

**ATTRIBUTION, EXPECTATION, AND RECOVERY: AN  
INTEGRATED MODEL OF SERVICE FAILURE AND RECOVERY**

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## **CHAPTER 1**

### **INTRODUCTION**

#### **Research Context**

Services providers often face the decision of whether or not to recover a failure encountered by customers and if so, what recovery strategies should be used. From a customer's point of view, a failure refers to any situation in which something has gone wrong, irrespective of responsibility (Johnston 1995 a). It has been recognized that failures are inevitable due to the unique characteristics of services (i.e., simultaneous production and consumption). Failures occur across time, situations, service providers, and industries. Failures are exhibited as an unsatisfying outcome of a service delivery or during a service delivery process (Smith et al. 1998). It can be caused by consumers, organizations, or third party/environmental situations. The consequences of such failures are customer dissatisfaction that deteriorates companies' profitability (Anderson et al. 1994), customer loyalty (Fornell et al. 1996; Zeithaml et al. 1996), and customer retention (Bolton 1998; Bolton and Lemon 1999; Mittal and Kamakura 2001).

Since failures are unavoidable, it is necessary to recover these failures to keep dissatisfied customers from switching to competitors (Blodgett et al. 1997). Service recoveries refer to actions taken in response to a failure (Gronroos 1988). Recovery actions need to take place even when the service provider doing the recovering is not necessarily responsible for the failure (Heskett et al. 1990). A successful recovery can turn a dissatisfied customer to a satisfied one (Bitner et al. 1990; McCollough and Bharadwaj 1992; Smith et al. 1999). As a matter of fact, customers who experience a successful service recovery can be more satisfied than customers

who do not encounter a failure (McCollough and Bharadwaj 1992). Recovering failures also provides an opportunity to delight customers and creates a high level of customer satisfaction (Johnston 1995 a).

### **Background of This Study**

Due to the importance of failure and recovery in customer satisfaction, marketing researchers have devoted considerable effort to gain better understanding of consumer reactions to failures and consequences of different recovery strategies. In particular, there are two streams of research in this area each stream of research focusing on different phases during a service encounter.

The first stream of research focuses on the failure phase in a service encounter. This stream of research introduces attribution theory to the product/service failure context and attempts to explain consumer reactions to product/service failure (Bitner 1990; Folkes 1984; Folkes et al. 1987; Folkes and Kotsos 1986; Hess et al. 2003). In general, there is a discrepancy between a buyer's and seller's explanation for product failure (Folkes and Kotsos 1986). Sellers are more likely to attribute a product failure to buyers while buyers are more likely to blame sellers for a product failure. However, it is consumer attributions determine their reactions to product/service failure (Folkes 1984; Folkes et al. 1987; Bitner 1990; Hess et al. 2003). Consumer perceived causality of a failure, stability of a failure, and controllability of a failure influence their intentions to complain, their satisfaction, emotional reaction to the firm, recovery expectations, and behavioral intentions to the firm (Bitner 1990; Folkes 1984; Folkes et al. 1987.; Hess et al. 2003). Therefore, understanding consumer attributions of failures helps companies make an effective recovery decision.

Another stream of research focuses on the effect of recoveries on customer satisfaction. This stream of research introduces the concept of perceived justice into the model of customer satisfaction with failure/recovery encounters to help understand how recoveries influence customer satisfaction (Blodgett et al. 1997; Goodwin and Ross 1992; Smith et al. 1999; Tax et al. 1998). These studies identify three types of perceived justice influencing effects of recoveries on customer satisfaction. The three types of perceived justice reflect consumers' fairness judgments toward different aspects of the exchange relationship. Distributive justice, procedural justice, and interactional justice reflect the outcome, the procedure reaching the outcome, and the interaction during the procedure of service encounters respectively. The three types of perceived justice are determinants of service encounter satisfaction. Different recovery attributes influence service encounter satisfaction via different types of perceived justice. The introduction of perceived justice in studies of service failure and recovery deepens our understanding of consumer reactions to recovery and service encounter satisfaction.

While attribution theory and justice theory focus on different stages of a service encounter, the two theories have not integrated together to model the full spectrum of service encounters. The reason is that recovery studies are primarily interested in failures caused by firms while attribution theory focuses on that consumer perceived failures caused either by firms or by themselves or others. Therefore, failures defined by attribution theory are from consumers' point of view. It is more general and includes failures caused not only by firms but also by consumers or environmental situations. With different attributions of a failure, consumers may have different levels of recovery expectations.

Most current recovery studies focus on a proportion of service failures (failures caused by firms). Therefore, these studies have not addressed the issue of whether firms should recover failures for which they are not responsible. In addition, failure to recognize consumer needs and

wants after a failure makes recovery strategies ineffective. Firms may either over-reward or under-reward customers who encounter a failure. To maximize the benefit for both firms and consumers, it is necessary to integrate the two streams of literature together to model customer satisfaction with failure/recovery encounters, which means that failures and recoveries should be viewed as one spectrum of a service encounter.

To integrate the two streams of research, this study introduces recovery expectations into the model to link the failure context to recovery strategies. Expectation is an important component of the expectancy-disconfirmation paradigm. The expectancy-disconfirmation paradigm has been used extensively in consumer satisfaction studies (Bearden and Teel 1983; Oliver 1980, 1981, 1989, 1993; Oliver and Bearden 1985; Swan and Trawick 1981). According to the expectation-disconfirmation paradigm, customer satisfaction is determined by the comparison between pre-consumption expectations and perceived product performance.

The debate lies in the conceptual definition of expectations. Various types of expectations have been proposed by previous studies. The most prevalent one is predictive expectations. Predictive expectations are suitable when consumers already have experience with a service provider. Based on prior experience with a particular service provider, customers have expectations of what the service provider can do. In addition, since predictive expectations exist in the mind of the consumer and they cannot be articulated by consumer clearly, predictive expectations affect consumer satisfaction indirectly via disconfirmation (Oliver 1980).

Many researchers propose normative expectations as a standard for the comparison (fish and Coney 1982; Olivier and DeSarbo 1988; Oliver and Swan 1989 b). Normative expectations indicate that consumers evaluate the exchange relationship based on norms such as equity. Since the normative standard cannot be captured by predictive expectations, Oliver and Swan (1989a, 1989b) suggest that the effect of equity as a normative standard on customer satisfaction should

be considered separately and complementarily in addition to disconfirmation.

In service encounters involving failure and recovery, both predictive expectations and normative expectations play a role in the final service encounter satisfaction. However, the two types of expectations may play a different role in the different phases of failure/recovery encounters. Predictive expectations play a role in the disconfirmation of the initial service performance and the disconfirmation of the service recovery. However, justice-based normative expectations should have a direct impact on service encounter satisfaction.

While recovery expectations depend on consumer evaluations of perceived justice, the justice theory suggests that consumer attributions of failures are an antecedent of perceived justice (Folger and Cropanzano 1998, 2001; Utne and Kidd 1980). Attribution theory also suggests that consumers are more likely to engage in spontaneous attributional search after failures (Weiner 1980, 2000; Wong and Weiner 1981). In addition, results from previous attribution studies in marketing implicitly suggest that consumer attributions influence their justice based recovery expectations from the firm (Belk and painter 1983; Belk et al. 1981; Folkes 1984).

### **Purpose of This Study**

Given the fact that the general failure scenario has not been modeled in customer satisfaction with service encounters, this study aims to build a general failure model for customer satisfaction (see Figure 1.1). This model specifies the relations between attribution and expectation. It takes all possible causal agents into account. In a service encounter involving failure and recovery, three possible causal agents are considered: firm, consumer, and environmental situation. The consumer attribution of a failure is the primary driver of

expectations from that particular causal agent. The expectation in the general failure model is governed by different norms for different causal agents.

The second purpose of this study is to empirically test the path between attribution and expectation anchored on the firm. In addition, this study also considers consumer reaction to recovery attributes provided by firms. The link between these is important because it provides some insights for managers on how to make a recovery decision. In particular, the expectation anchored on the firm is governed by perceived justice. The effect of recovery is also influenced by the perceived justice.

When only examining the relations among attribution, expectation anchored on the firm, and reactions to recovery, the following questions will be answered:

1. How do consumers' causal attributions affect their service recovery expectations?
2. How do consumers' causal attributions affect their perceived justice of a service encounter involving failure and recovery?
3. How do recovery expectations influence the effect of recovery attributes on perceived justice and service encounter satisfaction?
4. How does a recovery strategy change consumer-perceived justice?
5. How do consumer attributions interact with recovery attributes on customer satisfaction?
6. Which combination of recovery attributes forms the most effective recovery strategy in terms of enhancing customer satisfaction?

### **Importance of This Study**

This study is different from previous studies in that it integrated attribution theory,



expectancy-disconfirmation paradigm, and justice theory into a model of customer satisfaction with failure and recovery encounters. This study emphasized the role of consumer attribution of failures in the effect of recovery strategies while previous recovery studies only focused on effect of recovery strategies per se and neglected to examine how failure context affect the effectiveness of recovery strategies. The study conducted by Smith et al. (1999) is one exception that did consider how the types of failures and magnitude of failures interacted with recovery strategies. However, the failure context was defined by researchers rather than consumers themselves. Therefore, they limited failure types to firm-related failures and failed to recognize the influence of consumer attribution of failures on their recovery expectations, their reactions to failures, and the effectiveness of recovery strategies.

Secondly, the study emphasized the role of normative expectations in the formation of customer satisfaction. The recovery expectations were conceptualized based on the perceived justice. In addition, the relationship between attribution, recovery expectations, and perceived justice toward service encounters is empirically tested.

Third, this study is different from previous studies in that it examined the effect of recovery attributes on the change in perceived justice to gain a better understanding of the effect of recoveries on customer satisfaction.

This study is important because it contributes to the literature from the following aspects.

1. This study integrated attribution theory and justice theory together to help us understand customer satisfaction with service encounters involving failure and recovery.
2. This study modeled failures based on consumer attributions of failures to capture the effect of consumers' individual differences in their reactions to failures and recoveries.
3. This study viewed failures and recoveries as a full spectrum of a service encounter with different phases. Perceived justice was evaluated based on the entire process of service

encounters rather than the recovery phase alone.

4. This study provided empirical evidence for practitioners to explain which recovery attribute or combination of recovery attributes was most effective in restoring customer satisfaction after a failure.

### **Organization of This Study**

This dissertation is organized as follows. The first chapter provides the background of this study, identifies the research gap in the extant marketing literature, and lists research questions that will be examined in this study. Importance of and contributions to this study are provided in Chapter 1.

Chapter 2 provides a review of relevant theories used in this study. These theories included the expectancy-disconfirmation paradigm, attribution theory, and justice theory.

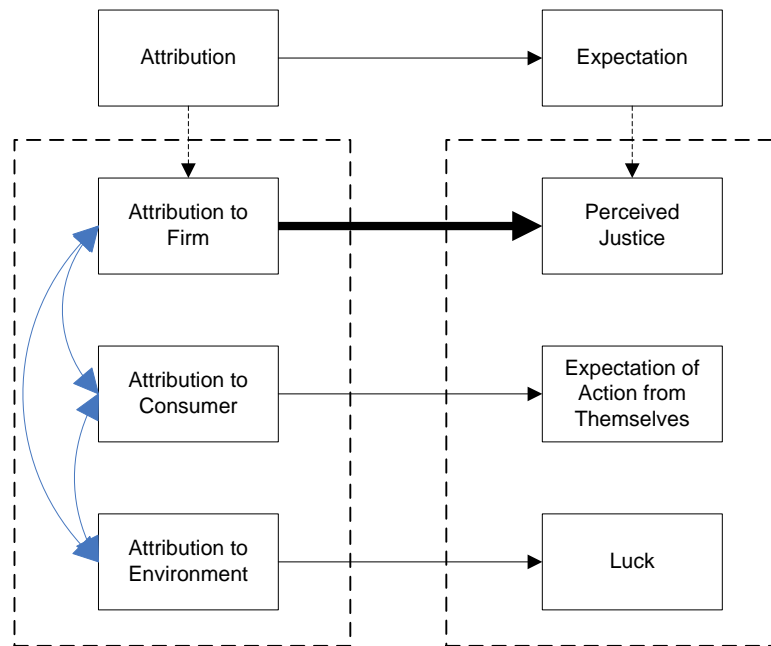
Chapter 3 develops hypotheses for this study.

Chapter 4 provides a detailed description of the research methodology. Specifically, this chapter explains the experimental design, questionnaire development, sample description, data collection method, manipulation of experimental variables, and measures of variables. Reliability and validity of measures are also examined in this chapter.

Chapter 5 describes data analysis procedures and presented model estimations and hypotheses testing results.

Finally, Chapter 6 provides a discussion of the results and outlines the contributions, managerial implications, limitations of this study, and directions for future research.

Figure 1.1 General Failure Model



## **CHAPTER 2**

### **LITERATURE REVIEW AND THEORETICAL BACKGROUND**

#### **Disconfirmation**

##### **Expectations in Expectancy-Disconfirmation Paradigm**

The expectancy-disconfirmation paradigm is probably the most recognized model in consumer behavior literature for understanding customer satisfaction/dissatisfaction (Bearden and Teel 1983; Oliver 1980, 1981, 1993; Oliver and Bearden 1985; Swan and Trawick 1981). The expectancy-disconfirmation paradigm states that consumers compare their prior expectations to post-performance perceptions (Bearden and Teel 1983; Churchill and Surprenant 1982; Oliver 1980). Post-performance perception is positively confirmed if it exceeds expectations; post-performance perception is confirmed if it meets expectations; and post-performance perception is disconfirmed if it falls below expectations. The result of disconfirmation determines consumer satisfaction. Negative disconfirmation results in consumer dissatisfaction and positive confirmation results in consumer satisfaction. Even though there are mixed supports for the disconfirmation model, no study has shown convincing evidence to reject disconfirmation as a general model of customer satisfaction/dissatisfaction. It is generally agreed that disconfirmation is an antecedent of consumer satisfaction/dissatisfaction.

The disagreement lies in the conceptualization of expectations in the expectancy-disconfirmation paradigm. Various types of expectations exist. The most prevalent type is predictive expectations proposed in the original expectancy-disconfirmation paradigm (Oliver 1981). Predictive expectations refer to consumer-defined probabilities of the occurrence of positive and negative events if a consumer engages in certain behaviors (Oliver 1981). Miller

(1977) defined the predictive expectations as an objective calculation of probability of performance and contrasted it with other types of expectations such as ideal expectations (what “can be”), minimum tolerable expectations (what “must be”), and deserved expectations (what “should be”). Swan and Trawick (1980) and Prakash (1984) used predictive expectations as an estimate of anticipated performance level. Zeithaml et al. (1993) termed predictive expectations as adequate expectations.

What should be noted is that predictive expectations assume that the customer has had experience with firms. The expectations are in the mind of the consumer and do not affect satisfaction directly. Predictive expectations affect customer satisfaction indirectly via disconfirmation (Oliver 1980). Predictive expectations were adopted by many customer satisfaction studies via the disconfirmation.

Many marketing researchers argue that alternative standards exist because consumers hold different levels of expectations (Miller 1977; Olsen and Dover 1976). An alternative expectation is the normative expectation. For example, many studies recognized desired expectations as a normative standard of comparison. Desired expectations refer to the level at which customers want products to perform or what the product should be (Miller 1977; Swan and Trawick 1980). Spreng and Olshavsky (1993) argued that desires were the attributes and benefits that consumers believed would lead to higher-level values that comprised their life goals and guide behaviors. Prakash (1984) viewed desired expectations as normative expectations, which indicated the level of performance to make consumers completely satisfied. Zeithaml et al (1993) also adopted “desired expectations” in their conceptualization of the services consumers expect and defined the desired service as the level of service customers hoped to receive. They also pointed out that a desired service was a blend of what customers believe “can be” and “should be.” The distance between desired expectations and adequate expectations indicates the degree to

which customers recognize and are willing to accept heterogeneity. The distance is conceptualized as “zone of tolerance” (Zeithaml et al. 1993).

Similar to desired expectations, equity also has been studied as one type of normative standard of comparison by many marketing researchers (Fish and Coney 1982; Oliver and DeSarbo 1988; Oliver and Swan 1989 b). Equity as a norm governs the exchange relations between consumers and firms. The norm of equity suggests that consumers evaluate their ratio and a firm’s ratio of input and outcome and reach a conclusion as to whether the exchange is fair. The effect of equity on customer satisfaction has been supported by many empirical studies (Fisk and Young 1984; Oliver and Swan 1989 a, b; Swan et al. 1985).

Different from predictive expectations that affect customer satisfaction indirectly via disconfirmation, the equity based normative standard of comparison affects customer satisfaction directly. Many authors demonstrated that customer satisfaction was a function of performance outcomes, expectations, and disconfirmation (Churchill and Surprenant 1982; Oliver and DeSarbo 1988; Tse and Wilton 1988). Oliver (1993) pointed out that consumer satisfaction was influenced via both the creation of expectations and the disconfirmation of these expectations through comparison of consumption experience.

When studying customer satisfaction with failure/recovery encounters, two issues need to be addressed. First, fairness, or justice rather than equity should be used to model service encounter satisfaction because services involve both economic exchange and social exchange. Justice reflects both aspects of the exchange between consumers and firms while equity only reflects the aspect of economic exchange. Secondly, service encounter satisfaction should consider disconfirmation and expectations in both failure and recovery phases. Therefore, recovery expectations should be modeled as a separate factor for service encounter satisfaction.

### **Justice based Recovery Expectations in Service Encounter Satisfaction**

In service encounters involving failure and recovery, both predictive expectations and normative expectations play a role in the formation of customer satisfaction. As reviewed above, predictive expectations influence customer satisfaction via disconfirmation while normative expectations such as equity affect customer satisfaction directly.

Failure/recovery encounters are comprised of two phases: failure and recovery. Therefore, there are two sets of disconfirmation in failure/recovery encounters. Service encounter satisfaction is determined not only by the disconfirmation of service performance (failure) but also by the disconfirmation of service recovery (Smith and Bolton 1998). In the first phase of service delivery, consumers hold pre-consumption expectations of service performance and compare the perceived performance with their expectations. Pre-consumption expectations are predictive expectations based on consumers' experience with the firm. In the recovery phase of service encounters, consumers evaluate redress efforts against their expectations of appropriate recovery efforts, which results in a second disconfirmation judgment (Oliver 1981). This is termed "secondary satisfaction" and is combined with the original dissatisfaction to determine customers' overall satisfaction toward a service encounter. The disconfirmation of recovery is based on predictive expectations. However, consumers may not experience recoveries with the firms and the predictive expectations may not be clearly defined by consumers. Normative expectations play a salient role in service-encounter satisfaction.

Singh and Widing (1991) suggest that service encounter satisfaction be determined by consumers' perception of recovery efforts and their recovery expectations. However, many studies only measured customers' perception of recovery efforts based on perceived justice. The evaluation of perceived justice toward service encounter before recovery is not considered (Goodwin and Ross 1992; Blodgett et al. 1997; Smith et al. 1999). This study examines the role

of perceived justice of service encounter before recovery in the formation of recovery expectations.

Drawn from customer satisfaction studies in marketing, this study proposes a customer satisfaction model with failure/recovery encounters presented in Figure 2.1. In this model, both disconfirmations are based on predictive expectations and perceived quality of service performance. Justice is modeled differently from previous studies in that it represents the customers' evaluations of fairness toward the whole service encounter. The evaluation of perceived justice can be triggered right after a service failure. This study also posits that fairness judgment before recovery serves as the basis of recovery expectations.

Due to the importance of recovery expectations in failure/recovery encounters, identifying antecedents of recovery expectations can deepen our understanding of service encounter satisfaction.

### **Antecedents of Recovery Expectations**

Several studies have examined antecedents of customer expectations for service recovery. Kelley and Davis (1994) proposed that consumer-perceived service quality and customer organizational commitment were determinants of consumer recovery expectations. They argued that consumers' knowledge structure of a service provider was formed based on information related to service delivery. Consumer experiences with the firm lead to predictive expectations for service delivery. Positive service encounters and effective recoveries lead to optimistic service delivery expectations, while negative experiences and poor recoveries lead to low perceived service quality and pessimistic expectations for service delivery. Therefore, perceived service quality is a determinant of service recovery efforts. Organization commitment is defined as an individual's identification with and involvement in an organization (Kelley and Davis 1994).



Consumers who have a strong commitment to the organization expect the relationship to be maintained. They are more likely to anticipate impressive responses to service failures as a means of maintaining the equity of the customer-organization relationship.

In addition to the two factors identified by Kelly and Davis (1994), severity of failures and service guarantee are also identified as antecedents of service recovery expectations (Craighead et al. 2004; Miller et al. 2000). Miller et al. (2000) divided the process of service recovery into three phases. In pre-recovery phase, customers form service recovery expectations determined by severity of failure, perceived service quality, customer loyalty, and service guarantee. During the immediate recovery phase, service recoveries are given to consumers. The third phase of recovery is follow-up leading to customer loyalty, satisfaction, and customer retention. Craighead et al. (2004) suggested that perceived quality, customer loyalty, services guarantee, and severity of failures were positively related to the consumer recovery expectations.

