effect on behavioral intentions ($\beta_{52} = -.12, t = -1.45$). Hypotheses 7 and 8 were supported, but not hypothesis 10. Significant *t*-values ($\beta_{43} = .44, t = 4.71$; $\beta_{53} = 0.46, t = 6.00$, respectively) showed that commitment had positive effects on overall satisfaction and behavioral intentions. Hypotheses 9 and 11 were supported. Overall satisfaction had a positive effect on behavioral intention ($\beta_{54} = .69, t = 13.78$). Hypothesis 12 was supported. Mediating roles of trust and commitment on overall satisfaction were confirmed.

In study 2, 16 hypotheses were proposed. To test the proposed hypotheses noted below, multivariate analysis of variance (MANOVA) and multivariate analysis of covariance (MANCOVA) tests were employed.

H14. Customers' overall satisfaction after experiencing a service recovery is higher than satisfaction before experiencing a service failure. (NS)

H15. Customers' revisit intentions after experiencing a service recovery are greater than initial customers' revisit intentions before experiencing a service failure. (NS)

H16. Customers' word-of-mouth intentions after experiencing a service recovery are greater than customers' w-o-m intentions before experiencing a service failure. (NS)

H17a: Customers' perceived criticality of service consumption will be negatively related to customers' perceived justice. (NS)

H17b: Customers' perceived criticality of service consumption will be negatively related to customers' service recovery satisfaction. (NS)

H18a: Customers' perceived magnitude of service failure will be negatively related to customers' perceived justice. (S)

H18b: Customers' perceived magnitude of service failure will be negatively related to customers' service recovery satisfaction. (S)

H19a: Customers' perception of controllability of causality will be negatively related to customers' overall satisfaction. (NS)

H19b: Customers' perception of controllability of causality will be negatively related to customers' w-o-m intentions. (NS)

H19c: Customers' perception of controllability of causality will be negatively related to customers' revisit intentions. (NS)

H20a: Customers' perceived stability will be negatively related to customers' overall satisfaction. (S)

H20b: Customers' perceived stability will be negatively related to customers' w-o-m intentions. (S)

H20c: Customers' perceived stability will be negatively related to customers' revisit intentions. (S)

H21a: Customers' perceived locus of causality will be negatively related to customers' overall satisfaction. (NS)

H21b: Customers' perceived locus of causality will be negatively related to customers' w-o-m intentions. (NS)

H21c: Customers' perceived locus of causality will be negatively related to customers' revisit intentions. (NS)

No recovery scenarios resulted in a significantly higher level of overall satisfaction, revisit intention, and w-o-m intention than those of pre-failure at the significance level of .05. Thus, hypotheses 14 through 16 were not supported. Overall, MANCOVA tests indicated that the multivariate main effect of magnitude was significant (Wilks' lambda = .919, $F_{12, 494} = 1.778$, $p = .049$), but the effect of criticality was not significant (Wilks' lambda = .955, $F_{12, 494} = .951$, $p = .496$). The univariate analysis of covariance (ANCOVA) test found that criticality of service consumption did not have main effects on perceived justice and recovery satisfaction ($F = 1.678$, $p = .127$ and $F = .853$, $p = .530$, respectively). Hypotheses 17a and 17b were not supported. The ANCOVA tests found significant main effects of magnitude on perceived justice and recovery satisfaction ($F = 2.812$, $p = .012$ and $F = 2.324$, $p = .033$, respectively). Hypotheses 18a and 18b were supported. Interaction effects of criticality and magnitude

were not significant for perceived justice and recovery satisfaction ($F = 1.148, p = .299$ and $F = .966, p = .506$, respectively).