What previous studies have not examined is whether perceived causes of service failures influence consumer recovery expectations. Consumers are more likely to engage in attributional search after failure than success (Weiner 2000). Wong and Weiner (1981) demonstrated that individuals did engage in spontaneous attributional search. This search is most likely when the outcome of an event is negative and unexpected. Review of the attribution theory below provides a theoretical foundation for the link between consumer attribution of failures and recovery expectations.

### **Attribution Theory**

#### **Origins of Attribution Theory**

Attribution theory is not a single theory. It is “an evolution of theories that form a set of

major developments in the area of causal attribution” (Mizerski et al. 1979). This stream of research is originated from Heider’s (1958) work and later extended by Kelley (1967). Heider (1958) believed that individuals were motivated to understand their world and this motivation led to further processes. In this process, individuals interpret events “as being caused by particular parts of the relatively stable environment” (Heider 1958). Studies in this area primarily focus on how individuals attribute, interpret, analyze, and order stimuli and events. More specifically, attribution theory deals with the process whereby individuals come to form causal interpretation of the events surrounding them. Kelley (1973) stated that attribution was about how people made causal explanations and about how people answered questions beginning with “why?”

Many different attributional models have been developed in psychology. The models of attribution can be distinguished by the subjects of attribution theory. Heider’s (1958) person perception theory focuses on how individuals understand and attempt to validate their perceptions of others. Heider argues that individuals reach a conclusion of causality of other’s behaviors by viewing other’s actions. Causes can be distinguished into two categories: internal or personal cause and environmental, situational, or external cause. For example, a sports team losing a game is probably due to an internal cause (e.g., lack of competence) or because of an environmental cause (e.g., severe weather that is favorable to the opposing team). Heider explains the nature of this inference process and points out that the causal inference process is naïve in nature and not scientifically analyzed and tested. Even though Heider believes that an individual’s attributions are not necessarily accurate, he finds that they nevertheless influence individuals’ subsequent actions.

Another attribution theory that focuses on “person-perception” is Jones and Davis’ (1965) correspondence of inference. This theory differs from Heider’s theory in that it focuses on the effects of actions rather than the actions themselves. The correspondent inference theory

emphasizes inferences made about a person's intentions from his/her actions. Based on the correspondent inference theory, the biases and distortions also occur when individuals make causal inference. Observers and actors may make different causal inferences toward a same action. Observers tend to attribute the actor's behavior to the actor's personal propositions while the actor is more likely to attribute his own action to situational factors. The tendency to overlook situational factors when explaining another person's behavior is called the fundamental attribution error (Cowley 2002). Applying the fundamental attribution error to the service failure and recovery scenario, Folkes and Kotsos (1986) suggest that sellers tend to find fault with the product itself less than did consumers. Apparently, there is a discrepancy of buyer-seller attributions of product failure. Due to the discrepancy of buyer-seller attributions, firms may make a wrong judgment of what consumers' really want.

Kelley's objective perception theory (1967; 1971; 1972; 1973), built on Heider's (1958) person-perception literature, has broader applications in social psychology and consumer research. It provides a framework to understand how causal attributions are reached. Previous works assumed that individuals were biased toward internal attributions. Therefore, people tend to see the dispositions of an actor as causing the actor's behavior. People rely on information they obtain to make a causal inference. The information process of causal inference is based on the principle of covariance between effects and their potential causes (Kelley 1967). Kelley (1967) delineated three possible causes that an event could be attributed to: (1) the stimulus object, which refers to the person or object being observed; (2) the observer(s) of the effects, which refers to the persons who interact with the stimulus object; (3) the context in terms of time and/or modality, in which an effect occurs. The three sources of causes appear to exhaust all potential causes for an event. Drawn from Kelley's theory, possible causes for a service failure should include firms, consumers, and/or environmental situations. That is to say, all participants in an

exchange relationship, including environmental situations, could be the cause of a service failure.

Kelley's theory also delineates what kind of information an individual needs to reach a casual inference. He explained that the effect was attributed to the entity only if the effect uniquely occurred when the entity was present and did not occur in its absence. Furthermore, for an individual to make an attribution, the reaction observed should be consistent over time and modality, and the effects should be perceived the same way by all observers.

Reviewing the theory of attribution deepened our understanding of consumer attributions of service failures. Given limited information about what the real cause of a service failure is, consumers may attribute the failure to the firm, themselves, and/or environmental situations. "Fundamental attribution error" predicts that with a same service failure, consumers may reach a different attribution than a firm does. It is also possible that causes inferred vary among consumers because consumers have different experiences and relationships with the firm, and they reach different causal inferences based on different information they held toward the firm.

Weiner's (1980) study provides a way to gauge consumer attributions. His study attempts to create a classification scheme of causes, delineate the similarities and differences, and identify their underlying properties. Three dimensions are identified to describe the underlying properties of a cause. Locus of causality originated from Heider's original dimension of internal/external causes. Some causes are internal while others are external. For example, ability, effort, and mood are considered within a person. They are internal to the individual. In contrast, task difficulty and luck are considered outside a person and perceived as external sources of causality. Weiner (1980) also recognized that "the taxonomic placement of a cause depends upon the subjective meaning of that cause to the individual." A cause may be considered as internal to one person, but as external to another person.

In addition to locus of causality, another dimension of causality is stability. Among

possible causes for success and failure, some are relatively invariant while others are unstable. For example, ability, difficulty of a task, and bias of others are likely to be perceived as relatively stable while luck, effort, mood, fatigue, and illness are more unstable. Weiner (1980) explained that “luck implies random variability; effort might be augmented or decreased from one episode to the next; and mood, fatigue, and illness were conceived as temporary states.” Therefore, those factors have unstable characteristics.

The third dimension of causality identified by Weiner (1980) is controllability. Causes can be perceived as either controllable, such as effort, or uncontrollable, such as ability, difficulty of a task, and mood. Controllability influences individuals’ reactions toward others. What an individual believes about another’s responsibility for success and failure influences this individual’s reactions toward another person. Weiner (1980, p379) stated:

“Attributions of positive and negative events to controllable factors, such as effort expenditure or a desire to help or harm, maximize reward and punishment toward these individuals. Although the relation between attributions to effort and evaluation is modified by the age and culture of the evaluator and the specific action under consideration, the generality of this association is nevertheless upheld. In addition, attributions to controllability greatly influence the likelihood of helping another in need, as well as our sentiments toward others.”

The three dimensions of attribution have been applied in consumer research extensively, particularly in product/service failure and recovery.

### **Attribution in Failure and Recovery Studies**

Attribution theory has been introduced in consumer research since the beginning of 1970s. Consumer researchers adopt attribution theory in many different areas. For example, attribution theory has been adopted to explain consumer product purchase or selection (Scott and Yalch 1980; Tybout and Scott 1983), the consequences of product failure or success (Curren and Folkes 1987; Richins 1983), the reasons that consumers switch brands (Mazursky et al. 1987), the endorser’s

credibility (Sparkman 1982; Wiener and Mowen 1986), and consumer responses to research mail surveys (Allen et al. 1980; Furse et al. 1981; Hansen and Robinson 1980).

Weiner's dimensions of causality gain wide applications in consumer research. Several studies have shown that individuals' causal attributions determine their preferred solutions. Belk et al. (1981) did a survey among Salt Lake households regarding the energy crisis. They found that individuals who attributed the energy crisis to the public favored the public solving the problem by such actions as voluntary conservation. Individuals who attribute the energy crisis to the oil companies favor government pressure on oil companies as a solution. In another survey, Belk and Painter (1983) found that respondents who blamed individuals for polluting the air and littering the environment identified these individuals as responsible for solving the problems. In the above studies, the person-perception model is used showing that observers are not involved in the action. That is, the observer cannot be the agent being blamed.

Product/service failure context is different from above context in that both exchange parties are involved in the transaction. Multiple causal agents may play a role (Folkes 1988). Buyer, seller, and environmental situation can all contribute to a product/service failure. Folkes (1984) suggested that the locus of causality influenced consumer equity reactions and beliefs about who should solve problems. Consumers generally hold that problems arising from consumer actions should be solved by consumers, whereas problems arising from firms' actions should be solved by firms.

According to Heider's people perception, consumers in a service failure encounter may reach a causal inference of the failure based on their observation of the service delivery and their experience with the firm. Consumers can attribute the failure to any entities involved in the service delivery process such as firms, themselves, and/or environmental situations. The environmental situation factor may include anybody who is responsible for the failure except

firms and consumers. For example, weather can cause a flight delay, a noisy customer in the restaurant can cause an unpleasant service experience, and a power outage can cause the interruption of a surgery. All of these factors listed can be classified as environmental situation factors.

When multiple causal agents play a role in a service failure, the locus distinction is not always “clear-cut.” (Folkes 1988). Consumers may blame different causal agents for the failure at various degrees. How much consumers blame one causal agent is dependent on how much they blame other causal agents. Therefore, the degree to which a consumer blames one causal agent should be positively related to his/her expectations from that causal agent. The relationship between attributions and expectations is illustrated in Figure 1.1.

Figure 1.1 indicates that the degree to which consumers blame the firm for a failure is positively related to their recovery expectations from the firm and the degree to which consumers blame themselves for a failure is positively related to their expectations of actions from themselves. The same relationship should be held for environmental situations.

Causal agents in this study include firms, consumers, and situations. Expectations in this study are formed based on the normative standard. More specifically, recovery expectations from the firm are formed based on the perceived justice governing the exchange relationship between firms and consumers. Expectations of actions from consumers are formed based on norms of self-regulation. If the situation is blamed, consumers may expect luck in the next patronage.

Figure 1.1 also indicates that blaming one causal agent is dependent on blaming the other two causal agents. If the firm is viewed as the actor, the causes residing within the firm will be considered internal to the firm and external to consumers and situations. Causes residing from consumers or environmental situations would be considered external to the firm and internal to consumers or environmental situations. Therefore, consistent with the attribution theory, the

following proposition can be made:

**Proposition I: The degree to which consumers put blame on one causal agent is positively related to the expectations from that causal agent. The degree to which consumers blame one causal agent is dependent on how much they blame other causal agents.**

Among the three links between causal attributions and expectations showed in Figure 1.1, the link between attributions to the firm and recovery expectations from the firm is the primary interest of this study. When only focusing on the link between attribution and expectation anchored on the firm, attributing different causal agents is treated as a continuum that putting more blame on the firm indicates putting less blame on consumers and environmental situations. Likewise, putting less blame on the firm indicates putting more blame on consumers and environmental situations. When the causal agent is anchored on the firm, consumers expect the firm to recover service failures. How much consumers want to redress from the firm is based on the norm of perceived justice governing the exchange relationship.

### **Perceived Justice**

#### **Making Fairness Judgment: Fairness Theory**

The fairness theory (Folger and Cropanzano 1998, 2001) explains how consumers make a fairness judgment. Fairness theory articulates three processes for an individual to make a fairness judgment. First, a negative outcome must occur in the eyes of beholders. In other words, a person must feel that the allocation of the benefit is unfavorable to him/her. Folger and Cropanzano (2001) argued that under this circumstance, the individual used counterfactual thinking to imagine a positive alternative to the situation. The easier it is for an individual to imagine a positive alternative to the situation, the more likely it is that the unfortunate event will cause distress. In addition, when assessing the negative situation, an individual may consider both



economic and socio-emotional factors such as the allocation of the benefit, the procedure of the allocation, and the interaction during the procedure.

The second process of making a fairness judgment is to determine who is accountable for the negative outcome. In this process, an individual assess the social accountability of the target. This process explains why attribution influences individuals' perceived justice. Previous research has shown that information regarding locus and controllability of a negative event can influence individuals' fairness judgment (Bies 1987, 2001; Bobocel et al. 1997; Tyler and Bies 1990). Even though the target may be responsible for a negative outcome, whether it is under the target's control can change the individual's perception of justice.

The last process in the fairness theory is the individual taking into account whether the harmful actions violate some ethical principles of interpersonal treatment. A situation will not be perceived as unjust unless it is viewed as violating some moral codes.

Fairness theory summarizes the three phases for an individual to make a fairness judgment. These judgments contrast the negativity of the situation, the actions of the target, and the moral conduct employed with counterfactual scenarios of what would, could, and should have taken place. While negative outcomes trigger the process of fairness judgment, the process of making fairness judgments could take place along different dimensions.

### **Structure of Perceived Justice**

Justice is first conceptualized as a social and personal device designed to facilitate the acquisition of other desired resources (Lerner 1981). Justice is meaningful only when it is defined in contrast with injustice (Karniol and Miller 1981). Individuals can perceive an injustice occurring along different dimensions.

***Distributive Justice.*** The first dimension of perceived justice is related to the allocation

of benefits and rewards which is called distributive justice. Adams (1965) stated that social behavior was affected by beliefs that the allocation of benefits and costs within a group should be equitable. When an individual perceives that benefits have not been allocated equitably, he/she experiences distress (Walster et al. 1973), which in turn motivates him/her to restore the distributive justice.

Distributive justice is closely related to the outcome of service delivery. Consumers make an exchange with a firm expecting to receive benefits that are equivalent to the cost to the consumer (Goodwin and Ross 1992). When a service failure occurs, the customer does not receive equivalent benefits, and will perceive a distributive injustice that further leads to customer dissatisfaction. For example, airline passengers pay tickets to exchange the transportation service from one place to another. If the airline cancels the flight for some reason, the airline is supposed to arrange another flight for all passengers. Otherwise, the outcome of the service delivery will be considered unfairly distributed.

The violation of distributive justice indicates that the outcome of service delivery is not the same as what consumers expect. Distributive justice only explains one aspect of perceived justice in the social exchange relations. In many situations, even though outcomes are perceived as just, individuals may still experience perceived injustice if the procedure that reaches the outcome is unjust.

***Procedural Justice.*** The systematic study of procedural justice begins with the work of Thibaut and Walker (1975). Procedural justice refers to the fairness judgment of a decision-making procedure. The initial study of procedural justice focuses on dispute resolution procedures and legal procedures (Thibaut and Walker 1975). Later on, many of the explanations and prescriptions are extended to social decision-making procedures in other contexts. Lind and Tyler (1988) reviewed procedural justice in law, in the political arena, and in organizations. In

general, individuals evaluate procedural justice based on agreed-upon rules (Leventhal 1980).

These rules can have a wide variety of manifestations in any given procedural situation.

Leventhal (1980) found that individuals evaluated procedures based on the following rules: consistency, bias suppression, accuracy of information, correctability, representativeness, and ethicality. Consistency requires that a fair procedure be applied consistently across person and time. In other words, all individuals affected by the procedure should have the same rights and be treated similarly. Meanwhile, the procedure should be enacted the same way each time it is used. Bias suppression refers to the concept that the decision makers should be unbiased. There are two possible sources of bias. First, decision makers may have an interest in a specific decision. Second, prior beliefs of decision makers may influence the decision making process. The bias suppression rule requires a decision maker to avoid both types of bias when making a decision. The rule of accuracy of information requires that a decision be based on accurate information and on well-informed or expert opinion. Correctability requires a fair procedure to include provisions for correcting bad decisions. Representativeness “dictates that all phases of allocation process must reflect the basic concerns, values, and outlook of important subgroups in the population of individuals affected by the allocation process” (Thibaut and Walker 1975). Finally, ethicality requires a procedure to conform to personal standards of ethics and morality. These rules guide an individual’s evaluation of procedural justice.

Studies in procedural justice generally find that the procedure used to allocate outcomes has an influence on people’s judgment of the fairness of a decision that was independent of outcome favorability (Folger and Greenberg 1985). In other words, given the same unfavorable outcome, individuals feel less dissatisfied when they perceive the procedure to be fair than when they perceive the procedure to be unfair.

***Interactional Justice.*** Although the decision-making procedure is important in

understanding peoples' reactions to the fairness of a decision, there is a growing interest focusing on the enactment of a procedure. Bies and Moag (1986) referred the fairness judgment of the enactment of a procedure as interactional justice which concerns the decision makers' behaviors during the enactment of procedures. For example, people expect to be treated with truthfulness and respect in communication (Bies and Moag 1986). In addition to the two communication criteria (truthfulness and respect) identified by Bies and Moag (1986), providing explanation or justification for a decision can influence individuals' interactional justice. Providing reasons and information for a decision makes the decision understandable and acceptable and enhances the perceived justice among parties.

The distinction between procedural justice and interactional justice is not clear-cut. The degree of perceptual overlap between interactional and procedural fairness judgment has been articulated by Bies and Moag (1986) as follows:

“Procedures become meaningful only when they are experienced by someone. That is, people do not really know the procedure until it is implemented. Once the procedure is enacted, people may make inferences about the fairness of the procedure from the actions of decision makers. According to this reasoning, procedural fairness judgments are based, in part, on people's attributions regarding some action or outcome.

Interactional fairness evaluations will generalize to the procedure itself only when the person attributes the responsibility for the actions to the organization, a systemic attribution, rather than the decision maker. For example, if a person believes that deception and rudeness by recruiters are not isolated occurrences, but condoned by the organization, then he or she will more likely to assume the decision-making procedures are unfair. On the other hand, if a person attributes the deception and rudeness solely to the decision maker and not the organization, then there should be less implication for the procedure itself.”

Many studies also demonstrate that procedural justice and interactional justice are correlated together (Blodgett et al. 1997; Tax et al. 1998). Due to the unclear distinction between procedural justice and interactional justice, the two types of perceived justice are combined into one dimension to reflect the perceived justice of service delivery process in this study.

### **Perceived Justice in Failure/Recovery Encounters**

Among the three dimensions of perceived justice, distributive justice has gained extensive attention from marketing researchers. It has been shown that perceived justice affects consumer satisfaction (Oliver and DeSarbo 1988; Oliver and Swan 1989), repurchase intentions, and word of mouth decisions (Blodgett et al. 1997). Huppertz et al. (1978) first applied equity theory to retail exchange situations and examined consumer perception of inequity and behavior when encountering two sources of inequity: high price and poor service. The results from their study show that high price and poor service are perceived as less fair than low price and high quality service. Individuals generally respond to inequity by either leaving the store, or complaining about price or service when shopping frequency is also high. Equity in exchange relationship also influences consumer satisfaction. A series of studies show that consumers elicit inputs and outcomes from themselves and merchants (Huppertz 1979), rate input/outcome combinations on fairness (Huppertz et al. 1978), and express their satisfaction/dissatisfaction with hypothetical inequitable situations (Fisk and Coney 1982; Mowen and Grove 1983; Oliver and DeSarbo 1988).

Recent research on service recovery focuses on the role of perceived justice in understanding the effect of recovery attributes on customer satisfaction (Blodgett et al. 1997; Goodwin and Ross 1992; McCollough et al. 2000; Smith et al. 1999; Tax et al. 1998). This theoretical perspective examines the extent to which customers perceive the process and outcomes of service recovery to be just. With the increased interest in services marketing, procedural justice and interactional justice are also introduced to explain consumer satisfaction in a service failure and recovery encounter. Perceived justice is seen as an aggregate construct with three dimensions (Tax et al. 1998). The three dimensions are the fairness of the resolution procedures (procedural justice), the interpersonal communications and behaviors (interactional

justice), and the outcomes (distributive justice).

When a service failure occurs and distributive justice is violated, the motivation to restore the equity will prompt consumers to complain about the failure to service providers. The resource or reward in service recovery represents the outcome of the complaint (Goodwin and Ross 1992). The reward can take the form of compensation such as refund, exchange, discount, credit, coupon, or free-gift. Empirical evidences have shown that compensation is positively associated with consumers' perceived distributive justice (Goodwin and Ross 1992; Smith et al. 1999) and can influence consumers' subsequent behavioral intentions such as word of mouth and repurchase intention (Blodgett et al. 1997).

It is also agreed that consumers evaluate recovery strategies based upon not only the ultimate outcome of the service recovery but also the procedure used to reach the outcome, as well as the interactions along the way. It has been documented that procedural justice has an impact on customer attitudes (Clemmer 1988; Goodwin and Ross 1992) and customer satisfaction (Bitner et al. 1990; Taylor 1994). Flexibility, waiting/responsiveness, and efficiency have been identified to influence consumers' perceived procedural justice and further customer satisfaction and service quality (Bitner et al. 1990; Hui and Bateson 1991). Speed of a recovery and initiation of a recovery process are also associated with consumers' perceived procedural justice (Goodwin and Ross 1992; Smith et al. 1999). Speed of a recovery influences consumers' behavioral intentions (Blodgett et al. 1997). Tax et al. (1998) pointed out that even though a customer was satisfied with the type of recovery strategy offered, recovery evaluation might be poor due to poor perceived procedural justice.

Interactional justice is believed to be associated with many factors such as truthfulness, explanation (Bies and Moag 1986), politeness, friendliness, sensitivity, interest, honesty (Clemmer and Schneider 1993), empathy and assurance (Parasuraman et al. 1985), directness and

concern (Ulrich 1984), and effort (Mohr 1991). Smith et al. (1999) found that interactional justice has a direct effect on customer satisfaction. Recovery attributes such as apology play an important role in elevating perceived interactional justice and determining subsequent behavioral intentions (Bies and Shapiro 1987; Blodgett et al. 1997; Maxham III and Netmeyer 2003; Smith et al. 1999; Tax et al. 1998).

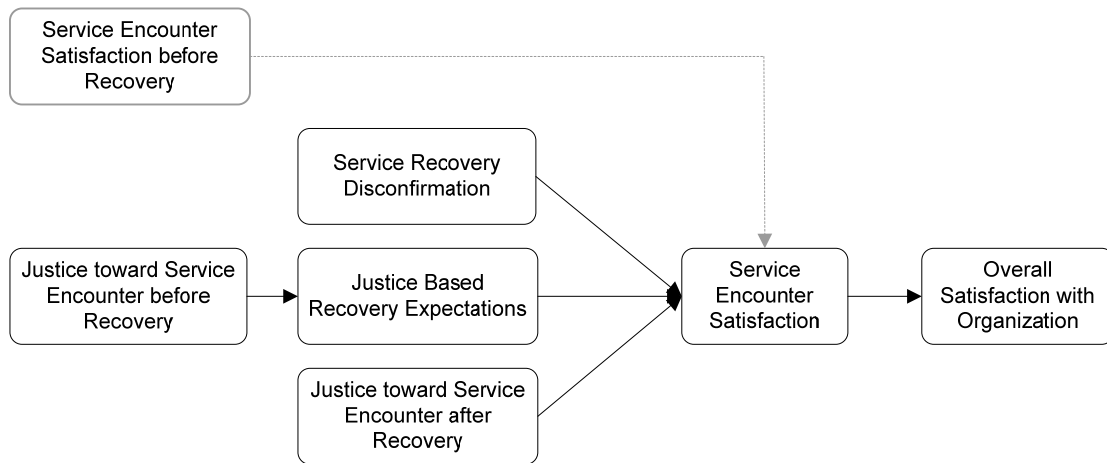
Studies reviewed above exclusively focus on how consumers evaluated perceived justice of recovery process. None of the studies has examined how consumers' perceived justice is violated by service failures and how their perceived injustice affects their recovery expectations. The second proposition specifies the relationship between consumers' causal attributions and perceived justice before recoveries. Consistent with disconfirmation-expectancy paradigm, attribution theory, and justice theory, the following proposition can be made:

**Proposition II. The degree to which consumers blame the firm for a service failure has a direct effect on consumers' perceived justice (distributive justice and procedural justice).**

### **Summary**

This chapter reviews the origination and evolution of disconfirmation-expectancy paradigm, attribution theory, and justice theory and their applications in consumer research. The three theories are theoretical foundations for this study. They are closely related to the service failure and recovery context examined in this study. Two propositions are developed based on the relationship among attribution, expectation, and perceived justice. The two propositions serve as the foundation of hypotheses developed in the next chapter.

Figure 2.1 Model of Service Encounter Satisfaction





## **CHAPTER 3**

### **HYPOTHESES DEVELOPMENT**

#### **Attributions of Failures and Recovery Expectations**

##### **Service Failure Context**

Previous studies have demonstrated that failure contexts are related to customer satisfaction and influence the effect of recoveries on customer satisfaction (Smith et al. 1999).

The exploratory study done by Bitner et al. (1990) examines the relationship between service failures and customer satisfaction. Three types of service failures are identified from employees' point of view using the critical incident technique. The critical incident technique is a method of classification often used by marketing researchers in various circumstances such as discovering the underlying sources of satisfaction and dissatisfaction and favorable/unfavorable incidents in service encounters (Bitner et al. 1990; Kelley et al. 1993). Using this technique, researchers collect direct observations of human behaviors in defined situations and use the information to solve practical problems. For example, in their study of determining the sources of satisfaction and dissatisfaction in service encounters, Bitner et al. (1990) collected satisfied and dissatisfied service encounters from hotel, restaurant, and airline industries and analyzed the data to generate three types of service failures from employees' point of view. The three types of service failures include service delivery failures, failures to respond to customer needs and requests, and unprompted and unsolicited employee actions. Among all failures listed in Bitner et al.'s (1990) study, service failures initiated by consumer mistakes are also included as a type of failures. They pointed out that employees of firms should also respond to the type of failures caused by consumers.

Bitner et al.'s (1990) typology of service failures has been adopted by researchers to examine service failure scenarios in a particular industry. For example, Kelley et al. (1993) investigated the service failure types and recovery strategies in the retail industry. Hoffman et al. (1995) investigated the service failure types and recovery strategies in the restaurant industry. The purpose of the two studies was to track service failure types and analyze the effectiveness of recovery strategies based on the identified service failure types. Keaveney (1995) examined the reasons for consumers' switching behaviors. He found that consumers' switching behaviors were not always due to a core service failure, such as a mistake or technical problem with the service itself. Consumers' switching behaviors were also affected by a failure of the service encounter, including uncaring, impolite, unresponsive, or unknowledgeable behaviors by an employee. Failure to respond effectively to a service failure can also lead to switching behaviors.

Smith et al. (1999) examined service failure types from the social exchange point of view. Social exchange theories distinguish social interactions from economic transactions. Smith (1997) argued that exchange relations involved not only economic transactions but also social interactions between exchange parties. Service failures can occur as part of the economic transaction or as part of the social interaction in an exchange relation. Therefore, they classified service failures into outcome failures and process failures. Smith et al. (1999) further demonstrated that different types of service failures influenced the effect of recovery attributes on perceived justice of recoveries. For example, compensation has a greater impact on distributive justice when an outcome failure occurs than when a process failure occurs.

A consensus regarding the service failure type can be found between Smith's study and other studies (Bitner et al. 1990; Keaveney 1995). Keaveney's (1995) core service failures are correspondent to outcome failures, while service encounter failures are process failures. Likewise, service delivery failures (Bitner et al. 1990) are outcome failures and unexpected employee

behaviors are process failures.

Bitner et al. (1990) suggests that failures caused by consumers should be taken care of by employees. However, none of the studies have examined whether the cause of a service failure has an effect on customers satisfaction. In addition, previous studies classified the service failure type from employees' point of view. Less is known about how consumers attribute service failures. To fill the gap in the literature, this study examines the service failure type from consumers' point of view. Consumer attributions of service failures are used to define the service failure context.

### **Consumer Attributions of Failures and Recovery Expectations**

Weiner's classification of causal attributions has a wide application in consumer research particularly in product/service failure studies because each of the three dimensions is linked to behavioral consequences.

Locus of causality refers to whether the cause of service failure is located in service providers, consumers, or environmental situations. For example, a passenger may not be able to reach his/her destination on time because the flight is delayed by weather (environmental situation), the flight is delayed by mechanical problems (firm), or the passenger reached the airport late (consumer). A customer may not get the food he/she wants because the waiter/waitress made a mistake (firm) or the customer ordered the wrong food (consumer). After a failure occurs, consumer expectations of recovery may vary by the causal attributions they infer.

According to the literature, locus of causality "influences beliefs about who should solve problems; problems arising from consumer actions should be solved by consumers, whereas problems arising from firms' actions should be solved by firms," (Folkes 1988, p556). If a failure is caused by firms, firms owe consumers refunds and apologies, whereas if a failure is caused by

consumers, firms are not obligated to provide redress (Folkes 1984).

It is also possible that consumers do not blame a single causal agent completely when multiple causal agents play a role in a service failure. The degree to which they put blame on the firm for a failure determines their reactions toward the firm and evaluations of the service encounter. Therefore, the relationship between locus of causality and recovery expectations is hypothesized as follows:

**H1a: The degree to which consumers blame the firm for a failure has a positive effect on consumer recovery expectations from the firm.**

Controllability refers to whether the causal agent could have control over the cause. Some failures can be avoided or prevented by the actor, while other failures are constrained to human capability. For example, a delayed flight caused by severe weather is not controlled by either the airlines or consumers, but a mechanical breakdown could be prevented by frequent investigations of the airplane. If a consumer reaches the airport late, they could have prevented it themselves by leaving home earlier. However, if a consumer reaches the airport late because of the traffic, he or she has no control over the cause.

The relationship between controllability and recovery expectations has been established by previous studies. Hess et al. (2003) argued that when the cause of a failure was not under the firm's control, the firm could not prevent the failure by inputting more to the exchange relationship. However, when the cause of a failure is perceived as controllable, the firm could have prevented the failure by inputting more to the exchange relationship. Therefore, when the cause of failure is perceived as controllable, recovery expectations will be higher than when the cause of failure is perceived as uncontrollable. Folkes (1984) study also implicitly indicates the positive relationship between the controllability and recovery expectations. Controllability influences consumer affects or emotions toward the causal agent (Folkes 1984; Weiner 1980). If a failure is caused by the consumer and the cause of the failure is controllable, the consumer may

feel shamed, guilty, or regretful. If a product failure is caused by the firm, and the cause of the failure is perceived as controllable, the consumer may express more anger over the product failure (Folkes 1984). The negative emotions and affects should also influence consumer redress intentions and the magnitude of recovery expectations from the firm.

**H1b: Controllability of the cause related to the firm has a positive effect on consumer recovery expectations. Consumer recovery expectations from the firm will be higher when the cause of failures related to the firm is perceived as controllable.**

Following the argument made by Hess et al. (2003), the positive relationship between stability and customer recovery expectations is also expected. When the cause of a failure is perceived as stable, consumers would “expect the organization to be aware of the recurrence of such failures and have policies and procedures in place to compensate affected customers” (Hess et al. 2003). Hess et al. (2003) further argued, “Customers are less likely to expect the organization to give high priority to failures that are temporary.” The interesting thing is that Hess et al. (2003) did not find a significant effect of stability on recovery expectations. However, their study focused primarily on failures caused by the firm. The locus of causality is preconditioned. The failure in this study did not limit the cause of failures to the firm. As a matter of fact, multiple causal agents play a role in the failure scenario. It is possible that the relationship between stability and recovery expectations can be held as hypothesized in Hess et al.’s (2003) study.

**H1c: Stability of the cause related to the firm has a positive effect on consumer recovery expectations. Consumer recovery expectations from the firm will be higher when the cause of failures related to the firm is perceived as stable.**

Hypotheses 1a, 1b, and 1c are illustrated in Figure 3.1

### **Perceived Justice and Recovery Expectations**

Expectation is a component in expectancy-disconfirmation paradigm. It serves as a comparison standard for consumers to make an evaluation. In addition to the dominant predictive

standard, a normative standard describing desired expectations is often used in marketing studies. The normative standard defines the level of performance that consumers want products to achieve. A normative standard is based on norms that govern the exchange relationship between consumers and firms.

In a service organization, an exchange involves not only economic transaction but also social exchange. Perceived justice could be used as a normative standard in explaining consumer evaluation of service failures and recoveries. Yim et al. (2003) conceptualized recovery expectation as a justice-based normative expectation along three dimensions. The three dimensions indicate consumers' justice needs and their beliefs of what should happen in terms of the outcome of exchange, the process of delivery, and the interaction between consumers and employees (Yim et al. 2003). Any problems occurring along the three dimensions could lead to consumers' perceived injustice.

As explained earlier, procedural justice and interactional justice are correlated and both procedural justice and interactional justice reflect the perceived justice of the service delivery process. Therefore, this study models the recovery expectations as comprised of distributive and procedural justice needs.

The justice theory states that distress arises when an inequitable relationship occurs. The more inequitable the relationship, the more distress the participants feel and the harder they try to restore the equity (Walster et al. 1973). The distress is postulated to be the motivation of behaviors aimed at alleviating the distress (e.g., Festinger 1957). It is apparent that the greater the perceived injustice, the more distressed the victim will be. The more distressed the victim, the more desire the victim has to restore the equitable relationship. The desire to restore the equitable relationship determines the expectations of restitution from the exchange party.

In a service failure encounter, an unbalanced relationship could arise from a service

failure. Perceived injustice of an exchange determines the distress experienced by consumers after a service failure. The level of distress determines the desire by the consumer to seek restitution from the service provider. In other words, consumers try to get even with the firm in response to a perceived wrongdoing (Bechwati and Morrin 2003). Therefore, distributive justice before recovery should be negatively related to recovery expectations.

**Hypothesis 2a: Distributive justice before recovery is negatively related to recovery expectations from the firm.**

Procedural justice influences peoples' behaviors as well. For example, in an organization, fair procedures inspire feelings of loyalty to the organization, enhance commitment to the organization, and further intentions to remain with the organization (Martin and Bennett 1996; Olson-Buchanan 1996; Tyler and Belliveau 1995). It leads to high job satisfaction and job performance (Alexander and Ruderman 1987; Lind and Tyler 1988), increases trust and willingness to go beyond the call of duty (Kim and Mauborgne 1991), and lessens negative emotions such as anger and hostility (Barclay et al. 2005). In health care decision-making, a fair procedure improves the relationship between patients and health care decision makers and others in the health care group, increases levels of prides and pleasure, and lowers the level of anger as the result of their treatment (Murphy-Berman et al. 1999). On the other hand, the breach of procedural justice results in negative behaviors toward the organization. For example, procedural injustice leads to the withdrawal of citizenship behaviors and the desire to punish the organization and its representative (Youngblood et al. 1992).

Procedural justice has been adopted by marketing researchers to explain the effect of service recovery on customer satisfaction. It has been demonstrated that procedural justice is positively related to customer satisfaction after service recoveries (Goodwin and Rose 1992; Smith et al. 1999), intentions to return, and positive word of mouth (Blodgett et al. 1997).

On the other hand, procedural justice has an impact on the acceptance of negative

outcomes. For example, Lind and Tyler (1988) suggest that if employees perceive the procedure as fair, they are less resistant to the outcome. If employees perceive the procedure as unfair, they are more likely to resist the outcome. In a service failure context, a negative outcome occurs. If consumer perceived procedural justice is low, they are less likely to accept the negative outcome. The recovery expectations from the firm will be higher. If consumers feel a high level of procedural justice, they are less likely to resist the outcome. The recovery expectations from the firm will be lower.

It is worth noting that procedural justice defined in this study is different from previous studies in that it refers to consumers' perceived justice of service delivery that includes not only the recovery process but also interactions between consumers and firms during the service delivery, the process of services being delivered, and decisions being made in the entire service encounter.

**Hypothesis 2b: Procedural justice before recovery is negatively related to recovery expectations from the firm.**

The hypotheses 2a and 2b explain why perceived justice serves as the basis of recovery expectations. The two dimensions of perceived justice are negatively related to recovery expectations from the firm. In addition, since both distributive justice and procedural justice represent one aspect of perceived justice, the two dimensions are correlated (Tax et al. 1998).

The relationship between perceived justice and recovery expectations is presented in Figure 3.2.

**Consumer Attributions of Failures and Perceived Justice**

Once a failure occurs, consumers' first reaction is to engage in an attributional search (Weiner 2000; Wong and Weiner 1981). Psychologists have suggested that attributions may be an antecedent of perceived justice. Utne and Kidd (1980) explained why people had different



perceptions of injustice given a same inequitable outcome by introducing causal attributions. They argued that causal attributions might not be able to change the outcome of the exchange, but it did reduce the distress raised from the inequitable exchange relationship.

Locus of causality refers to whether the exchange partner's behavior has to do with the inequitable outcome. In an inequitable relationship, a person who experiences an unfavorable outcome will feel very distressed with the knowledge that the exchange party caused the unjust outcome. The distress will be lessened by knowing that the inequity is imposed by external forces to the exchange party. That is, the exchange party is not fully responsible for the unjust distribution of outcomes. Cohen (1982) also stated that making attributions was the implicit assumption in perceived justice. People's attribution of causes influences their perception of justice. Folger and Cropanzano (1998, 2001) suggest that locus of causality is a necessary condition for the fairness judgment.

Consumers' perception of justice can be delineated from two aspects. First, since the unfavorable outcome is caused by the causal agent, the norm of equity is breached. Consumers are motivated to seek equity. Second, since the delivery process directly leads to the service outcome, consumers may perceive that the process and the outcome of service delivery are causally related. Consumers may question the process of the service delivery based on the six rules of procedural justice (Leventhal 1980). It is possible that locus of causality also influences the procedural justice after a service failure.

**H3a: The degree to which consumers blame the firm for a failure has a negative effect on their evaluations of distributive justice.**

**H3b: The degree to which consumers blame the firm for a failure has a negative effect on their evaluations of procedural justice.**

The direct impact of perceived control of success or failure is the sentiment toward others (Weiner 1980). In consumer research, controllability influences consumer affects toward the firm

(Folkes 1984). If a consumer perceives that a failure is caused by the firm, the consumer will feel distressed because of the perceived injustice. If the consumer is aware that the cause of a failure is controllable by the firm, the distress will be strengthened. On the other hand, when a consumer perceives that the cause of a failure is not under the firm's control, the distress will be mitigated (Folkes 1984).

Since the controllability of causes can adjust the level of emotions or affects toward others, the inequity caused by failures can be increased if the cause related to the firm is controllable and reduced if the cause related to the firm is uncontrollable.

**H3c: Perceived controllability of the cause related to the firm has a negative effect on distributive justice.**

Procedural justice focuses primarily on the fairness of the process of reaching a decision. Consumer judgment of procedural justice is based on the six rules of procedural justice. Among the six rules identified by Leventhal (1980), two of them are relevant to this study: consistency and correctability. The rule of consistency requires a fair procedure to be consistent across persons and time. The rule of correctability requires a fair procedure to contain some provisions for correcting bad decisions.

Consistency and correctability indicate the relationship between the stability of the cause and procedural justice. Consistency requires that services be delivered at the same level across time and persons. If service failures occur often (stable of the cause), it indicates that the procedure of service delivery is not consistent (some people get better service than others do). Correctability requires that a fair procedure contain policies to correct failures. If service failures occur often (stable of the cause), the firms should adjust the procedure to avoid the recurrence of this kind of failure. For example, if an airline loses passengers' luggage frequently, they should improve their luggage handling procedure in ways such as updating technology to prevent the same mistake from recurring. Therefore, the relationship between stability of the cause and

procedural justice can be hypothesized as follows:

**H3d: Perceived stability of the cause related to the firm has a negative effect on procedural justice.**

The hypotheses 3a to 3d are exhibited in Figure 3.3.

### **Effects of Recovery Attributes**

#### **Recovery Attributes**

Service recovery is an important strategy for firms to enhance customer satisfaction when a service failure occurs (Berry and Parasuraman 1992; Hart et al. 1990; Heskett et al. 1990). Marketing researchers devoted extensive efforts identifying effective recovery attributes. The review of these studies is summarized in Table 3.1. Recovery attributes such as discount, refund, replacement, correction plus, symbolic atonement, and compensation aim to recover service failures from the economic aspect and could benefit consumers from the outcome. Other recovery attributes such as apology, intervention, information, empathy, fast response, and initiation of recoveries reflect the aspect of social interaction with consumers and are not related to economic loss or gain.

In addition to recovery attributes identified by these studies, some authors also acknowledge that the effectiveness of a recovery strategy varies by situations. Bell and Zemke (1987) state that appropriate elements of a recovery strategy depend on the level of dissatisfaction felt by customers. Bitner et al. (1990) suggest that in many situations consumers were dissatisfied because of firms' responses to a failure rather than the failure itself. In their study of examining service failure and recovery incidents in the retail industry, Kelley et al. (1993) find that some of recovery attributes are more effective than others. Discounts, correction, management intervention, and replacement are more effective than apology and refund. Johnston (1995)

reaches a similar conclusion that the staff's concerns for customers, information provided, and the employee's actions to solve the problem are necessary for service recoveries but financial compensation is not. Boshoff (1997) finds that the most successful recovery strategy is the combination of speed and compensation. In Boshoff's (1997) study, an apology has a limited effect unless accompanied by some form of compensation.

Despite the fact that every study acknowledged the importance of service recovery strategies, there are some disagreements and limitations among these studies. First, these studies have not reached a consensus in terms of which strategy is the most effective one. For example, compensation was considered necessary in some of the above studies but not in others. An apology was also not always effective to recover service failures. Second, all of above studies used the critical incident technique. The critical incident technique is a good method to identify service failure types and recovery attributes, but cannot explain why a recovery strategy can restore customer satisfaction and why a strategy is more effective in some circumstances than in others. These problems can be solved by introducing the perceived justice theory to model the effect of service recovery on consumer satisfaction. The following section specifies the effect of different types of recovery attributes on the change in consumers' perceived justice, the effect of different combinations of recovery attributes on perceived justice after recovery, and the effect of the magnitude of a recovery strategy on perceived justice.

### **Recovery Attributes and Changes in Perceived Justice**

The marketing literature has examined how recovery attributes affect consumers' perceived justice. However, it is not clear whether the recovery attributes have the same effect on the change in perceived justice.