Overall, MANCOVA tests indicated that the multivariate main effect of stability on dependent variables was significant (Wilks' lambda = .843, $F_{18, 595} = 2.058, p = .006$), but controllability and locus (Wilks' lambda = .847, $F_{18, 589} = 1.977, p = .009$), but controllability and locus (Wilks' lambda = .913, $F_{15, 575} = 1.289, p = .204$ and Wilks' lambda = .926, $F_{18, 589} = .904, p = .574$) were not. The univariate ANCOVA tests examined the significance of the main effects of stability on overall satisfaction, revisit intention, and w-o-m intention ($F = 3.609, p = .002, F = 3.770, p = .001$, and $F = 4.253, p = .000$, respectively). Hypotheses 20a, 20b, and 20c were supported. Controllability and locus had no significant main effects on dependent variables. Hypotheses 19a, 19b, 19c, 21a, 21b, and 21c were not supported. No two- and three-way interaction effects were significant.

Other Findings

Participants rated low recovery scenarios (any combination of 2 or more low dimensions) less realistic than recovery scenarios with 2 or more high dimensions. The results may imply that customers' past experiences were not as bad as stated in low recovery scenarios. Description of the high recovery scenarios (any combination of two or more high dimensions) were close to their recovery expectations.

One of the objectives of recovery efforts is to mitigate the negative effect of service failure. Therefore, it is also valuable for research to determine which scenarios' overall satisfaction and behavioral intentions after recovery efforts can have non-significant difference from initial satisfaction and behavioral intentions. In most the

scenarios, there was significantly lower recovery satisfaction and behavioral intentions than reported for pre-failure. Post-recovery revisit intention was significantly lower than pre-failure revisit intention at the significance level of .05 only in scenario LLH.

This study confirmed the conventional agreement of attribution of causality (Folkes & Kotsos, 1986; Weiner, 1980); buyers are more likely to perceive that the failure (overcooked steak) is seller related and controllable (M=6.06, M=6.15, on 7-point Likert Scales respectively).

Conclusions and Implications

This study confirmed a three-dimensional view of the justice theory. The three dimensions of justice had positive effects on recovery satisfaction and accounted for 89% of variance in recovery satisfaction. The finding indicates that customers' evaluations of service recovery are based on the perceived fairness of the three dimensions of justice.

Most previous studies observed significant main effects of distributive and interactional justice (e.g., Blodgett et al., 1995; Goodwin & Ross, 1992; Hoffman et al., 1995; Tax et al., 1998). However, procedural justice, measured as timeliness, often was least significant or did not have a significant main effect on recovery evaluation (e.g., Blodgett et al., 1997; Mattila, 2001;). Procedural justice in this study was manipulated in terms of timeliness and flexibility in recovery process (whether employees are allowed to make decisions on recovery efforts or not). The procedural justice had a significant main effect on recovery satisfaction, and it had the most significant effect on recovery satisfaction followed by distributive justice. The results indicate that empowering frontline employees to recover service failures conveys responsiveness and fair policy

and practice to handle service problems. Management should give frontline employees authority to recover service failures. They are the ones who may know customers most intimately, can tell what the problem was initially, and can recover the failure most effectively.

This study found that recovery satisfaction did not have a positive effect on behavioral intentions. This result may indicate that recovery satisfaction is an encounter evaluation of a transaction (Brown et al., 1996; Oliver, 1997), and customers' attitudinal and behavioral evaluations are additive (Brown et al., 1996; Maxham & Netemeyer, 2002; Oliver, 1997). Consequently, customers' initial (pre-failure) overall satisfaction and behavioral intentions along with recovery satisfaction may play a key role in determining their post-recovery overall satisfaction and behavioral intentions. Therefore, recovery satisfaction should not be considered as a direct estimator of post-recovery overall attitudinal and behavioral outcomes.