Previous studies in service failure and recovery demonstrate that different recovery

attributes are associated with different dimensions of perceived justice (Blodgett et al. 1997, Goodwin and Ross 1992; Smith et al. 1999). For example, the evaluation of distributive justice will be higher when offering compensation and the evaluation of procedural justice will be higher when the response to a failure is fast. What is not known from previous studies is whether consumers have the same level of perceived justice before recovery. These studies implicitly assume that consumers hold the same level of perceived justice after a service failure. Therefore, these authors only measured the perceived justice after recoveries. However, it is possible that consumers hold different levels of perceived justice after experiencing the same service failure scenario. If the compensation has a greater effect on distributive justice, it should be exhibited in the increase of distributive justice. The same logic can be applied to the relationship between the speed of response and procedural justice.

**H4a: The change in distributive justice should be greater when offering compensation than when not offering compensation.**

**H4b: The change in procedural justice should be greater when offering a speedy response than when offering a slow response.**

### **Matching Recovery Attributes with Recovery Expectations**

As noted above, exploratory studies in service recoveries have not reached a consensus in terms of what constitutes an effective recovery strategy. The reason probably lies in the different failure context in these studies. Different failure contexts trigger different levels of recovery expectations. Whether a recovery strategy meets consumer recovery expectations is the key factor in determining customer satisfaction with service encounters.

The purpose of expectations is to set up a standard for consumers to make a comparison. Consumer recovery expectations based on perceived justice before recovery should have an impact on the effect of recovery attributes on customer satisfaction. That is when recovery

attributes meet the expectations based on perceived justice before recovery, service encounter satisfaction can be enhanced. If firms provide recovery attributes that are not adequate to restore perceived justice violated by service failures, consumers may nevertheless be dissatisfied. Therefore, matching recovery attributes with justice-based recovery expectations may be critical in enhancing customer satisfaction.

According to the marketing literature, different recovery attributes can increase perceived justice along different dimensions. If a consumer has a very low perception of distributive justice, the consumer needs to be restituted economically or financially. Therefore, compensation should be offered to match consumer recovery expectations. If a consumer has a very low procedural justice, speedy response should be effective to increase customer satisfaction. Mismatch could occur when distributive justice is low but the firm only responds in a timely manner with an apology.

Based on what firms offer to customers, three types of recovery strategies can be formed. McCollough (1995) termed the three types of recovery strategies superior recovery, adequate recovery, and inferior recovery. Superior recovery refers to recovery performance that exceeds the customer's expectations of recovery efforts; adequate recovery refers to recovery efforts that meet the consumer recovery expectations; and inferior recovery refers to those that do not meet the consumer recovery expectations (McCollough 1995).

Different theories predict the effect of various types of recovery strategies differently. Walster et al.'s (1978) equity theory predicts that both under- and over-rewarded individuals were less satisfied than those receiving equitable rewards. That is, adequate recovery strategies should generate the highest customer satisfaction after recovery. However, some other researchers argued that favorable inequity is more tolerable than unfavorable inequity (Adams 1963, 1965). Furthermore, research in marketing suggests that individuals receiving less than what they

expected are more dissatisfied than those receiving rewards equal to or greater than their expectations according to the expectancy-disconfirmation paradigm (Homans 1961). This makes delighting customers possible. In a service encounter involving failure and recovery, customers who experienced a service failure are unlikely to view a superior recovery as an excessive reward. Consumers are unlikely to experience “distress” or “guilt” (Walster et al. 1978) after they have experienced an inequitable exchange. Therefore, this study favors the prediction that superior recovery should generate the highest level of perceived justice and satisfaction followed by adequate recovery and inferior recovery.

**H5a: Consumers who receive superior recovery should evaluate distributive justice highest followed by those who receive adequate recovery and inferior recovery.**

**H5b: Superior recovery has the greatest impact on the change in distributive justice followed by adequate recovery and inferior recovery.**

**H5c: Consumers who receive superior recovery should evaluate procedural justice highest followed by those who receive adequate recovery and inferior recovery.**

**H5d: Superior recovery has the greatest impact on the change in procedural justice followed by adequate recovery and inferior recovery.**

**H5e: Consumers who receive superior recovery should have the highest level of service encounter satisfaction followed by those who receive adequate recovery and inferior recovery.**

#### **Effects of the Number of Recovery Attributes on Perceived Justice and Service Encounter Satisfaction**

The types of recovery strategies are closely related to the number of recovery attributes comprised in a strategy. To a customer with a certain level of recovery expectation, the superior recovery strategy contains a high number of recovery attributes than adequate and inferior recovery strategies. Hypotheses 5a to 5e indicate that the more the firms offer to consumers, the more justice consumers perceive and the more satisfied consumers will be. Therefore, the number of recovery attributes comprised in a strategy should have a main effect on distributive justice,

procedural justice, change in distributive justice and procedural justice, and service encounter satisfaction.

**H6a: The number of recovery attributes has a positive effect on distributive justice.**

**H6b: The number of recovery attributes has a positive effect on the change in distributive justice.**

**H6c: The number of recovery attributes has a positive effect on procedural justice.**

**H6d: The number of recovery attributes has a positive effect on the change in procedural justice.**

**H6e: The number of recovery attributes has a positive effect on service encounter satisfaction.**

#### **Interaction between Attributions and Recovery Attributes**

The interaction between consumer attributions of service failure and recovery attributes on perceived justice after recovery may occur. For instance, the degree to which consumers blame the firm for a service failure influences their perceived justice before recovery and recovery expectations. Consumers who perceive the cause of a failure being firm related will hold a lower level of perceived justice after a service failure. If compensation increases the distributive justice to the same level, then the increased distributive justice should be higher for consumers who blame the firm for the failure than those who blame others for the failure. Therefore, compensation should have a greater effect on distributive justice when consumers blame the firm for a failure than when consumers blame others for a failure.

The same logic can be applied to the interaction between locus of causality and speed of reactions of procedural justice. That is speed of reactions should have a greater effect on procedural justice when consumers blame the firm for a failure than when consumers blame others for a failure.



**H7a: Compensation will have a greater effect on the evaluation of distributive justice when the failure is attributed to the firm than when the failure is attributed to consumers or environmental situations.**

**H7b: Speed of reactions will have a greater effect on the evaluation of procedural justice when the failure is attributed to the firm than when the failure is attributed to consumers or environmental situations.**

### **Summary**

This chapter reviewed types of service failures and recovery strategies identified by previous studies and developed hypotheses to examine the relationship between consumer causal attributions and their recovery expectations. Perceived justice was viewed as the normative standard of expectations of recovery. The relationship between consumer causal attributions and dimensions of perceived justice was developed in this chapter.

This study took a different approach from previous studies in studying the effect of recovery attributes. Consistent with suggestions from expectancy-disconfirmation paradigm, this study hypothesized that the more the firm offered to recover a failure, the higher the evaluation of perceived justice would be, and the more satisfied consumers would be.

In the end, the interaction between the service failure context and recovery attributes on perceived justice after recovery was also examined. The service failure context was defined from consumers' point of view. Consumer inferred locus of causality influenced the effect of compensation on distributive justice and the effect of speed of reactions on procedural justice.

The next chapter provides detailed methodology and experimental design to test above hypotheses.

Figure 3.1 Attributions and Recovery Expectations Anchored on Firms

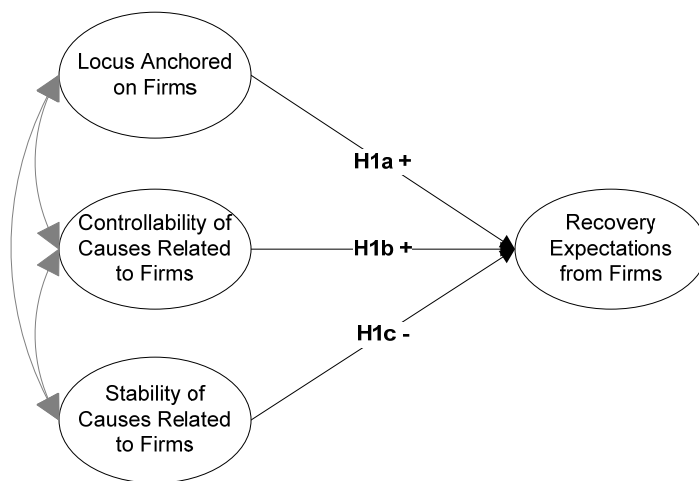


Figure 3.2 Relations between Perceived Justice and Recovery Expectations

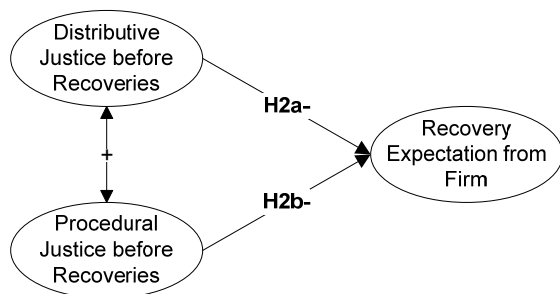


Figure 3.3 Relations between Attributions and Perceived Justice

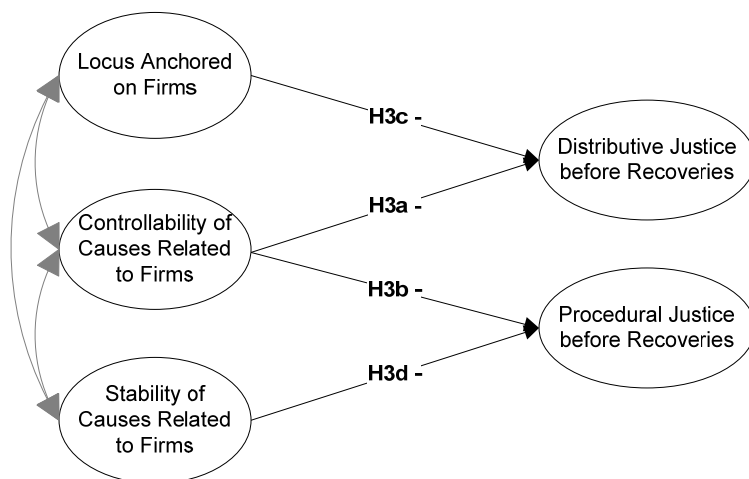


Table 3.1 Recovery Strategies Identified by Previous Studies

	Bell and Zemke (1987)	Bitner et al. (1990)	Kelley et al. (1993)	Johnston (1995)	Boshoff (1997)
Apology	√	√	√		
Urgent restatement	√				
Empathy	√			√	
Symbolic atonement	√				
Follow up	√				
Acknowledgment		√			
Explanation		√			
Compensation		√			√
Discount			√		
Correction			√		
Management/employee intervention			√		
Correction plus			√		
Replacement			√		
Refund			√		√
Information				√	
Action				√	
Fast response					√

## **CHAPTER 4**

### **RESEARCH DESIGN AND METHODOLOGY**

This chapter presents research design and methodology, including experimental design, sample description, scenario design, questionnaire design, data collection methods, and measurement of variables. Reliabilities and validities of measures are also provided at the end of this chapter.

#### **Research Methods in Service Failure and Recovery**

There are three commonly used methods in the studies of customer satisfaction, service quality, and service failure and recovery: the critical incident technique, experiments, and surveys. Each method has its own advantages and disadvantages.

##### **Surveys**

Studies using a survey approach have superior generalizability and greater external reliability because they are based on actual marketing exchanges (Churchill and Iacobucci 2005). Surveys are based on people's knowledge, experience, information, or opinions. Surveys allow us to assess a large set of variables. In a service failure and recovery study, surveys can collect responses on the majority of factors such as perceived justice, attribution of service failure, satisfaction with a particular service failure and recovery encounter. Many studies have used surveys to examine customer satisfaction, consumer evaluation of service quality, and consumer response to service failure and recovery (Bolton and Drew 1991; Carman 1990; Cronin and Taylor 1992; Kelley and Davis 1994; Parasuraman et al. 1988; Resnik and Harmon 1983).

Surveys have some drawbacks. First, since surveys do not seek to manipulate variables, they are not able to control extraneous factors. In service failure and recovery studies, respondents generally conduct a survey based on their memory of a service failure and recovery incident. There is a lag between the service encounter and the survey. This lag makes the recall of key elements of the service encounter inaccurate. The affective reactions to a particular incident may also decay. It is possible that consumer evaluation of a particular incident confound with their general service quality attitude. In addition, surveys in service failure and recovery studies require a large sample since only a small proportion of consumers actually experience both service failures and recoveries. It is necessary to survey a large sample to obtain a handful of service failure and recovery examples.

### **The Critical Incident Technique**

The critical incident technique (CIT) is a useful method in conducting exploratory studies. It has been claimed as an inductive method (Bitner et al. 1990; Flanagan 1954) and used in the theory development stage rather than the theory verification stage. CIT helps us understand the phenomena, classify phenomena into different categories, and extract factors from information obtained from consumers. As Bitner et al. (1990) state:

“Critical incident technique consists of a set of specifically defined procedures for collecting observations of human behavior and classifying them in such a way as to make them useful in addressing practical problems. The CIT as a method of classification can be categorized with other inductive grouping procedures such as factor analysis, cluster analysis, and multidimensional scaling. Such methods determine categories based on analysis of a specific set of data and are particularly useful when there is little documentation of properties that are likely to be important for classifying. Unlike the other grouping procedures, however, CIT uses content analysis of stories, rather than quantitative solutions, in the data analysis stage of the procedure.

CIT takes the stories that people have told and asks questions of the stories in order to classify each one within the scheme.”

CIT is an appropriate method in the initial stage of studies for service failure and

recovery. Several researchers used CIT to identify types of service failures, recovery attributes, and the relationship between failures, recoveries, and customer satisfaction (Bitner et al. 1990; Folkes 1984; Hoffman et al. 1994; Kelley et al. 1993). CIT is helpful in understanding the phenomena and obtaining knowledge about service failure and recovery. It may not be appropriate for testing the causal relationships among factors.

## **Experiments**

The most commonly used experimental methodology is role-playing experiments (scenarios) in which subjects are asked to read a short description of a scenario and respond to questions regarding perceptions of justice, attribution, and satisfaction. Role-playing experiments have many advantages, such as greater internal validity, easy manipulation of variables, easy control over unmanageable variables, and compression of time and expense involved in the study (McCollough 1995; Smith 1997). Role-playing experiments have drawbacks as well, such as less external validity and possible inability of subjects to project their behaviors and to respond as they actually would in a real situation.

Even though role-playing experiments have been used by many researchers in service failure and recovery studies, the challenge of role-playing experiments is whether the scenario could elicit the same type and depth of emotions among subjects. The way to mitigate the possible negative effect of this method is to relate the scenario to the subjects' real experience as much as possible, such as asking subjects to evaluate the service firm they have patronized and asking subjects about tasks with which that they are often involved. Despite drawbacks of role-playing experiments, this method has been intensively used in service failure and recovery studies (Bitner et al. 1990; Boulding et al. 1993; Folkes 1984; Folkes and Kotsos 1986; Goodwin and Ross 1992).



Considering the pros and cons of different research methods and the characteristics of this study, which requires variable manipulation and causal relationship testing, it was decided that the scenario-based experiment is more suitable for this study. The detailed research design is presented below.

### **Experimental Design**

This study is divided into four sections (see Figure 4.1). A service failure scenario is presented in the second section. The service failure scenario involves multiple causal agents. The three dimensions of attribution are measured according to consumers' inferred causality. Comparing the manipulated scenario design, this method has several advantages. First, this type of scenario design is closer to reality because it considers all possible causal agents that may contribute to a failure scenario. Second, when encountering a failure, consumers may not have accurate information about what causes the failure. Consumer attributions largely depend on their prior experience. Self-reported consumer attributions capture consumers' subjective evaluation of the cause of a failure. Third, personality influences consumer attributions as well. It is possible that consumers derive different attributions even when they encounter the same failure scenario. Manipulated scenarios do not consider the influence of personality on consumer attributions. Measured consumer attributions reflect the variations of consumer personality.

One failure scenario involving three causal agents was presented to participants in the failure stage. Participants were asked to evaluate their responses to the failure including attributions of the service failure (locus, controllability, and stability), distributive justice, procedural justice, disconfirmation, customer satisfaction, and recovery expectations. The three dimensions of attribution are measured using a 9-point bipolar scale and other constructs are measured with a 7-point Likert scale.

The third section is 2×2×3 between-subjects experimental design in which recovery attributes are manipulated. The three recovery attributes are compensation (no compensation/compensation), speed of reaction (slow/fast), and apology (no apology/partial apology/apology). .

The purpose of manipulating apology in this study is two-fold. First, an apology is used to form the three types of recovery strategies: superior, adequate, and inferior strategies (to be discussed later). The second purpose is to reexamine the effect of an apology on service encounter satisfaction. An apology is the most controversial recovery attribute. Service failure and recovery studies reveal mixed effects of an apology on customer satisfaction. For example, Johnston (1995 b) found that apology is not needed for service recovery. This conclusion is contrary to the findings from other studies (Bell and Zemke 1987; Bitner et al. 1990; Kelley et al. 1993). It is valuable to reexamine the effect of an apology on service encounter satisfaction in this research context.

Consistent with the suggestion from a recent study conducted by Richard and Walker (2007), an apology in this study is manipulated at three levels. Richard and Walker (2007) suggest that an apology contains four elements: acknowledgement of the event, expressing of sympathy, expressing of remorse, and admission of fault. Admission of fault is an aspect that distinguishes apology from other forms of accounting for one's behavior. Richard and Walker (2007) term apology without admission of fault as a partial apology. When a person only shows sympathy without admitting the fault, the person offers a partial apology. In contrast, apology is defined as a partial apology plus admission of fault. Adopting the definition of apology introduced by Richard and Walker (2007), this study manipulates apology at three levels: no apology, partial apology, and apology.

A total of twelve recovery profiles were created. Each participant was exposed to one

profile with different combinations of recovery attributes. Participants evaluate the recovery profile using 7-point Likert scales in terms of distributive justice, procedural justice, service encounter satisfaction after recovery, overall satisfaction with the organization, and behavioral intentions.

### **Sample Description and Data Collection Methods**

A student sample is used for this study because students are real customers for the type of service providers selected for this study. The type of service providers selected for this study is restaurants. Students are considered experienced customers of restaurants. Everyone who participated in this study claimed that he/she had patronized a restaurant at least once during the last three months. Sampling experienced customers makes the evaluation of customer satisfaction more valid. Meanwhile, the familiarity of the context increases participant involvement and motivations in the study. The use of consumers that have been engaged in the service act helps ensure realism and increase external validity.

The failure presented to participants involved several causal agents. The scenario described to participants is realistic and relevant to their experience. The type of service used in this study also provides an appropriate setting for the failure and recovery efforts to be explored.

The sample of this study consisted of 455 undergraduate business students from Kent State University. Data were collected via self-report questionnaires that were administered in a small class with 30-40 students or in groups of 5-10 students. Students received extra credit in exchange for their voluntary participation in the study. Of the 455 participants, 44.4% were male and 55.6% were female. Ninety-five percent of participants were between the age of 19 and 24; 5% were between 25 and 45. In terms of class rank, 23% were sophomore, 24% were junior, and 52% were senior students. Freshmen and special students constituted another one percent. Ninety-

eight participants claimed that they were currently working at a restaurant, and 254 students claimed that they had worked in a restaurant in the past. The profile of students showed that the restaurant industry was familiar to participants and that they had enough experience with restaurants.

### **Questionnaire Design**

The questionnaire used in this study composed both open-ended and structured questions. The research procedure for this study was presented in Figure 4.1. The questionnaire was divided into four sections. The first section gathered participants' background information in regards to restaurants. Participants were first asked to name a restaurant they had patronized during the last three months and then answered a series of questions that described their experience and relationship with this restaurant, such as time of the last visit, total bill on the last visit, frequency of visits, customer loyalty to the restaurant, and overall satisfaction with this restaurant. Seven-point Likert scales were used in these questions. The purpose of these questions was to help participants recall some details about their last visit and their overall evaluations of the restaurant.

In the second section, participants engaged in a role-playing activity where they were asked to imagine their revisit to this restaurant with a hypothetical failure presented. The hypothetical failure scenario involved several causal agents. These causal agents included the restaurant, consumer, or environmental situation. The failure scenario was presented in Appendix I. After reading the failure scenario, participants were asked to answer questions regarding their evaluations of the service failure including their causal attributions of the failure, disconfirmation of service delivery, fairness judgment of the service encounter, affective reactions to the service failure, customer satisfaction, and their recovery expectations from different causal agents.

After a battery of structured questions, participants were asked to turn to the third section

in which recovery strategies containing different attributes were offered and reactions to the recovery strategy and the overall service encounter satisfaction were evaluated. Three recovery attributes were manipulated. Compensation had two levels. Participants either received compensation or did not receive compensation. The speed of reactions had two levels. The server either responded right away or responded after half an hour. The apology had three levels: the server apologized with admission of their fault, apologized without admission of their fault, or did not apologize at all. There was a total of twelve treatments with different combinations of recovery attributes. Each participant was randomly assigned to one treatment. Between-subject design was used to avoid the order effect.

Following the recovery treatment, participants were asked to answer a battery of structured questions including service encounter satisfaction after recovery, overall satisfaction toward the organization, perceived justice after recovery, and behavioral intentions. All of the questions used 7-point Likert scales.

The last section included questions regarding the realism of the failure scenario and recovery profiles and demographic information.

### **Pilot Study**

A pilot study was conducted to pretest the scenario design and measures of constructs. Four hundred and seventy students participated in the pilot study. The structure of the questionnaire for the pilot study is similar to the final study.

A failure scenario with an up-scale restaurant was presented to participants in the pilot study. Three possible causal agents were involved in the failure scenario. Participants attributed the failure based on their pre-attitude and relations with the restaurant. After participants read the failure scenario, they were presented with questions adapted from Russell (1982) to measure their

attributions of the failure. In addition, a single item measuring locus of causality was asked to identify the most responsible causal agent perceived by participants. The failure scenario used in the pilot study was presented below:

**You and your friends planned to go to the restaurant you just named for dinner to celebrate a special occasion. You had a reservation for 6:00pm, but your party arrived at 7:30pm (customer) because traffic was heavy (environment). The restaurant was jammed with birthday parties and wedding celebrations (environment). Consequently, you could not be seated until 8:30pm (restaurant). Eventually your server arrived. You placed your order. Your food came late and was cold (restaurant).**

The results from the pilot study showed that the failure scenario was appropriate for this study. Participants viewed the problem occurred as a major problem with a mean of 4.41 and median 5 with 7-point scale. The evaluation of the realism of the failure and recovery are also high with mean 5.12 and 5.13, and media 5.00 and 5.00 respectively. It indicated that the scenario used in the study occurred often and was realistic. In terms of the most blamed causal agent, 138 participants put blame on the restaurant for the failure; 125 put blame on themselves; 132 viewed the failure as situational; and 75 believed that nobody should be responsible for the failure. Examination of the relationship between the single measure of locus and other variables such as satisfaction and complaint intentions revealed that there was no difference in customer satisfaction and complaining intention between the group attributing the failure to environmental situations and the group attributing the failure to nobody. Therefore, the two groups were merged for analysis purposes.

The pilot study identified some problems in the measures of causal attributions. Students were confused by the way the questions were being presented. Meanwhile, the reliability of locus, controllability, and stability were .70, .35, and .45 respectively. The low reliability of controllability and stability was probably because the failure scenario involved three causal agents while the attribution measures developed by Russell (1982) were anchored on only

internal/external of a causal agent. Due to the low reliability of attribution measures, Russell's measures of attribution were abandoned and new scales were developed in the final study.

In the service recovery stage, four recovery attributes were manipulated to test the relationship between different recovery attributes and three dimensions of perceived justice. The measures of distributive justice, procedural justice, and interactional justice in the pilot study were adapted from Smith et al.'s (1999) study. These measures exhibited good reliability.

To fit the objectives of the current study, three recovery attributes remained in the final study. In addition, measures for procedural justice and attribution were altered. Perceived justice was measured both before and after recovery.

### **Measures**

The measures in this study were borrowed or adapted primarily from previous studies in marketing and sociology. Customer satisfaction, disconfirmation, and distributive justice were borrowed from the marketing literature (Bitner and Hubbert 1994; Blodgett et al. 1993; Oliver 1980; Oliver and Swan 1989a), while attribution and procedural justice were developed and adapted from sociology (Leventhal 1980; Walster 1966; Bulman and Wortman 1977). The scales and sources of these measures were presented in Table 4.1. Items for each construct were presented in Table 4.2.

### **Consumers' Relationships with Firms**

The first section gathered information from participants regarding their relationship with the restaurant, such as the frequency with which they patronize the restaurant, the perceived loyalty to the restaurant, and their commitment to the restaurant. These factors were used to examine the validity of consumer attribution measures and other measures, and provide basic

descriptive information about the sample for classification and comparison purposes.

At the beginning of the questionnaire, participants were asked to name a restaurant that they patronized during the last three months, the number of people during the last visit, and the total amount spent on that visit. Following the three open-ended questions, participants were asked to answer a series of structured questions regarding their frequency of patronization, their perceived loyalty, perceived service quality, and overall customer satisfaction with the restaurant.

### **Attribution Measures**

There is a debate regarding how to measure attribution in order to preserve respondents' naturalistic character. Harvey et al. (1980) suggests using "unsolicited attribution" measures. Unsolicited attribution measures allow respondents to report various types and magnitude of attribution in the process of describing how they feel about the event.

Elig and Frieze (1979) questioned the reliability and validity of "unsolicited attribution" measures. They compared the unstructured and structured measures, and found that open-ended response measures (unsolicited attribution measures) had poor reliability and validity compared to structured measures (e.g., rating scales).

Due to the low reliability for controllability and stability in the pilot study, this study adapted measures of attribution from previous studies in sociology and marketing (Bulman and Wortman 1977; Hess 2003; Walster 1966). Two items were developed for each dimension of attribution. Each question was repeated three times for each of the three causal agents. The two questions measuring locus were "Do you feel that any responsibility should be assigned to restaurant/you and your friends/the situation or "pure" chance for the failure(s) occurred to you?" (Walster 1966) and "How much do you blame restaurant/yourself and your friends/the situation or "pure" chance for the failure(s) occurred to you?" (Bulman and Wortman 1977). The two items



measuring controllability were “To what extent do you believe what happened to you could have been avoided by restaurant/you and your friends/by chance?” (Bulman and Wortman 1977) and “To what extent that the problem(s) occurred could have been prevented by restaurant/you and your friends/by chance?” (Hess et al. 2003). The two items for stability were “The restaurant/you and your friends/situation causes this kind of failures infrequently/frequently,” and “The cause within the restaurant/related to you and your friends/related to the situation is likely to be temporary/permanent.”

The measures of attribution used in this study did not assume that attributing to one causal agent was inversely dependent on attributing to other causal agents. However, correlations among causal agents are allowed.

In addition to the above measures, one single measure of locus adapted from Bulman and Wortman (1977) was used to validate consumer attributions of failures. This question asked participants to assign a percentage of blame to each causal agent so that the overall assignment of blame totaled 100%. This construct was used to supplement the locus measure described above and verify whether consumers gave a consistent answer in this study.

### **Disconfirmation**

The disconfirmation measures were first developed by Oliver and Swan (1989 a, b). Many studies adapted the disconfirmation measures with different degrees of modification. This study adapted the two items of disconfirmation from Hess et al. (2003). The two items were measured using a 7-point Likert scale.

### **Perceived Justice**

Measures for distributive justice were borrowed from previous studies. Procedural justice measures were adapted from studies in sociology and marketing.

***Distributive justice.*** Different measures for distributive justice were developed by previous studies (Oliver and Swan 1989; Tax 1993). Distributive justice measures were constructed based on different rules identified in the social justice literature such as equity, equality, and need (Blodgett et al. 1997; Cook and Messick 1983; Deutsch 1985; Smith et al. 1999). Each of the rules identified were relevant in determining distributive justice. The distributive justice scale used in this study was adapted from Smith et al. (1999).

***Procedural justice.*** Although many marketing studies developed measures to evaluate procedural justice (Blodgett et al. 1997; Clemmer 1988; Smith et al. 1999; Tax 1993), all of these studies primarily focus on procedural justice toward the service recovery process. Procedural justice in this study aims to measure consumer evaluation of the whole service delivery process. The whole service delivery process included not only the recovery process but also the service delivery during the failure stage. Due to the different conceptualization of procedural justice in this study, a new set of measures for procedural justice was needed. The measures of procedural justice were developed based on two of six rules of procedural justice (consistency and correctability) identified by Leventhal (1980). A total four items were created and used a 7-point Likert scale to obtain subjects responses.

## **Satisfaction**

Different types of satisfaction exist in service failure and recovery encounters. Smith and Bolton (1998) distinguish overall customer satisfaction with an organization from service encounter satisfaction. Bitner and Hubbert (1994) found that the overall customer satisfaction with an organization and service encounter satisfaction were distinct in the minds of consumers. The overall customer satisfaction with an organization evaluated the global satisfaction and reflected customers' cumulative feelings about multiple encounters with the organization while

service encounter satisfaction was more transactional specific and reflected customer feelings about failure and recovery transactions (Bolton and Drew 1992; Parasuraman et al. 1994; Smith and Bolton 1998). These studies suggest that overall satisfaction was updated after each service encounter. In this study, customer satisfaction was measured four times at various points of service delivery process: overall satisfaction with the organization before the failure, service encounter satisfaction after failure, service encounter satisfaction after recovery, and updated overall customer satisfaction with the organization after the failure/recovery encounter.

There are many customer satisfaction studies in marketing literature. Each study measured customer satisfaction using slightly different wordings. This study adapted the customer satisfaction measures from Hess et al. (2003). Satisfaction was measured using three items with a 7-point Likert scale.

### **Expectations after Failure**

The failure scenario in this study involved not only the restaurant, but also consumer and environmental situations. Considering that each causal agent could trigger consumer expectations from that particular agent, expectations after failure were measured toward all three causal agents. However, items used to measure expectations from different causal agents were different. Recovery expectations from the restaurant were based on consumer perceived justice. Three items were adapted from Hess et al. (2003). Since none of the previous studies considers expectations from consumers themselves and situation, two items for expectations of actions from consumers and one item for expectation from situations were developed to fit the needs of the current study. The six items for expectations after failure are listed in Table 4.2.

### **Behavioral Intentions**

The common measures for behavioral intentions include consumer willingness to re-

patronize the restaurant and to provide favorable word of mouth. Three items were adapted from Smith (1995) to measure consumer behavioral intentions after failure and recovery (see Table 4.2).

### **Reliability and Validity**

This section presents the reliability and validity of constructs measured in this study. These constructs include attribution, disconfirmation, customer satisfaction, distributive and procedural justice, and behavioral intentions.

#### **Reliability of Measures**

Reliability of measures was assessed using Cronbach's alphas to ensure that items had reasonably good internal consistency and measured the same underlying construct consistently.

Many constructs used in this study were well-established constructs and were expected to have very high reliability. Cronbach's alphas are reported in Table 4.3. As expected, reliabilities of satisfaction at four different points of service delivery (overall satisfaction with organization before encounter, service encounter satisfaction after failure, service encounter satisfaction after recovery, and overall satisfaction with organization after encounter) ranged from .8062 to .9736. Reliabilities of disconfirmation for failure and recovery were .9320 and .9394 respectively. The Cronbach's Alpha for behavioral intentions was .9332. The reliability analysis indicated that these constructs had good internal consistency.

Reliability of locus was assessed along different causal agents. Reliabilities of locus anchored on restaurant, consumer, and environmental situation ranged from .8187 to .8801. Reliabilities of controllability anchored on restaurant, consumer, and environmental situation ranged from .8178 to .8587. Cronbach's Alphas for locus and controllability indicated good

internal consistency for these measures. Reliabilities of stability anchored on restaurant, consumer, and environmental situation were .6660, .6967, and .4938 respectively, indicating low internal consistency of these measures. Stability of causes anchored on restaurant and consumer were acceptable (slightly below .7). Stability anchored on environmental situation was below .5 indicating poor internal consistency. The relatively low internal consistency of stability was probably caused by the context used in this study. Stability anchored on a specific causal agent such as restaurant or consumer is easy to understand. Stability anchored on situational factors could cause confusions and led to low internal consistency of measures. Since stability of causes anchored on environmental situation was not used in hypotheses testing and stability anchored restaurant and consumer were acceptable, the two measures of stability were kept for the final data analysis.

Distributive justice and procedural justice were measured both before and after recovery to capture consumers' perceived justice change due to the recovery effort from the restaurant. Items for distributive justice were borrowed from Smith et al. (1999). Cronbach's Alphas for distributive justice before and after recovery were .7373 and .8712 indicating good reliability. Four items were developed to reflect consistency and correctability of procedural justice (Leventhal's 1980). Cronbach's Alphas of procedural justice before and after recovery were .7550 and .8974 respectively, indicating good internal consistency.

Expectations after failure were measured along three different causal agents. Three items measuring recovery expectations from the restaurant were adapted from Hess et al. (2003). The reliability was .7874 indicating good internal consistency. Two items measuring expectations of actions had relatively low Cronbach's Alphas at .60. The two items measuring expectations of actions from consumer were developed specifically to fit the research context. They could not be borrowed from other studies. In addition, the purpose of the two items was to confirm the

proposition proposed in Chapter 2. They were not used for hypothesis testing. Therefore, developing new measures was not necessary. Only one item was used to measure expectations from environmental situation.

The means and standard deviations for constructs and their respective indicators were presented in Table 4.3.

### **Validity of Constructs**

Convergent validity and discriminant validity of attribution and perceived justice were also assessed in this study. Convergent validity would be established if it were shown that items measuring the same construct were related to each other. The discriminant validity would be established if it were shown that measures that should not be related were indeed not related.

Principal components analysis was used to analyze convergent validity separately for each construct. Only one factor was extracted for each construct. Factor loadings for all measures are presented in Table 4.3. As displayed in Table 4.3, except one of procedural justice item before recovery (PJB-CONS), all other factor loadings were .70 or higher. To keep consistent measures for procedural justice both before and after recovery, PJ-CONS item was eliminated from further analysis for procedural justice both before and after recovery. Overall, the results provide strong evidence of convergent validity constructs used in this study.

Principal components factor analysis with varimax rotation was conducted to assess convergent validity and discriminant validity for the three dimensions of attribution and two dimensions of perceived justice. Table 4.4 displays the final rotated factor matrix for the two dimensions of perceived justice both before and after recovery. The rotated factor pattern for perceived justice before recovery showed high convergent validity and discriminant validity. Two factors were extracted from the principal components analysis and all items were loaded on the

appropriate factor. The two factors extracted account for 61.9 percent of the total variance for perceived justice before recovery. The correlation matrix displayed in Table 4.5 also indicates the high convergent and discriminant validity for the two dimensions of perceived justice before recovery.

Distributive justice and procedural justice after recovery showed poor discriminant validity. In the initial factor analysis, only one factor was extracted from the seven items (four for distributive justice and 3 for procedural justice). It indicates that the two constructs were highly correlated. After forcing the number of factors to be extracted to two, items were loaded on their correspondent factor. The two factors together account for 77.9 percent of the total variance for perceived justice after recovery. The correlation matrix for distributive justice and procedural justice after recovery also indicates low discriminant validity between the two constructs. The possible explanation is that recovery attributes influenced consumer evaluations of both distributive justice and procedural justice causing the two dimensions of perceived justice to be highly correlated.

Table 4.5 displays the rotated factor matrix for the three dimensions of attribution anchored on three different causal agents. The initial factor analysis shows that only two factors were extracted from the six items across all three causal agents. Locus and controllability were loaded on the same factor. The pattern of factor loadings indicates that the discriminant validity was low between locus and controllability. After forcing the number of factors to be extracted to three, items for controllability were separated from items for locus. The finding was consistent with the conclusion from the study conducted by Tsui et al. (2004). These authors suggested that due to the high correlation between locus and controllability, attribution should have only two dimensions. Locus and controllability should be merged as one dimension. They named this dimension responsibility.

### **Summary**

This chapter introduced the research methodology used for this study. This chapter first enumerated a number of methodologies that were commonly used in these types of studies. After comparing the pros and cons of differing methodologies, an experiment was selected for this study. Subsequently, this chapter presented the experimental design, sample and data collection methods, questionnaire design, and pilot study. All measures used in this study were introduced and the reliability and validity of the study constructs were assessed using principal components factor analysis. In general, measures in this study had very good reliability, except measures for stability and expectations of actions from consumers. The results from the discriminant validity analysis identified relatively low discriminant validity between the two dimensions of perceived justice after recovery and between locus and causality. It is possible that recovery attributes had an impact on consumer evaluation of distributive justice and procedural justice. The low discriminant validity between locus and controllability was probably due to the similarity in conceptualization of the two constructs. The low discriminant validity between locus and controllability confirmed the findings from a previous study conducted by Tsiros et al. (2004).



Figure 4.1 Research Procedure

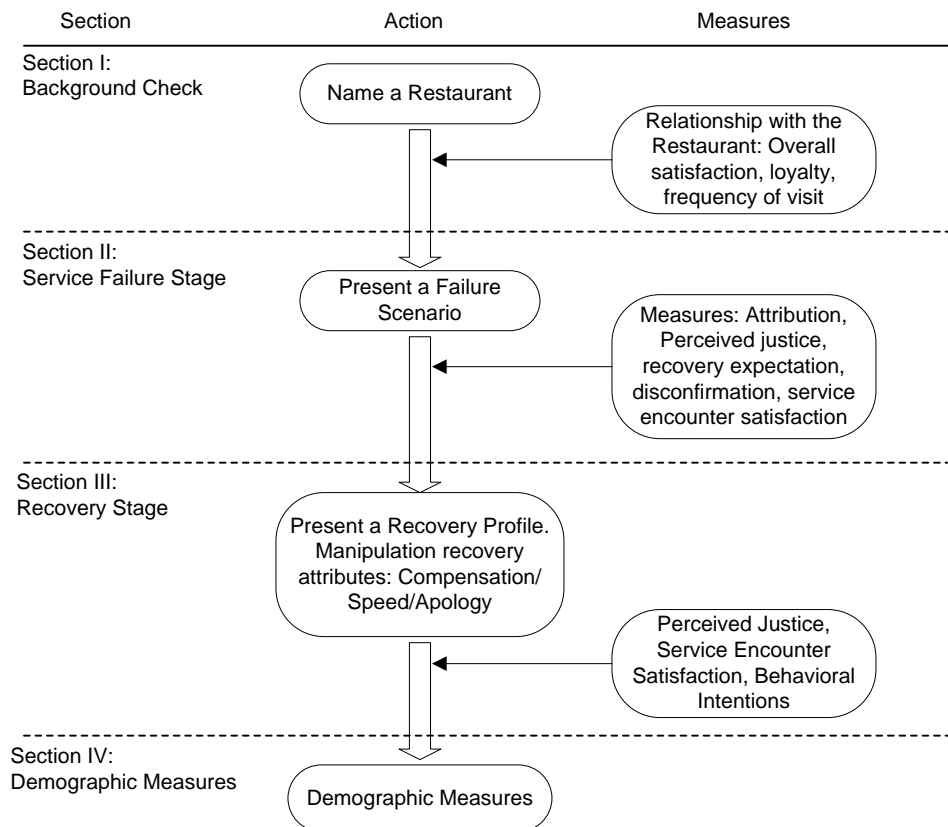


Table 4.1 Summary Descriptions of Constructs

Theoretical Construct	Measures	Source
Descriptive Measures:		
Number of Past Encounter with the Organization	3-item Likert Scale	Adapted from Hess, et al. 2003
Customer Loyalty	2-item Likert Scale	Adapted from Kelley and Davis, 1994
Perceived Service Quality	3-item Likert Scale	Adapted from Hess, et al. 2003, and Richard and Allaway 1993
Satisfaction with the Service Performance	3-item Likert Scale	Adapted from Hess et al. 2003
Attribution Measures:		
Locus	2-item bipolar adjective scale	Adapted from Walster 1966 and Bulman and Wortman 1977
Controllability	2-item bipolar adjective scale	Adapted from Bulman and Wortman 1977 and Hess et al. 2003
Stability	2-item bipolar adjective scale	Adapted from Hess et al. 2003
Other Constructs:		
Disconfirmation	2-item Likert scale	Adapted from Hess et al. 2003
Satisfaction	3-item Likert scale	Adapted from Hess et al. 2003
Distributive Justice	4-item Likert scale	Adapted from Smith 1995
Procedural Justice	4-item Likert scale	Constructed by Researcher
Expectations after Failure	6-item Likert scale	Adapted from Hess et al. 2003 and constructed by Researcher
Behavioral Intentions	3-item Likert scale	Adapted from Smith 1995

Table 4.2 Scale Items for the Study Constructs

<b>Locus of Causality</b>
2 items – 9-point bipolar semantic scale
1. Do you feel that nay responsibility should be assigned to ... for the failure(s) occurred? (Not at all Responsible/Completely Responsible)
2. How much do you blame the restaurant for the failure(s) occurred to you? (Not at all/Completely)
<b>Controllability</b>
2 items – 9-point bipolar semantic scale (Not at all/Completely)
1. To what extent do you believe that ... could have avoided what happened to you?
2. To what extent that the problem(s) occurred could have been prevented by ...?
<b>Stability</b>
2 items – 9-point bipolar semantic scale
1. The ... causes this kind of failures (Infrequently/Frequently)
2. The cause within ... is likely to be (Temporary/Permanent).
<b>Disconfirmation</b>
2 items -7-point scale-Anchored at endpoints (Worse than expected/Better than expected)
1. The outcome of the eating-out experience was ...
2. The result of the eating-out experience was ...
<b>Distributive Justice</b>
4 items- 7-Likert Scale-Anchored at endpoints (Strongly Disagree/Strongly Agree)
1.The outcome of the eating-out experience was not right
2. The outcome of the eating out experience was fair.
3. I got what I deserved.
4. I did not get what I needed.