This study confirmed that successful service recovery reinforces customers' trust. Further, the recovered customers' confidence in dependability and reliability – trust - toward service providers had a positive effect on intention to maintain relationship - commitment (Morgan & Hunt, 1994; Sirdeshmukh, Singh, & Sabol, 2002; Tax et al., 1998). In turn, customers' commitment provides a strong base for overall satisfaction and results in increased produce/service use and enhanced willingness to spread positive word of mouth (Kelly & Davis, 1994; Bowen & Shoemaker, 1998). These findings emphasize that service recovery efforts should be viewed not only as a strategy to recover customers' immediate satisfaction but also as a relationship tool to provide customers confidence that an ongoing relationship is beneficial to them.

To build long-term relationships with customers, service providers should do their best to deliver service as expected. Since no service is perfect, service providers have to strive to recover service failure so as not to harm customers' confidence in reliability toward service providers. Although a service failure may affect service quality and customer satisfaction initially, effective complaint handling through service recovery may reinforce the customer's perception of the reliability of the service provider.

Because customers' expectations on service delivery vary, proactive service recovery may limit the service providers' ability to identify all service failures. Most dissatisfied customers will exit and engage in negative w-of-m behavior. Consequently, it is important that service providers encourage customers to seek redress when they encounter an experience that affects their satisfaction so the service provider will have opportunities to remedy negative attitude of dissatisfied customers (Blodgett et al., 1995). Ensuring customers' beliefs that the service provider is willing to remedy the problem will maximize the opportunities of successful reactive service recovery (Blodgett et al., 1995).

This study found that customer perception of magnitude of service failure affected both customers' perceived justice and recovery satisfaction. To restore the customers' perceived losses in serious failure situations, the service provider needs to exert extra efforts to recover from service failures. Similar to previous studies (Blodgett, Granbois, & Walter, 1993; Blodgett et al., 1995), this study found that customers' stability causation had significant negative effects on satisfaction and behavioral intentions. These findings indicate that it is critical for service providers to reduce systematic occurrence so that customers will not develop stability perception.

As suggested by Sundaram et al. (1997), standardized service recovery may fail to turn a negative experience into a positive one or mitigate negative evaluation. To respond more effectively toward customers' complaints, service providers should develop various recovery practices, take into consideration important situational factors, and train employees accordingly. Training employees with situation approach is worthwhile to respond to customers' complaints properly.

Suggestions for Future Research

First, in this study, customers were given an outcome failure (overcooked steak) rather than a process failure. The effectiveness of recovery may depend on the type of service failure customers experienced. Previous studies found that customers who experienced a process failure were less satisfied after service recovery than those who experienced an outcome failure (Smith et al., 1999). In addition, Smith et al. (1999) found that the relative effectiveness of service recovery was dependent upon the type of service failure. The findings are meaningful to hospitality industry since failures in a symbolic exchange are as critical as or more critical than in a utilitarian exchange (Smith et al., 1999). Future study should include a process failure to assess how customers evaluate recovery effort and which dimension of justice is more effective in recovery efforts.

Second, this study tested a service recovery model that incorporates the antecedents and consequences of service recovery in the restaurant setting. Service recovery evaluation is context specific (Hoffman & Kelley, 2000; Mattila, 2001). Therefore, replication of studies in multi-industry settings is necessary to understand the

effect of service recovery on relationship quality dimensions in different types of services. Similarly, cross-cultural studies are recommended to validate the generalizability of the study findings across national and/or cultural backgrounds (Mattila, 1999; Mueller, Palmer, & McMullan, 2003; Palmer, Beggs, & Keown-McMullan, 2000; Swanson & Kelley, 2001).

Third, consumers' recovery expectations play a key role in the evaluation of service recovery. Researchers reported contradictory opinions about the recovery expectation. For example, Kelley and Davis (1994) argued that recovery expectation tends to be high for committed customers, particularly loyal customers, and, consequently, it is hard to achieve a favorable evaluation on recovery efforts. In contrast, Hess, Ganesan, and Klein (2003) found that customers who hold a strong relationship continuity had lower service recovery expectations after experiencing service failure. Further study is needed to clarify how customers develop recovery expectation over time.

Finally, many of previous studies in service recovery focused on a single service failure and service recovery. Customers' responses to multiple failures and evaluations of service recovery are limited, thus additional studies should explore how customers' attitudinal and behavioral outcomes change overtime.

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APPENDIXES

Appendix A **Failure Scenario**

Failure Scenario

On Friday evening, you and your family went out for dinner at *the restaurant you named* to celebrate one of your family member's graduation from high school or college. After waiting about 15 minutes, a hostess seated your group. Shortly after, a waiter took your order. You ordered a steak and requested it to be cooked "medium." When your meal was served, you noticed that your steak was "overcooked." You stopped eating and informed your server that your steak was overcooked.

Appendix B
Recovery Scenarios

Recovery Scenarios

Low IJ – Low PJ – Low DJ

After you explained the problem to the server, he simply apologized for the problem. He said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you but did not apologize for the problem. The manager asked you what the problem was and you had to re-explain the problem. She did not provide an explanation for the problem. She informed you that another steak would be served. No other compensation was offered. She did not ask if there was anything else that she could do to serve you better.

Low IJ – Low PJ – High DJ

After you explained the problem to the server, he simply apologized for the problem. He said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you but did not apologize for the problem. The manager asked you what the problem was and you had to re-explain the problem. She did not provide an explanation for the problem. She informed you that another steak would be served and you would not be charged for it. She did not ask if there was anything else that she could do to serve you better.

Low IJ – High PJ – Low DJ

After you explained the problem to the server, he simply apologized for the problem. He said that he could take care of the problem and removed the steak. After 2-3 minutes, the manager approached you but did not apologize for the problem. She said she was informed about the problem from the server and you didn't have to re-explain the problem. She did not provide an explanation for the problem. She informed you that another steak would be served. No other compensation was offered. She did not ask if there was anything else that she could do to serve you better.

Low IJ – High PJ – High DJ

After you explained the problem to the server, he simply apologized for the problem. He said that he could take care of the problem and removed the steak. After 2-3 minutes, the manager approached you but did not apologize for the problem. She said she was informed about the problem from the server and you didn't have to re-explain the problem. She did not provide an explanation for the problem. She informed you that another steak would be served and you would not be charged for it. She did not ask if there was anything else that she could do to serve you better.

High IJ – Low PJ – Low DJ

After you explained the problem to the server, he sincerely apologized for the problem. He said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you and apologized for the problem. The manager asked you what the problem was and you had to re-explain the problem. She also explained why the problem happened. She informed you that another steak would be served. No other compensation was offered. She asked if there was anything else that she could do to serve you better.

High IJ – Low PJ – High DJ

After you explained the problem to the server, he sincerely apologized for the problem. He said that he could not do anything about the problem and would get a manager to resolve it. After 10 minutes, the manager approached you and apologized for the problem. The manager asked you what the problem was and you had to re-explain the problem. She explained why the problem happened. She informed you that another steak would be served and you would not be charged for it. She also asked if there was anything else that she could do to serve you better.

High IJ – High PJ – Low DJ

After you explained the problem to the server, he sincerely apologized for the problem. He said that he could take care of the problem and removed the steak. After 2-3 minutes, the manager approached you and apologized for the problem. She said she was informed about the problem from the server and you didn't have to re-explain the problem. She also explained why the problem happened. She informed you that another steak would be served. No other compensation was offered. She asked if there was anything else that she could do to serve you better.

High IJ – High PJ – High DJ

After you explained the problem to the server, he sincerely apologized for the problem. He said that he could take care of the problem and removed the steak. After 2-3 minutes, the manager approached you and apologized for the problem. She said she was informed about the problem from the server and you didn't have to re-explain the problem. She also explained why the problem happened. She informed you that another steak would be served and you would not be charged for it. She also asked if there was anything else that she could do to serve you better.