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#### Procedural Justice

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4 items - 7 Point Likert Scale- Anchored at endpoints (Strongly disagree/strongly agree)

1. The quality of services provided by the restaurant was not consistent.
2. The restaurant was not flexible in providing services.
3. The process of service delivery of the restaurant was not fair.
4. The restaurant did not have instructions to deal with unusual situations.

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#### Customer Satisfaction

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3 items -7 point Likert Scale- Anchored at endpoints (Strongly disagree/strongly agree)

1. I was pleased with the eating-out experience.
2. I was unhappy with the eating-out experience.
3. I was dissatisfied with the eating-out experience.

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#### Expectations after Failure

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6 items -7 point Likert Scale -Anchored at endpoint. (Strongly disagree/Strongly agree). The first three items are recovery expectation from the restaurant. The following two are expectation of actions from the consumer. The last item is the expectation from the situation.

1. I expect the restaurant to do something in its power to solve the problem.
2. I do not expect the restaurant to exert much effort to solve the problem.
3. I expect the restaurant to try to make up for my lost.
4. We will plan better to avoid the recurrence of this kind of failures in the future.
5. We will come out earlier to avoid the traffic jam next time when we go out for dinner.
6. I expect that the traffic will not be so heavy next time when we go out for dinner.

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#### Behavioral Intentions

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3 Items - 7 Point scale- Anchored at endpoint (Not at all likely/Very Likely)

1. I would visit this restaurant again.
  2. I would recommend this restaurant to others.
  3. I would go to this restaurant more often.
-

Table 4.3 Descriptive Statistics and Reliability of Constructs

Construct and Item Measures	Mean (SD)	Cronbach's Alpha and Factor Loading
Locus-Restaurant (LOCUS <sub>restaurant</sub> )	6.06 (1.58)	.825
LR-RES: responsibility assigned to restaurant	6.18 (1.69)	.922
LR-BLAM: how much blame the restaurant	5.94 (1.73)	.922
Locus-Consumer (LOCUS <sub>consumer</sub> )	4.93 (2.02)	.880
LC-RES: responsibility assigned to consumer	4.99 (2.16)	.945
LC-BLAM: how much blame the consumer	4.87 (2.11)	.945
Locus-Situation (LOCUS <sub>situation</sub> )	5.29 (1.75)	.819
LS-RES: responsibility assigned to situation	5.29 (1.85)	.920
LS-BLAM: how much blame the situation	5.28 (1.96)	.920
Controllability-Restaurant (CON <sub>restaurant</sub> )	6.28 (1.63)	.818
CR-AVOID: avoidable by restaurant	6.14 (1.83)	.920
CR-PREV: prevented by restaurant	6.41 (1.72)	.920
Controllability-Consumer (CON <sub>consumer</sub> )	5.27 (2.07)	.859
CC-AVOID: avoidable by consumer	5.28 (2.24)	.936
CC-PREV: prevented by consumer	5.26 (2.18)	.936
Controllability-Situation (CON <sub>situation</sub> )	4.97 (1.86)	.847
CS-AVOID: avoidable by situation	5.07 (2.01)	.931
CS-PREV: prevented by situation	4.87 (1.98)	.931
Stability-Restaurant (STAB <sub>restaurant</sub> )	3.37 (1.54)	.666
SR-FREQ: infrequency/frequency	3.71 (1.91)	.868

SR-TEMP: temporary/permanent	3.04 (1.63)	.868
Stability-Consumer (STAB <sub>consumer</sub> )	3.27 (1.61)	.697
SC-FREQ: infrequency/frequency	3.52 (1.94)	.877
SC-TEMP: temporary/permanent	3.01 (1.75)	.877
Stability-Situation (STAB <sub>situation</sub> )	4.37 (1.55)	.494
SS-FREQ: infrequency/frequency	5.13 (1.93)	.815
SS-TEMP: temporary/permanent	3.62 (1.88)	.815
Distributive Justice before Recovery (DJ <sub>before</sub> )	3.11 (1.15)	.737
DJB-RIGHT: outcome of was not right	3.01 (1.53)	.707
DJB-FAIR: outcome of was fair	3.40 (1.38)	.763
DJB-DESER: got what I deserved	3.01 (1.64)	.717
DJB-NEED: get what I needed	3.00 (1.57)	.810
Distributive Justice after Recovery (DJ <sub>after</sub> )	3.59 (1.72)	.871
DJA-RIGHT: outcome of was not right	3.69 (2.07)	.885
DJA-FAIR: outcome of was fair	3.71 (1.92)	.865
DJADESER: got what I deserved	3.40 (1.91)	.861
DJA-NEED: get what I needed	3.51 (2.01)	.831
Procedural Justice before Recovery (PJ <sub>before</sub> )	3.71 (1.12)	.755
PJB-CONS: quality is not consistent	3.01 (1.47)	.665
PJB-FLEX: not flexible in providing services	3.76 (1.53)	.828
PJB-FAIR: process was not fair	3.93 (1.46)	.805
PJB-USUA: no instructions for unusual situations	4.12 (1.46)	.733
Procedural Justice after Recovery (PJ <sub>after</sub> )	3.82 (1.70)	.897
PJA-CONS: quality is not consistent	3.44 (1.79)	.840
PJA-FLEX: not flexible in providing services	3.84 (2.10)	.908

PJA-FAIR: process was not fair	3.82 (1.95)	.929
PJA-USUA: no instructions for unusual situations	4.18 (1.91)	.819
Disconfirmation of Failure (DISC <sub>before</sub> )	2.77 (1.22)	.932
DISB-OUT: the outcome of the eating out experience is worse/better than expected	2.76 (1.25)	.968
DISB-RESULT: the result of the eating out experience is Worse/better than anticipated	2.79 (1.27)	.968
Disconfirmation of Recovery (DISC <sub>after</sub> )	3.71 (2.16)	.939
DISA-OUT: Restaurant's response is worse/better than expected	3.79 (2.24)	.971
DISA-RESULT: The way the restaurant handle the problem is worse/better than anticipated	3.62 (2.22)	.971
Expectations from Restaurant (EXP <sub>restaurant</sub> )	5.49 (1.13)	.787
EXPR-SOLVE: do something to solve problem	5.68 (1.22)	.896
EXPR-EFFORT: make effort	5.59 (1.40)	.836
EXPR-MAKE: try to make up	5.21 (4.41)	.791
Expectation from Consumer (EXP <sub>consumer</sub> )	5.71 (1.00)	.593
EXPC-PLAN: plan better	5.78 (1.07)	.845
EXPC-AVOID: come out earlier to avoid traffic	5.63 (1.29)	.845
Expectations from Environmental Situation (EXP <sub>situation</sub> )		
EXPS-HEAVY: traffic not heavy next time	3.88 (1.46)	
Overall Satisfaction with Organization before Encounter (OVSAT <sub>before</sub> )	6.07 (1.10)	.964
OVSB-PLE: pleased	6.10 (1.13)	.970
OVSB-HAP: happy	6.09 (1.12)	.982
OVSB-SAT: satisfied	6.03 (1.16)	.947
Service Encounter Satisfaction before Recovery (SESAT <sub>before</sub> )	3.16 (1.32)	.806

SESB-PLE: pleased	3.04 (1.41)	.777
SESB-HAP: happy	3.18 (1.58)	.919
SESB-SAT: satisfied	3.27 (1.65)	.848
Service Encounter Satisfaction after Recovery (SESAT <sub>after</sub> )	3.74 (1.87)	.904
SESA-PLE: pleased	3.65 (2.03)	.880
SESA-HAP: happy	3.80 (2.06)	.944
SESA-SAT: satisfied	3.76 (2.03)	.923
Overall Satisfaction with Organization after Encounter (OVSAT <sub>after</sub> )	4.28 (1.85)	.974
OVSA-PLE: Pleased	4.33 (1.86)	.974
OVSA-HAP: Happy	4.23 (1.92)	.977
OVSA-SAT: Satisfied	4.28 (1.91)	.973
Behavioral Intentions (BINT)	4.35 (1.73)	.933
BI-AGAIN: visit again	4.81(1.87)	.936
BI-MORE: go more often	4.43 (1.92)	.955
BI-RECOM: recommend to others	3.82 (1.80)	.926

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Table 4.4 Results of Factor Analysis for Perceived Justice

A. Rotated Component Matrix for Distributive and Procedural Justice <b>before</b> Recovery		
	Factor 1	Factor 2
	DJ <sub>before</sub>	PJ <sub>before</sub>
DJB-FAIR	.771	.071
DJB-NEED	.767	.217
DJB-DESER	.737	.058
DJB-RIGHT	.654	.191
PJB-USUA	-.044	.855
PJB-FLEX	.207	.820
PJB-FAIR	.371	.708
Eigenvalues	2.336	1.997
% Explained	33.38	28.52
B. Rotated Component Matrix for Distributive and Procedural Justice <b>after</b> Recovery		
	Factor 1	Factor 2
	DJ <sub>after</sub>	PJ <sub>after</sub>
DJA-DESER	.837	
DJA-FAIR	.817	.310
DJA-RIGHT	.697	.343
DJA-NEED	.594	.543
PJA-USUA	.258	.870
PJA-FLEX	.518	.731
PJA-FAIR	.556	.724
Eigenvalues	2.851	2.605
% Explained	40.732	37.218

Method: Principal Components Analysis with Varimax Rotation

Table 4.5 Correlations for Distributive and Procedural Justice

	DJB- RIGHT	DJB- FAIR	DJB- DESER	DJB- NEED	PJB- FLEX	PJB- FAIR	PJB- USUA
DJA-RIGHT		.368	.250	.524	.257	.288	.156
DJA-FAIR	.687		.482	.433	.247	.301	.079
DJA-DESER	.666	.69		.436	.214	.323	.065
DJA-NEED	.684	.591	.59		.293	.391	.170
PJA-FLEX	.719	.656	.653	.63		.542	.529
PJA-FAIR	.768	.675	.665	.678	.82		.435
PJA-USUA	.594	.585	.570	.566	.665	.67	

Note: Above diagonal is the correlation for distributive and procedural justice **before** recovery.  
 Blow diagonal is the correlation matrix for distributive and procedural justice **after** recovery.

Table 4.6 Results of Factor Analysis for Attributions

A. Rotated Component Matrix for Locus, Controllability, and Stability Anchored on Restaurant			
	Factor 1	Factor 2	Factor 3
	CON <sub>restaurant</sub>	LOCUS <sub>restaurant</sub>	STAB <sub>restaurant</sub>
CR-PREV	.891	.260	.001
CR-AVOID	.848	.326	.091
LR-RES	.251	.900	.002
LR-BLAM	.346	.841	.109
SR-FREQ	-.029	.004	.876
SR-TEMP	.108	.084	.854
Eigenvalues	1.709	1.698	1.517
% Explained	28.484	28.297	25.282
B. Rotated Component Matrix for Locus, Controllability, and Stability Anchored on Consumer			
	Factor 1	Factor 2	Factor 3
	CON <sub>consumer</sub>	LOCUS <sub>consumer</sub>	STAB <sub>consumer</sub>
LC-RES	.891	.301	.155
LC-BLAM	.820	.424	.152
CC-AVOID	.365	.851	.171
CC-PREV	.348	.822	.265
SC-TEMP	.032	.156	.886
SC-FREQ	.255	.187	.808
Eigenvalues	1.787	1.730	1.584
% Explained	29.776	28.841	26.403
C. Rotated Component Matrix for Locus, Controllability, and Stability Anchored on Environmental Situation			
	Factor 1	Factor 2	Factor 3
	CON <sub>situation</sub>	LOCUS <sub>situation</sub>	STAB <sub>situation</sub>
CS-AVOID	.901	.216	.085
CS-PREV	.890	.218	.131
LS-RES	.154	.908	.074
LS-BLAM	.313	.847	.125
SS-TEMP	.164	-.047	.824
SS-FREQ	.023	.237	.783

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Eigenvalues	1.754	1.696	1.338
% Explained	29.237	28.261	22.298

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Method: Principal Components Analysis with Varimax Rotation

## **CHAPTER 5**

### **DATA ANALYSIS AND RESULTS**

MANOVA and Structural Equation Modeling (SEM) were used to test the hypotheses. Hypotheses 1-3 were tested by SEM. Attribution, perceived justice, and recovery expectations were treated as continuous variables. Hypotheses 4-7 were tested by MANOVA. The advantage of using SEM to test hypotheses is that it considers all factors simultaneously and is very helpful in understanding the relationship between predictor variables and outcome variables. Meanwhile, SEM is good at distinguishing between indirect and direct relationships between variables and analyzing relationships among latent variables without random errors.

#### **Manipulation Checks**

Since this study used the role-playing technique, it is necessary to check whether the designed scenario is realistic or not. There are two items in the questionnaire to assess consumers' perceived realism of the failure and recovery scenario. The evaluation of realism of the failure and recovery scenario are very high ( $X_{\text{realism}} = 5.52$  for failure and  $X_{\text{realism}} = 5.10$  for recovery with 7-point Likert Scale). The results indicate that the scenario designed for this study is indeed realistic and relevant to the real world. Participants are familiar with the service failure and recovery context.

#### **Analyzing Measures of Attributions**

##### **Preliminary Analyses and Descriptive Statistics**

Means and standard deviations for attribution measures across causal agents are

presented in Table 4.3. The means for latent variables were calculated by averaging the items for that construct. Locus, controllability, and stability were measured three times anchoring on restaurant, consumer, and environmental situation respectively. The paired-sample t test indicates that Locus for restaurant, consumer, and environmental situation are statistically different at .05 levels ( $\text{LOCUS}_{\text{restaurant}} - \text{LOCUS}_{\text{consumer}}$ :  $t = 7.974$ ,  $p < .001$ ;  $\text{LOCUS}_{\text{restaurant}} - \text{LOCUS}_{\text{situation}}$ :  $t = 6.581$ ,  $p < .001$ ;  $\text{LOCUS}_{\text{consumer}} - \text{LOCUS}_{\text{situation}}$ :  $t = -3.02$ ,  $p = .003$ ). The degree to which consumers blame the restaurant for failure is much higher than the degree they blame the environmental situation. Consumers blame themselves the least for failure ( $\text{LOCUS}_{\text{restaurant}} = 6.06$ ,  $\text{LOCUS}_{\text{consumer}} = 4.93$ ,  $\text{LOCUS}_{\text{situation}} = 5.29$ ). The results are consistent with the suggestion from attribution theory that an individual has a tendency to attribute the failure to external factors and attribute the success to internal factors.

The relationships among controllability anchored on restaurant, consumer, and environmental situation show the same pattern. The means for controllability anchored on restaurant, consumer, and situation are statistically different at .05 levels ( $\text{CON}_{\text{restaurant}} - \text{CON}_{\text{consumer}}$ :  $t = 7.28$ ,  $p < .001$ ;  $\text{CON}_{\text{restaurant}} - \text{CON}_{\text{situation}}$ :  $t = 11.01$ ,  $p < .001$ ;  $\text{CON}_{\text{consumer}} - \text{CON}_{\text{situation}}$ :  $t = 2.55$ ,  $p = .011$ ). The results suggest that when the cause is firm related, consumers are more likely to perceive the cause as controllable than when the cause is consumer-related. The cause anchored on environmental situation is perceived less controllable than the causes anchored on restaurant and consumer ( $\text{CON}_{\text{restaurant}} = 6.28$ ,  $\text{CON}_{\text{consumer}} = 5.27$ ,  $\text{CON}_{\text{situation}} = 4.97$ ).

The paired-sample t test also shows that there is no difference between stability anchored on restaurant and stability anchored on consumer. Other two pairs of comparison for stability are statistically significant at .05 levels ( $\text{STAB}_{\text{restaurant}} = 3.37$ ,  $\text{STAB}_{\text{consumer}} = 3.26$ ,  $\text{STAB}_{\text{situation}} = 4.37$ ;  $\text{STAB}_{\text{restaurant}} - \text{STAB}_{\text{consumer}}$ :  $t = 1.34$ ,  $p = .182$ ;  $\text{STAB}_{\text{restaurant}} - \text{STAB}_{\text{situation}}$ :  $t = -12.33$ ,  $p < .001$ ;  $\text{STAB}_{\text{consumer}} - \text{STAB}_{\text{situation}}$ :  $t = -13.81$ ,  $p < .001$ ).

### **Measurement Model for Attribution**

Confirmatory factor analysis (CFA) was used to assess convergent validity and discriminant validity of measures for attribution.

The measurement model for attribution is presented in Figure 5.1. Attribution was comprised three dimensions with six items. The three dimensions were correlated together. Three measurement models of attribution anchored on different causal agents were tested first. Then the three models were compared to examine the metric invariance of attribution across three causal agents using multiple-groups analysis.

The measurement models were tested using the maximum-likelihood method in the EQS program. As suggested by Hu and Bentler (1999), three indices were used to assess goodness of fit of the models: the root-mean-square error of approximation (RMSEA; best if close to .06 or less), the Comparative Fit Index (CFI; best if close to .95 or greater), and Bentler-Bonett Non-Normed Fit Index (NNFI; best if close to .95 or greater). The standardized estimates of path coefficients and model fit indices are presented in Figure 5.2.

As showed in Figure 5.2, the measurement models across the three causal agents fit the data very well (NNFI = .993, .978, and .999; CFI = .997, .991, and .999; RMSEA = .032, .068, and .014 for restaurant, consumer, and situation respectively). In addition, all of the factor loadings are significant ( $p < .05$ ), which provide evidence supporting the convergent validity of the measures (Anderson and Gerbing 1988). Thus, all the latent constructs appear to be well measured by their respective indicators. The coefficients between locus and controllability are consistently higher than the coefficients between locus and stability and higher than the coefficients between controllability and stability across three models. The results confirm our previous conclusion that locus and controllability have relatively low discriminant validity.

Second, the three measurement models were compared to test measurement invariance

across three causal agents using multiple-groups analysis. According to Ployhart and Oswald (2004), multiple-groups analysis includes the following procedures. First, the groups are combined into the multiple groups baseline model (M1), which allows for unconstrained factor loadings and error variances between groups. This model estimates parameters for all groups simultaneously. In order to proceed to test the metric invariance model (M2), the baseline model should provide a reasonably good fit to the data. The model M2 constrains factor loadings to be equal across groups. If doing so does not reduce model fit significantly, the model M2 is supported. That means a construct has the same meaning and interpretation across groups. Equal factor loadings are a prerequisite for making meaningful group comparison of latent constructs. If the model M2 is not supported, we allow partial invariance with respect to the factor loadings.

Next step is to investigate whether the indicator error variances are the same across groups for the model M3. The model M3 constrains the error variances to be equal. If the model M3 is supported, models are invariant with respect to the error variances. Otherwise, partial invariance should be allowed. The final step for testing the measurement invariance is to examine the invariance of covariance and/or path coefficients between factors (M4). The model M4 constrains the covariance and/or path coefficients between factors to be equal.

The results for the multiple-groups analysis are presented in Table 5.1. The fit indices for the model M1 indicate an adequate fit to the data (RMSEA = .026, NNFI = .987, CFI = .995). This model allows for unconstrained factor loadings, error variances, and covariance among the three causal agents. The good model fit leads to the testing of the metric invariance model M2. The model M2 constrains factor loadings to be equal across all causal agents. However, doing so reduces the model fit significantly ( $\Delta\chi^2 = 14.41$ ,  $\Delta df = 6$ ). Therefore, the model M2 is not supported. According to the modification indices, the factor loading for Locus-Blame item is freed to increase the model fit (model M2a). Fit indices for the model M2a suggest that this



model fit the data well and it does not reduce the model fit comparing to the model M1 ( $\Delta\chi^2 = 5.995$ ,  $\Delta df = 4$ ). The model M2a was supported.

In the model M3, all error variances are constrained to be equal. However, doing so reduced the model fit significantly comparing to the model M2a ( $\Delta\chi^2 = 51.446$ ,  $\Delta df = 12$ ). Therefore, the model M3 is not supported. Partial invariance with respect to the error variances has to be allowed. After freeing the error variances for the two items measuring stability, the partial invariant model (Model M3a) does not reduce the model fit significantly comparing to the model M2a ( $\Delta\chi^2 = 14.33$ ,  $\Delta df = 8$ ).

The final step is to constrain all the covariance among latent variables (model M4). The fit indices indicate that the model fit is reduced dramatically ( $\Delta\chi^2 = 62.647$ ,  $\Delta df = 6$ ). The modification indices show that covariance among latent variables are not equal across the three models.

The results of multiple-groups analysis suggest that the factor loadings for Locus-Blame are not equal across the three causal agents. Error variances for the two items measuring stability are not equal across the three causal agents. Finally, coefficients among the three dimensions of attribution are not equal across three causal agents.