Appendix C
Survey Questionnaire

SECTION I: DINING EXPERIENCES AT CASUAL RESTAURANTS AND SERVICE EVALUATION

INSTRUCTION: This section is about your dining experiences at casual restaurants. Though some of the questions may seem similar, you need to respond to all of them. There are no “right” or “wrong” answers. Your opinions are valuable for the study.

Please provide the name of a casual restaurant that serves steaks that you have visited recently.

Name of the restaurant: _____

The following statements are related to your satisfaction/dissatisfaction level with *the restaurant you named*. Based on all your previous experiences with this restaurant, please rate your level of overall satisfaction/dissatisfaction toward this restaurant.

	<u>Strongly disagree</u>						<u>Strongly agree</u>
1. I am satisfied with my overall experience with the restaurant named.....	1	2	3	4	5	6	7
2. As a whole, I am happy with this restaurant.....	1	2	3	4	5	6	7
3. Overall, I am pleased with the service experience with this restaurant.....	1	2	3	4	5	6	7

The following statements are related to your intention to revisit this restaurant and to recommend this restaurant to your acquaintances. Please indicate the level of agreement with each statement.

	<u>Strongly disagree</u>						<u>Strongly agree</u>
4. I will dine out at this restaurant in the future.....	1	2	3	4	5	6	7
5. There is likelihood that I would eat at this restaurant in the future.....	1	2	3	4	5	6	7
6. I <i>will not</i> eat at this restaurant in the near future.....	1	2	3	4	5	6	7
7. I will spread positive word-of-mouth about this restaurant.....	1	2	3	4	5	6	7
8. I will recommend this restaurant to my friends.....	1	2	3	4	5	6	7
9. If my friends or relatives were looking for a restaurant, I would tell them to try at this restaurant..	1	2	3	4	5	6	7

The following statements are related to your attitude toward complaining. Please circle the number that most appropriately describes your attitude toward complaining.

	<u>Strongly disagree</u>			<u>Neither</u>			<u>Strongly agree</u>
1. I am usually reluctant to complain to restaurant employees/managers regardless of how poor the service is.....	1	2	3	4	5	6	7
2. In general, I prefer to complain to a manager than to an employee.....	1	2	3	4	5	6	7

SECTION II: SERVICE FAILURE AND RECOVERY EXPERIENCE

INSTRUCTION: In this section you are given a service failure scenario and a service recovery scenario. Please read scenarios thoroughly and provide your evaluations of the episodes. As you read the story, please put yourself into the situation and imagine that you are actually experiencing the service failure.

Service Failure Scenario

On Friday evening, you and your family went out for dinner at *the restaurant you named* to celebrate one of your family member’s graduation from high school or college. After waiting about 15 minutes, a hostess seated your group. Shortly after, a waiter took your order. You ordered a steak and requested it to be cooked “medium.” When your meal was served, you noticed that your steak was “overcooked.” You stopped eating and informed your server that your steak was overcooked.

This section deals with the service failure that is described in the scenario. Please circle the number that most closely corresponds to your opinion about the problem.

	<u>Strongly disagree</u>			<u>Neither</u>			<u>Strongly agree</u>
1. The problem is preventable by the restaurant.....	1	2	3	4	5	6	7
2. The problem is controllable by the restaurant.....	1	2	3	4	5	6	7
3. Such incidents happen frequently at this restaurant.....	1	2	3	4	5	6	7
4. A similar problem could occur at this restaurant.....	1	2	3	4	5	6	7
5. The restaurant is responsible for the problem(s).....	1	2	3	4	5	6	7
6. The dining experience to celebrate the graduation is very important.....	1	2	3	4	5	6	7
7. If this incident really happened to me, I would consider the problem to be a major problem.....	1	2	3	4	5	6	7

Service Recovery Scenario

After you explained the problem to the server, he sincerely apologized for the problem. He said that he could take care of the problem and removed the steak. After 2-3 minutes, the manager approached you and apologized for the problem. She said she was informed about the problem from the server and you didn't have to re-explain the problem. She also explained why the problem happened. She informed you that another steak would be served and you would not be charged for it. She also asked if there was anything else that she could do to serve you better. (HHH)

The following statements are about the scenarios described. Please circle the number that most closely corresponds to how you think about the scenarios.