### **Measurement Model for Expectation**

The measurement model results for expectation are presented in Figure 5.3. In the measurement model, expectations from firm, consumer, or environmental situation are correlated. The results show that all of the six indicators are related significantly to their respective latent constructs. The standardized path coefficients from each latent construct to the observed indicators range from .431 to .998. All path coefficients are significant at .05 levels. This indicates high validity of items.

The goodness-of-fit indices demonstrate that the model fit the data. The Chi-square statistics is significant at .05 levels due to its sensitivity to sample size. Other fit indices demonstrate a good fit to the data (RMSEA = .058, CFI = .978, NNFI = .958). The results also suggest high discriminant validity among expectations anchored on different causal agents.

### **Measurement Model for Perceived Justice**

The two dimensions of perceived justice were measured twice at two different point of time in this study (before and after recovery). The measurement models for perceived justice before and after recovery were tested separately to assess the convergent validity and discriminant validity the two constructs. Then, the multiple-groups analysis was used to examine the measurement invariance across time.

The estimates and model fit indices of the measurement models for perceived justice before and after recovery are presented in Figure 5.4. The measurement models contain two latent variables and seven indicators (4 for distributive justice and 3 for procedural justice).

The measurement models for perceived justice both before and after recovery fit the data well (Perceived Justice before Recovery:  $\chi^2 = 78.02$ ,  $df = 13$ , NNFI = .875, CFI = .923, RMSEA = .105; Perceived Justice after Recovery:  $\chi^2 = 32.0$ ,  $df = 13$ , NNFI = .987, CFI = .992, RMSEA = .057). The measurement model results for perceived justice before recovery (Figure 5.4 A) show that all seven items are related significantly to their respective constructs. The correlation coefficient between distributive justice and procedural justice is .565 ( $p < .05$ ).

The estimates and fit indices for perceived justice after recovery are presented in Figure 5.4 B. As indicated in Figure 5.4 B, all seven items are significantly related to distributive justice and procedural justice respectively. The correlation coefficient between the two dimensions is very high ( $r = .935$ ). The result is consistent with the finding in Chapter 4 that distributive justice

and procedural justice after recovery have low discriminant validity.

The estimates and model fit indices for perceived justice before and after recovery suggest that the measurement models are not invariant across time. The items in perceived justice model after recovery shows high reliability than in perceived justice model before recovery (Factor loadings are higher in the model after recovery than in the model before recovery). In addition, the correlation coefficient between the two dimensions in the perceived justice model after recovery is stronger than that in the perceived justice model before recovery. Next, the multiple-groups analysis is used to examine the invariance of the measurement model across time.

The multiple-groups analysis for the measurement model of perceived justice before and after recovery follows the same steps outlined above. The baseline model (M1) estimate parameters for the two models (perceived justice before and after recovery) simultaneously. The model M1 allows factor loadings, error variances, and covariance freely estimated. The fit indices indicate a good fit to the data. Thus, further test of the metric invariance model M2 is plausible.

The model M2 constrains all factor loadings to be equal. However, the model M2 reduces the model fit significantly ( $\Delta\chi^2 = 24.69$ ,  $\Delta df = 5$ ,  $p < .05$ ). This indicates a partial invariance with respect to factor loadings. Factor loadings for DJ-NEED and PJ-FAIR are freed to increase the model fit (model M2a). After allowing partial invariance with respect to factor loadings, the model M2a does not reduce the model fit significantly comparing to the model M1 ( $\Delta\chi^2 = 3.15$ ,  $\Delta df = 3$ ,  $p = .39$ ). The next step is to test the invariance with respect to error variances (model M3).

Comparing to the model M2a, the model M3 reduces the model fit significantly ( $\Delta\chi^2 = 35.98$ ,  $\Delta df = 7$ ,  $p < .05$ ). This provides evidence for the partial invariance with respect to error variances. Modification indices suggest that error variances for DJ-DESER, DJ-NEED, and PJ-FLEX need to be freed. The model with partial invariance of error variances shows an adequate

model fit and does not reduce the model fit from the model M2a ( $\Delta\chi^2 = 6.05$ ,  $\Delta df = 4$ ,  $p = .19$ ).

The final model is to test whether covariance between the two factors (distributive justice and procedural justice) are equal across time. After constrained the covariance to be equal (model M4), the model fit is reduced significantly ( $\Delta\chi^2 = 155.32$ ,  $\Delta df = 1$ ). This is a strong indicator that the relationship between the two factors was not equal across time.

The results from the multiple-groups analysis suggest that the measurement models of perceived justice are partially invariant across time. Specifically, factor loadings for DJ-NEED and PJ-FAIR, error variances for DJ-DESER, DJ-NEED, and PJ-FLEX, and the correlation between distributive justice and procedural justice vary across time.

### **Hypotheses Testing**

In Chapter 2, the first proposition states that the degree to which consumers blame a causal agent for a failure should directly affect their expectations from that causal agent. Even though the causal attribution anchored on restaurant is the focus of this study, it is necessary to examine whether the relation between locus of causality and expectation is held for the other two causal agents.

This relationship can be examined by testing the causal model presented in Figure 5.5. Based on the prediction from the first proposition, the direct links between attribution to a causal agent and expectations from that causal agent are expected to be significant and positive. The links between attribution to one causal agent and expectations from other causal agents are also constructed in the model ( $\text{LOCUS}_{\text{restaurant}} \rightarrow \text{EXP}_{\text{consumer}}$ ,  $\text{LOCUS}_{\text{restaurant}} \rightarrow \text{EXP}_{\text{situation}}$ ,  $\text{LOCUS}_{\text{consumer}} \rightarrow \text{EXP}_{\text{restaurant}}$ ,  $\text{LOCUS}_{\text{consumer}} \rightarrow \text{EXP}_{\text{situation}}$ ,  $\text{LOCUS}_{\text{situation}} \rightarrow \text{EXP}_{\text{restaurant}}$ , and  $\text{LOCUS}_{\text{situation}} \rightarrow \text{EXP}_{\text{consumer}}$ ). These links are expected to be non-significant. In addition, attributing to one causal agent is related to attributing to other causal agents theoretically.

Figure 5.5 provides a summary of the maximum likelihood estimates for parameters and model fit indices. There is evidence of an excellent overall fit. All factor loadings are significant and positive. Except the significant Chi-square statistic ( $\chi^2 = 84.54$ ,  $df = 44$ ,  $p < .001$ ), other fit indices indicate a good fit (RMSEA = .045, CFI = .978, NNFI = .967). Therefore, the model structure indicating the relationship between locus of causality and expectations cannot be rejected.

However, the path coefficients between locus of causality and expectations need to be examined carefully. Among the nine coefficients between locus of causality and expectations, only three of them are statistically significant. The recovery expectations from the restaurant are positively associated with the degree to which consumers blame the restaurant for failure. This also supports the hypothesis 1a. The recovery expectations from the restaurant are affected by the degree to which consumers blame failure for themselves. The sign of the effect is also within expectations. The negative relationship between the locus of causality for consumer and recovery expectations from the restaurant indicates that the more consumers blame themselves for a failure, the lower the recovery expectations from the restaurant. The degree to which consumers blame themselves for a failure has a positive effect on expectations of actions from themselves. If consumers blame themselves for a failure, they have a high expectation of actions from themselves in the future. There is no relationship between the attribution anchored on the environmental situation and the expectation from the environmental situation. The non-significant relationship may be caused by the service failure and recovery context adopted in this study. Environmental situations are considered less controllable by anybody.

The correlations among the locus of causality anchored on three different causal agents are significant. As showed in Figure 5.5, the degree to which consumers blame the restaurant for a failure is negatively related to the degree they blame themselves and environmental situations.

Blaming themselves was positively related to blaming the environmental situations. The results confirm the internal and external classification of causes by Heider (1956). Consumers distinguish causes by looking at whether a cause is internal to the restaurant or external to the restaurant. Causes related to consumers and situations are both considered external to the firm.

In sum, the relationship between the locus of causality and expectations across causal agents can be exhibited by the simplified model presented in Figure 5.6.

### **Testing Hypotheses 1-3: Causal Attributions and Recovery Expectations**

Hypotheses 1-3 specify the relationship between attribution, expectations, and perceived justice.

**Hypothesis 1.** Hypothesis 1 predicts the relationship between the three dimensions of attribution anchored on the restaurant and recovery expectations from the restaurant. Hypothesis 1a states that the degree to which consumers blame the firm for a failure has a positive effect on consumers' recovery expectations from the firm. This hypothesis has been tested in above analysis showed in Figure 5.5. The relationship between locus and recovery expectations from restaurant is positive and significant ( $\beta = .387$ ). Hypotheses 1b and 1c predict a positive relationship between controllability and stability of the cause anchored on the restaurant and recovery expectations from the restaurant. Hypotheses 1a, 1b, and 1c are examined together by testing a structure model in Figure 5.7. The model fit indices and parameter estimations are presented in Figure 5.7 as well.

The model fit indices suggest a good model fit to the data ( $\chi^2 = 55.894$ ,  $df = 22$ , NNFI = .964, CFI = .978, RMSEA = .058). Consistent with these overall fit statistics, all factor loadings and path coefficients are statistically significant ( $p < .05$ ). The model also shows a significant correlation between locus of causality and controllability of the cause anchored on the restaurant.

The degree to which consumers blamed the restaurant for a failure is highly correlated with their perceived controllability of the cause anchored on the restaurant. The correlation coefficient is .741 ( $p < .05$ ).

The path coefficient between locus of causality anchored on the restaurant and recovery expectations from the restaurant supports the hypothesis 1a ( $\beta_{\text{locus}} = .313$ ,  $p < .05$ ). The significant and positive relation indicates that the more consumers blame the restaurant for a failure, the higher the recovery expectations from the restaurant would be. The path coefficient between controllability and recovery expectations is also significant and positive ( $\beta_{\text{control}} = .206$ ,  $p < .05$ ) indicating that if consumers perceive the cause of a failure is controlled by the restaurant, the recovery expectations from the restaurant will be higher. Therefore, the hypothesis 1b is also supported. Contrary to the prediction from hypothesis 1c, the path coefficient between the stability and recovery expectations is significant but negative rather than positive ( $\beta_{\text{stability}} = -.140$ ,  $p < .05$ ). That suggests that the more stable of the cause related to the firm, the lower recovery expectations would be. The possible explanation for this negative relationship is that when the cause of the failure is perceived as stable, consumers may have a relatively low expectation of performance from the restaurant. The perceived service quality should be low as well. When a service failure occurs, consumers may not believe that the firm can do a good job in recovering the failure. Therefore, their recovery expectations are lower when the cause of the failure is perceived as stable.

**Hypothesis 2.** This study used the justice-based normative standard as a basis for recovery expectations. Perceived justice serves as a norm governing the relationship between exchange parties. Perceived justice reflects not only the economic aspect of an exchange but also social aspect of an exchange. In this study, recovery expectations are hypothesized to be negatively affected by distributive justice and procedural justice. The hypotheses 2a and 2b are

examined by testing the causal model in Figure 5.8.

The fit indices suggest a very good model fit to the data. All factor loadings are significant indicating a good reliability measure of indicators. The path coefficient between distributive justice and recovery expectations is negative and significant ( $\beta_{dj} = -.469, p < .05$ ) indicating a negative effect of distributive justice on recovery expectations. The results support the hypothesis 2a. However, the path coefficient between procedural justice and recovery expectations is not significant even though the sign is the same as predicted in hypothesis 2b ( $\beta_{pj} = -.024, p > .05$ ). The data do not support hypothesis 2b. However, the correlation between distributive justice and procedural justice is significant and positive ( $r = .557, p < .05$ ). It appears that procedural justice may have an indirect effect on recovery expectations through distributive justice.

**Hypothesis 3.** Hypothesis 3 specifies the relationship between causal attributions toward the restaurant and perceived justice before recovery. Since the causal attributions affect overall recovery expectations from the restaurant and the overall recovery expectations are based on perceived justice as the normative standard of comparison, there should be an effect of causal attributions on perceived justice. Hypotheses 3a and 3b predict that the degree to which consumers blame the restaurant for a failure has a negative effect on distributive justice and procedural justice. Hypothesis 3c specifies a negative relationship between controllability and distributive justice. Hypothesis 3d specifies a negative relationship between stability and procedural justice. This set of hypotheses is examined by testing the structural model presented in Figure 5.9.

The summary of the maximum likelihood estimates for hypothesized relationship is presented in Figure 5.9. The model fit indices show a good fit to the data ( $\chi^2 = 125.5, df = 56, CFI = .964, NNFI = .950, RMSEA = .052$ ). All factor loadings are significant and positive indicating



good reliability measures. Therefore, the model structure cannot be rejected.

Consistent with these overall fit statistics, the path coefficients for all of the hypothesized relationships except one are statistically significant ( $p < .05$ ). The path coefficient between locus of causality anchored on the restaurant and distributive justice ( $\beta = -.40$ ,  $p < .05$ ) support hypothesis 3a. That means the degree to which consumers blame the restaurant for a failure is negatively related to their evaluation of distributive justice. The more consumer blame the restaurant for a failure, the lower their perceived distributive justice will be. The locus of causality has a negative impact on procedural justice ( $\beta = -.279$ ,  $p < .05$ ) supporting hypothesis 3b. The more consumers blame the restaurant for a failure, the lower their perceived procedural justice will be. This relationship is consistent with the suggestion from social psychology that causal account is an antecedent of perceived justice.

The path coefficient between stability and procedural justice suggest that the more stable the cause of a failure perceived by consumers, the lower the evaluation of procedural justice will be ( $\beta = -.217$ ,  $p < .05$ ). Stability of the cause is derived from consumers' experience or multiple observations. Procedural justice is based on the rule of consistency and correctability. Consistency requires that a fair procedure be applied consistently across persons and time. The correctability requires that a fair procedure contain some provisions for correcting bad decisions. If a failure occurs often, consumers are more likely to question the justice in terms of the procedure. The result supports hypothesis 3d.

Hypothesis 3c specifies the relationship between controllability and distributive justice. The path coefficient is not significant even though the sign was the same as predicted ( $\beta = -.089$ ,  $p > .05$ ). The probable reason is that controllability and locus of causality are highly correlated ( $\beta = .747$ ,  $p < .05$ ). The controllability has an indirect effect on distributive justice through the locus of causality.

In sum, among the four relationships hypothesized in Hypothesis 3, three are supported. The relationship between controllability and distributive is not supported.

#### **Testing Hypotheses 4-6: Effects of Recoveries**

Hypotheses 4-6 specifies the effects of recovery attributes on a set of variables. More specifically, hypothesis 4 examines the effect of a particular recovery attribute on the change in distributive justice and procedural justice, while hypothesis 5 and hypothesis 6 examines the type and magnitude of a recovery strategy on perceived justice, change in perceive justice, and service encounter satisfaction.

**Hypothesis 4.** Hypotheses 4a and 4b deal with the effect of recovery attributes on the change in perceived justice. Previous studies concluded that recovery attributes had a direct impact on perceived justice but these studies ignored the initial level of perceived justice. This study considers the initial level of perceived justice and examines whether recovery attributes have an impact on the change in perceived justice.

Hypothesis 4a predicts that compensation has an impact on the change in distributive justice. Hypothesis 4b predicts that a speed of reactions has an impact on the change in procedural justice. The change in distributive justice should be higher when giving compensation than when not giving compensation. The change in procedural justice should be higher when offering a speedy recovery than when offering a slow recovery.

The change in distributive justice (CHANGE-DJ) is formed by subtracting the distributive justice before recovery ( $DJ_{\text{before}}$ ) from the distributive justice after recovery ( $DJ_{\text{after}}$ ). The change of procedural justice (CHANGE-PJ) is formed by subtracting the procedural justice before recovery ( $PJ_{\text{before}}$ ) from the procedural justice after recovery ( $PJ_{\text{after}}$ ).

MANOVA is used to test hypotheses 4a and 4b with the change in distributive justice

(CHANGE-DJ) and the change of procedural justice (CHANGE-PJ) as dependent variables, and compensation and speed of reactions as independent variables. A MANOVA on the change in perceived justice reveals a significant main effect of compensation ( $F(1, 451) = 232.15, p < .001$ ) and speed of reactions ( $F(1, 451) = 6.51, p = .002$ ). The interaction between compensation and speed of reactions was marginal ( $F(1, 451) = .257, p = .078$ ). Table 5.3 and Table 5.4 show the cell means and F statistics for the univariate analysis.

The main effects show that the change in distributive justice is higher when a compensation is given than when no compensation is given ( $X_{com} = 1.77, X_{non\ com} = -.83$ ). The change in procedural justice is also higher under the speedy recovery condition than under the slow recovery condition ( $X_{fast} = .31, X_{slow} = -.09$ ).

The results from MANOVA support the hypotheses 4a and 4b that compensation increases the evaluation of distributive justice. However, by knowing that it is possible the restaurant can offer compensation, consumers evaluate distributive justice even lower than that before recovery if they do not get compensation. The same logic also applies to the effect of the speed of reactions on procedural justice. Offering speedy reactions to consumers increase the evaluation of procedural justice.

**Hypothesis 5.** Hypothesis 5 examines the effect of three types of recovery strategies on perceived justice after recovery, the change in perceived justice, and service encounter satisfaction. The three types of recovery strategies are termed as inferior recovery, adequate recovery, and superior recovery. The three types of recovery strategies represent the types of matching and mismatching between recovery strategies and consumers' recovery expectations. Inferior recovery represents the mismatch between recovery strategy and their recovery expectations. Adequate recovery represents the perfect match between recovery strategy and consumers' recovery expectations. Superior recovery refers to a recovery strategy that gives more

than what consumers want. It is a surplus of a perfect match. Hypothesis 5 predicts that the superior recovery strategy has the greatest effect on dependent variables followed by the adequate recovery strategy and the inferior recovery strategy.

The three types of recovery strategies were constructed in two ways. First, distributive justice and procedural justice before recovery were treated as the surrogates of consumers' recovery expectations. Consumers were classified into four groups based on their evaluations of distributive justice and procedural justice before recovery. Then, based on whether recovery attributes they received matched their evaluations of distributive justice and procedural justice, consumers were assigned into inferior recovery, adequate recovery, or superior recovery groups. The matching conditions and cell sizes are presented in Table 5.5. It should be noted that apology has three levels in the experimental design due to the possible effect of different types of apology on their post consumption evaluations. After examining the relationship between apology and distributive justice after recovery, procedural justice after recovery, service encounter satisfaction, overall satisfaction with the organization, and behavioral intentions, only the main effect of apology on behavioral intentions is found. No other main effects exist. The partial apology and apology were collapsed into one level. Apology serves as an additional recovery attribute to help forming the three types of recovery strategies.

Hypotheses 5a-5e are examined using MANOVA with distributive justice after recovery, the change in distributive justice, procedural justice after recovery, the change in procedural justice, and service encounter satisfaction as dependent variables and the type of recovery strategies as the independent variable. The results from MANOVA are presented in Table 5.6.

The MANOVA reveals the main effect of the type of recovery strategies on distributive justice ( $F(2, 452) = 83.02, p < .001$ ), the change in distributive justice ( $F(2, 452) = 9.06, p < .001$ ), procedural justice ( $F(2, 452) = 62.70, p < .001$ ), the change in procedural justice ( $F(2, 452) = 6.66,$

$p=.001$ ), and service encounter satisfaction ( $F(2,452) = 75.47, p<.001$ ). The post hoc analysis also suggests that the superior recovery strategy generates the highest evaluation of distributive justice, procedural justice, and service encounter satisfaction followed by adequate recovery and inferior recovery. Therefore, hypotheses 5a, 5c, and 5e are supported. With respect to the change in distributive justice and procedural justice, post hoc analysis indicates that the superior recovery strategy is more effective in increasing consumers' perceived distributive justice and procedural justice than the inferior recovery strategy. However, there is no difference between the adequate recovery strategy and the superior recovery strategy, and between the inferior recovery strategy and the adequate recovery strategy.

Hypotheses 5a to 5e are also tested by matching the magnitude of a recovery strategy with the aggregate recovery expectations. Consumers were first classified into two groups based on the overall recovery expectation index ( $EXP_{\text{restaurant}}$ ). Then consumers were classified into two groups based on the number of recovery attributes they received. When a consumer received none or one recovery attribute, this consumer was classified into the low magnitude of recovery group. Other consumers were classified into the high magnitude of recovery group. The three types of recovery strategies indicating the matching conditions between recovery attributes and recovery expectations are presented in Table 5.7.

MANOVA is used to test the hypotheses 5a to 5e with distributive justice after recovery, the change in distributive justice, procedural justice after recovery, the change in procedural justice, and service encounter satisfaction as dependent variables and the type of recovery strategies as the independent variable. The results from MANOVA are presented in Table 5.8.