1. I think the situations given in the scenario are:
- | | | | | | | |
|-------------------------|---|---|----------------|---|---|-----------------------|
| Very unrealistic | | | Neither | | | Very realistic |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
2. I think that a similar problem would occur to someone in real life.
- | | | | | | | |
|----------------------|---|---|----------------|---|---|--------------------|
| Very unlikely | | | Neither | | | Very likely |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

The following statements are related to your thoughts and attitude about the recovery efforts of the restaurant described in the scenario. Please indicate your level of agreement with the following statements. Once again imagine that you are in the situation.

- | | Strongly disagree | Neither | Strongly agree |
|--|--------------------------|----------------|-----------------------|
| 1. Although this event caused me a problem, the restaurant's efforts to resolve it resulted in a very positive outcome for me..... | 1 | 2 | 3 |
| 2. Given the inconvenience caused by the problem, the outcome I received from the restaurant was fair. | 1 | 2 | 3 |
| 3. The service recovery outcome that I received in response to the problem was more than fair..... | 1 | 2 | 3 |
| 4. Given the circumstances, I feel that the restaurant offered adequate compensation..... | 1 | 2 | 3 |
| 5. Despite the hassle caused by the problem, the restaurant responded quickly..... | 1 | 2 | 3 |
| 6. I feel the restaurant responded in a timely fashion to the problem..... | 1 | 2 | 3 |
| 7. I believe the restaurant has fair policies and practices to handle problems..... | 1 | 2 | 3 |

	Strongly disagree			Neither			Strongly agree
8. With respect to its policies and procedures, the employee(s) handled the problem in a fair manner....	1	2	3	4	5	6	7
9. In dealing with the problem, the restaurant personnel treated me in a courteous manner.....	1	2	3	4	5	6	7
10. During effort to resolve the problem, the restaurant employee(s) seemed to care about the customers...	1	2	3	4	5	6	7
11. The restaurant employee(s) were appropriately concerned about my problem.....	1	2	3	4	5	6	7
12. While attempting to solve the problem, the restaurant personnel considered my views.....	1	2	3	4	5	6	7

The following statements are related to your service evaluation. Please rate your degree of satisfaction/dissatisfaction level in experiencing this particular incident.

	Strongly disagree			Neither			Strongly agree
13. In my opinion, the restaurant provided a satisfactory resolution to the problem on this particular occasion.....	1	2	3	4	5	6	7
14. I am satisfied with the restaurant's handling of this particular problem.....	1	2	3	4	5	6	7
15. I am satisfied with this particular dining experience.....	1	2	3	4	5	6	7

The following statements are about your attitude toward the restaurant. Please indicate your level of agreement with the following statements.

Experiencing the situation in this restaurant,	Strongly disagree			Neither			Strongly agree
1. I think the restaurant can be trusted.....	1	2	3	4	5	6	7
2. I have confidence in the restaurant.....	1	2	3	4	5	6	7
3. I think the restaurant has high integrity.....	1	2	3	4	5	6	7
4. I think the restaurant is reliable.....	1	2	3	4	5	6	7
5. I am very committed to the restaurant.....	1	2	3	4	5	6	7
6. I intend to maintain relationship definitely.....	1	2	3	4	5	6	7
7. I think the restaurant deserves my effort to maintain relationship.....	1	2	3	4	5	6	7
8. I can develop warm feeling toward the restaurant.	1	2	3	4	5	6	7

Based on all your previous experiences with this restaurant, including the service problem and handling of events described in the scenarios, please rate your level of overall satisfaction/dissatisfaction toward this restaurant.

	Strongly disagree	Neither				Strongly agree	
1. I am satisfied with my overall experience with the restaurant named.....	1	2	3	4	5	6	7
2. As a whole, I am happy with this restaurant.....	1	2	3	4	5	6	7
3. Overall, I am pleased with the service experience with this restaurant.....	1	2	3	4	5	6	7

The following statements are related to your intention to revisit this restaurant and to recommend this restaurant to your acquaintance. Based on all your previous experiences with this restaurant, including the service problem and handling of events described in the scenarios, please indicate the level agreement with each statement.

	Strongly disagree	Neither				Strongly agree	
4. I will dine out at this restaurant in the future	1	2	3	4	5	6	7
5. There is likelihood that I would eat at this restaurant in the future.....	1	2	3	4	5	6	7
6. I <u>will not</u> eat at this restaurant in the near future.....	1	2	3	4	5	6	7
7. I will spread positive word-of-mouth about this restaurant.....	1	2	3	4	5	6	7
8. I will recommend this restaurant to my friends.....	1	2	3	4	5	6	7
9. If my friends or relatives were looking for a restaurant, I would tell them to try at this restaurant.....	1	2	3	4	5	6	7

SECTION III: INFORMATION ABOUT YOURSELF

INSTRUCTION: Please place a mark in the category that describes you best for the following questions. Your responses are for research purpose only.

1. What is your gender? Male Female
2. What is your age? _____
3. What is your highest level of education you have completed?
- Less than high school degree High school degree
- Some college College graduate
- Graduate degree
4. Which categories describe your total household income level, before taxes?
- Less than \$20,000 \$20,000 - \$39,999
- \$40,000 - \$59,999 \$60,000 - \$79,999
- \$80,000 - \$99,999 Over \$100,000
5. Your racial/ethnic background is:
- African-American Hispanic
- Asian Other, please specify
- Caucasian/White _____
- Multi – Racial

Please specify the organization that you would like to us to make our donation.

**Please make sure that you answered all the questions.
Please include the questionnaire in the self-addressed envelope and
return it within two weeks.**

Thank you for your participation in this study.

Appendix D

Cover Letter for Questionnaire

**Restaurant Customers' Evaluations of Service Failures and
Recovery Efforts**

Date:

Dear Participants,

Have you ever experienced poor service in a restaurant and were upset about the way an employee(s) responded to your complaint? We are asking for your participation in a research study evaluating customer satisfaction/dissatisfaction after experiencing a service failure and service recovery efforts. The results of the study will help restaurant operators realize the importance of satisfying customers and develop better procedures to effectively handle customer complaints.

Your help is important for the success of this study. Please take 15 minutes to complete this questionnaire. Your participation is strictly voluntary. Return of the completed questionnaire in the self-addressed envelope indicates your willingness to participate. You must be at least 18 years of age to participate. All responses will remain confidential and anonymous. No individual responses will be shared. Only aggregate responses will be reported.

We will donate one dollar to the charitable organization that you indicate for your returned questionnaire.

We truthfully appreciate your contribution to the success of this study.

Sincerely,

Chihyung Ok, M.S.
Ph.D. Candidate
Dept. of HRIMD

Ki-Joon Back, Ph.D.
Assistant Professor
Dept. of HRIMD

Carol W. Shanklin, Ph.D.
Professor, Dept. of HRIMD
Assistant Dean of Graduate School

For additional information, please feel free to contact Chihyung Ok at (785) 532-2213, Dr. Ki-Joon Back at (785) 532-2209, or Dr. Carol W. Shanklin at (785) 532-2206. For questions about your rights as a participant or the manner in which the study is conducted, you may contact Dr. Rick Scheidt, Chair of the Committee on Research Involving Human Subjects, (785) 532-3224, 1 Fairchild Hall, Kansas State University, Manhattan, KS 66506.