The results of analysis using this method are consistent with the results from the first method. The MANOVA reveals a significant main effect on distributive justice after recovery ( $F(2,452) = 68.15, p<.001$ ), the change in distributive justice ( $F(2,452) = 52.39, p<.001$ ),

procedural justice after recovery ( $F(2,452) = 49.42, p < .001$ ), the change in procedural justice ( $F(2,452) = 23.76, p < .001$ ), and service encounter satisfaction ( $F(2,452) = 30.26, p < .001$ ). The evaluation of distributive justice after recovery, procedural justice after recovery, and service encounter satisfaction are the highest for consumers who receive superior recovery strategy followed by consumers who receive adequate recovery and inferior recovery. The changes in distributive justice and procedural justice are higher for superior recovery than for inferior recovery. However, there is no difference of the change in distributive justice and procedural justice between superior recovery and adequate recovery.

Both of methods described above reveal that the superior recovery strategy is indeed better than the inferior recovery strategy in terms of consumers' perceived distributive justice, procedural justice, the change in distributive justice and procedural justice, and service encounter satisfaction. Hypotheses 5a to 5e are supported by the data.

**Hypothesis 6.** Hypotheses 6a to 6e aim to examine the effect of the magnitude of a recovery strategy on distributive justice after recovery, the change in distributive justice, procedural justice after recovery, the change in procedural justice, and service encounter satisfaction. Support of H6 suggests that offering more is always better than offering less to consumers. The attributes can be both monetary-related and non-monetary related.

A variable for the number of recovery attributes was created and an MANOVA was used to test the hypothesis 6 with distributive justice after recovery, the change in distributive justice, procedural justice after recovery, the change in procedural justice, and service encounter satisfaction as dependent variables and the number of recovery attributes in a strategy as the independent variable. The results from MANOVA are presented in Table 5.9.

MANOVA reveals the main effect of the number of recovery attributes on distributive justice after recovery ( $F(2,452) = 67.62, p < .001$ ), the change in distributive justice ( $F(2,452) =$

63.742,  $p < .001$ ), procedural justice after recovery ( $F(2,452) = 61.799$ ,  $p < .001$ ), the change in procedural justice ( $F(2,452) = 49.2$ ,  $p < .001$ ), and service encounter satisfaction ( $F(2,452) = 45.004$ ,  $p < .001$ ).

The patterns of means for the four groups are consistent across all dependent variables. Consumers evaluate distributive justice after recovery higher when they receive a recovery strategy containing three attributes than when they receive a recovery strategy containing two or less attributes. However, offering a recovery strategy containing only one attribute does not generate a higher evaluation of distributive justice after recovery than offering none of recovery attribute. The change in distributive justice shows the same pattern as distributive justice after recovery.

The groups who receive different number of recovery attributes evaluate procedural justice differently with the highest evaluation from the group offered all three recovery attributes. The evaluation of procedural justice decreases while the number of recovery attributes decreases. The change in procedural justice is also higher when the number of recovery attributes is higher.

Service encounter satisfaction is the highest for recovery strategies with three attributes followed by recovery strategies with two or less attributes. There is no difference for service encounter satisfaction between strategy with one attribute and strategy no attribute.

The results from MANOVA analysis support the hypotheses 6a to 6e. Meanwhile, the results also suggest that there might be a threshold for consumers' recovery expectations. Once the recovery exceeds the threshold of expectations, offering more attributes increases service encounter satisfaction. If the recovery is below the threshold of expectations, consumers nevertheless will be dissatisfied. It also should be noted that when offering a recovery strategy with zero attribute or one attribute, the change in distributive justice and procedural justice is negative. That indicates that consumers feel more unjust after recovery than before recovery. The

possible explanation is that once consumers are aware that recovery attributes are available and they do not get such recovery, they feel more unjust than before.

### **Testing Hypothesis 7: Interaction between Locus of Causality and Recovery Attributes**

Hypothesis 7 concerns the interactive effect of locus and compensation on distributive justice after recovery and the interactive effect between locus and speed of reactions on procedural justice. It has been well established that the compensation has a main effect on distributive justice. However, it is unknown whether consumers' attribution of a service failure has an impact on the relationship between compensation and distributive justice after recovery. Hypothesis 7a predicts that the effect of compensation on distributive justice after recovery is greater when consumers attribute the failure to the firm than when consumers attribute the failure to consumers or environmental situations. Hypothesis 7b predicts that the effect of speed of reactions on procedural justice after recovery is greater when consumers are offered a speedy response than when consumers are offered a slow response.

To test the interactive effect between locus and recovery attributes on perceived justice, I first classify consumers into two groups based on their perceived locus of causality ( $\text{LOCUS}_{\text{restaurant}}$ ). Participants who have low score for  $\text{LOCUS}_{\text{restaurant}}$  are assigned into group 1. Participants who have high score for  $\text{LOCUS}_{\text{restaurant}}$  are assigned into group 2. Compensation, the speed of reactions, and the new created categorical variable for locus of causality are used as independent variables to examine the interactive effect.

MANOVA using distributive justice and procedural justice after recovery as dependent variables and compensation, speed of reactions, and locus of causality as independent variables is conducted to test hypotheses 7a and 7b.

MANOVA on perceived justice reveals significant effects for locus of causality anchored



on the restaurant ( $F = 4.94$ ,  $p = .008$ ), compensation ( $F = 403.95$ ,  $p < .001$ ), and speed of reactions ( $F = 11.19$ ,  $p < .001$ ). MANOVA also reveals significant two-way interactions of compensation  $\times$  speed of reactions ( $F = 5.42$ ,  $p = .005$ ), and compensation  $\times$  locus of causality ( $F = 4.01$ ,  $p = .019$ ). The two-way interaction between locus and speed of reactions and the three-way interaction are not significant. Therefore, the hypothesis 7a is supported but hypothesis 7b is not supported. The univariate statistics and cell means are presented in Table 5.10 and Table 5.11.

As showed in Table 5.10, the effect of compensation on distributive justice is greater for consumers who believe that the firm is the primary cause of the failure ( $DJ_{no} = 2.00$ ,  $DJ_{com} = 4.83$ ,  $\Delta DJ = 2.83$ ) than for consumers who believe that the firm is not the primary cause of the failure ( $DJ_{no} = 2.55$ ,  $DJ_{com} = 4.91$ ,  $\Delta DJ = 2.36$ ). The difference of distributive justice caused by compensation is larger for the group who blame the restaurant for the failure than for the group who blame others for the failure ( $\Delta DJ_{restaurant} > \Delta DJ_{others}$ ). Overall, the evaluation of distributive justice is higher for the group who blame others for the failure than for the group who blame the restaurant for the failure ( $DJ_{restaurant} = 3.41$ ,  $DJ_{others} = 3.76$ ). The result is consistent with the prediction from hypothesis 7a. Since the interaction between speed of reactions and locus of causality is not significant, hypothesis 7b is not supported. The cell means and F statistics are reported in Table 5.11.

There is an additional finding from the MANOVA. The two-way interaction between compensation and locus of causality on procedural justice after recovery is significant. Table 5.12 presents the cell means for the interactional effect between locus of causality and compensation on procedural justice after recovery. Table 5.12 shows that the difference of procedural justice caused by compensation is greater for consumers who blame the restaurant for the failure ( $PJ_{no} = 2.30$ ,  $PJ_{com} = 5.30$ ,  $\Delta DJ = 3.00$ ) than for consumers who blame others for the failure ( $PJ_{no} = 2.86$ ,  $PJ_{com} = 5.27$ ,  $\Delta DJ = 2.41$ ). Consumers who blame others for the failure evaluate procedural justice

higher after recovery than consumers who blame the firm for the failure ( $DJ_{\text{restaurant}} = 3.79$ ,  $DJ_{\text{others}} = 4.10$ ).

### **Summary**

This chapter presented the detailed methods used for testing hypotheses and the results of data analysis. In addition, this chapter also checked realism of the scenario. Overall, the results of the hypotheses testing provided strong support for the following relationships: (1) the relationships among causal attributions, perceived justice, and recovery expectations, (2) the effects of recovery attributes on the change in perceived justice, perceived justice after recovery, and service encounter satisfaction, and (3) the interactions between locus of causality and recovery attributes on perceived justice after recovery. Discussion, implications, limitations, and future research direction are presented in the next chapter.

Figure 5.1 Measurement Model for Attribution

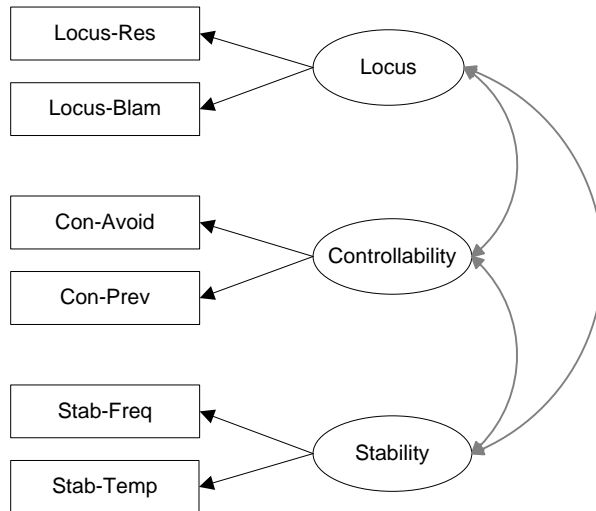
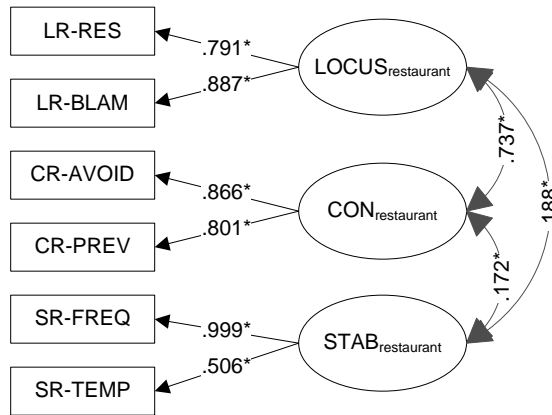


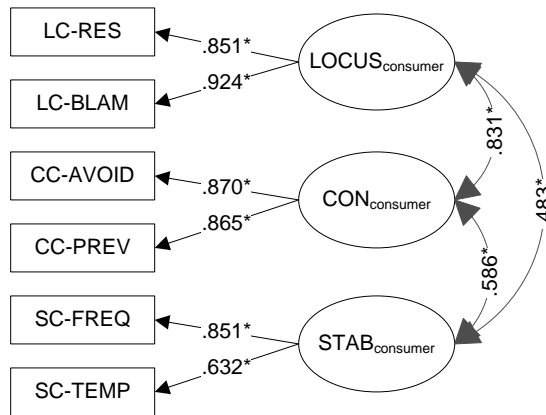
Figure 5.2 Measurement Model Results for Attribution

A. Measurement Model for Attribution Anchored on Restaurant ( $\chi^2 = 10.215$ ,  $df = 7$ ,  $p < .001$ , NNFI = .993, CFI = .997, RMSEA = .032)



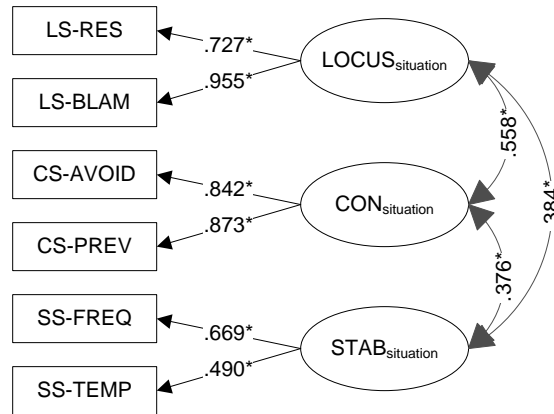
Note: \* $p < .05$

B. Measurement Model for Attribution Anchored on Consumer ( $\chi^2 = 18.456$ ,  $df = 6$ ,  $p < .001$ , NNFI = .978, CFI = .991, RMSEA = .068)



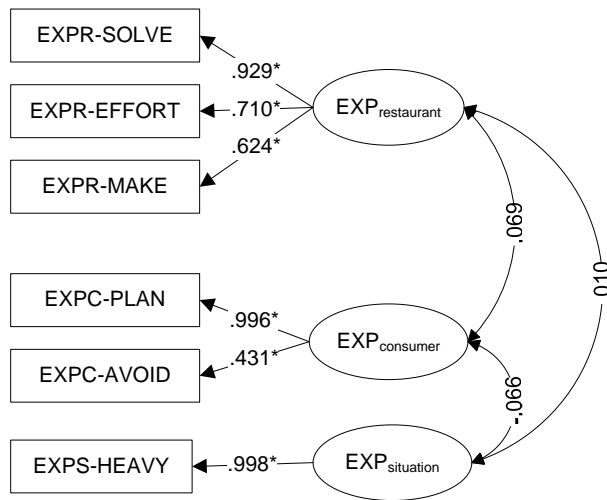
Note: \* $p < .05$ .

C. Measurement Model for Attribution Anchored on Environmental Situation ( $\chi^2 = 6.514$ ,  $df = 6$ ,  $p < .001$ , NNFI = .999, CFI = .999, RMSEA = .014)



Note: \* $p < .05$ .

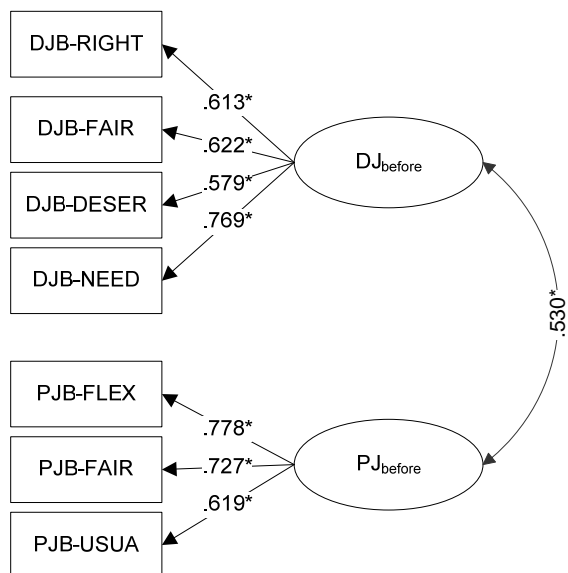
Figure 5.3 Measurement Model Results for Expectation ( $\chi^2 = 20.418$ ,  $df = 8$ ,  $p < .001$ , NNFI = .958, CFI = .978, RMSEA = .058)



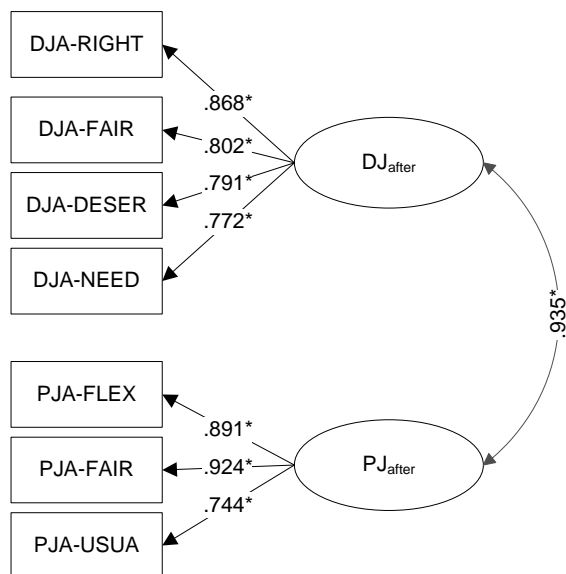
Note: \* $p < .05$ .

Figure 5.4 Measurement Model Results for Perceived Justice

A. Measurement Model for Perceived Justice **BEFORE** Recovery ( $\chi^2 = 78.021$ ,  $df = 13$ ,  $p < .001$ , NNFI = .875, CFI = .923, RMSEA = .105)

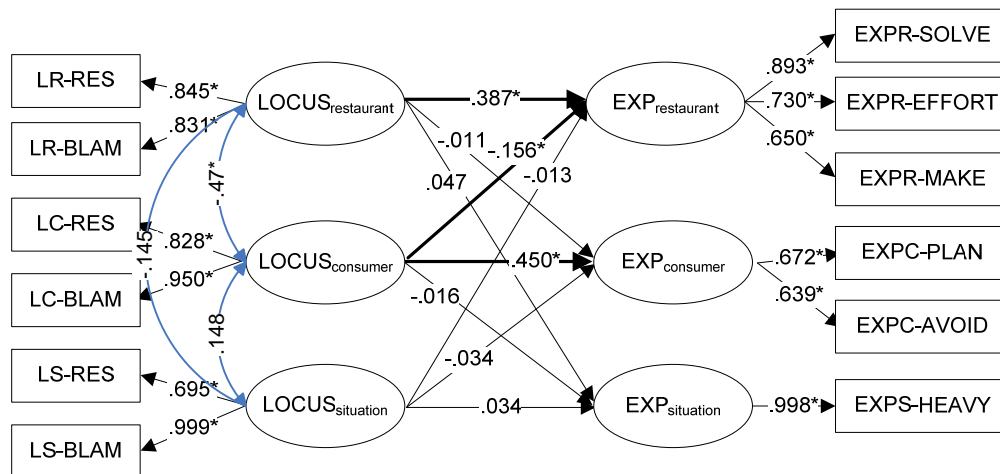


B. Measurement Model for Perceived Justice **AFTER** Recovery ( $\chi^2 = 32.0$ ,  $df = 13$ ,  $p = .002$ , NNFI = .987, CFI = .992, RMSEA = .057)



Note: \* $p < .05$ .

Figure 5.5 Relations between Locus and Expectation ( $\chi^2 = 84.54$ ,  $df = 44$ ,  $p < .001$ , NNFI = .967, CFI = .978, RMSEA = .045)



Note: \* $p < .05$



Figure 5.6 Modified Model for Relations between Locus and Expectation

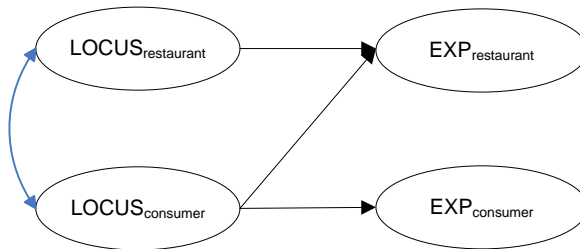
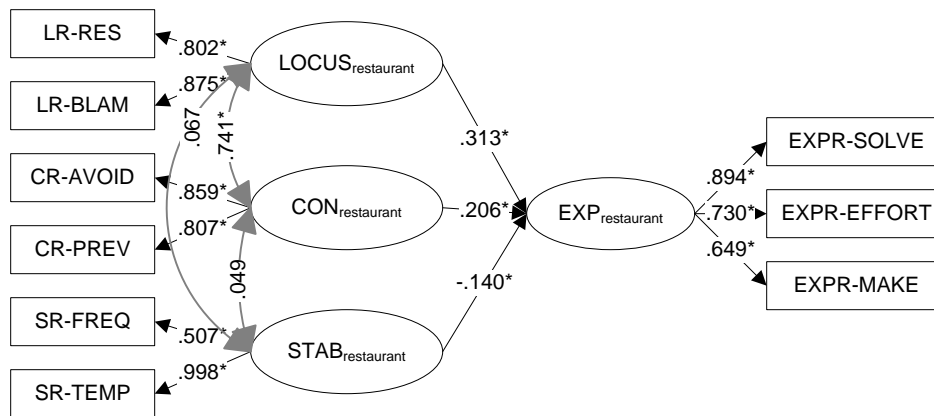
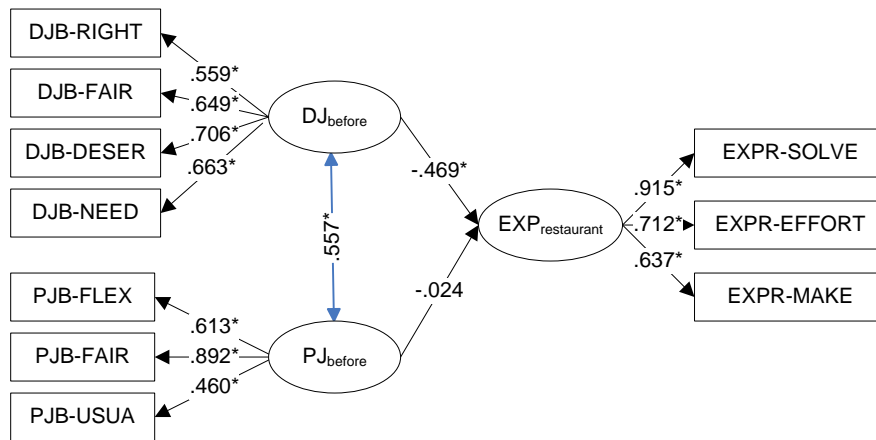


Figure 5.7 Relations between Attribution and Recovery Expectation ( $\chi^2 = 55.894$ ,  $df = 22$ ,  $p < .001$ , NNFI = .964, CFI = .978, RMSEA = .058)



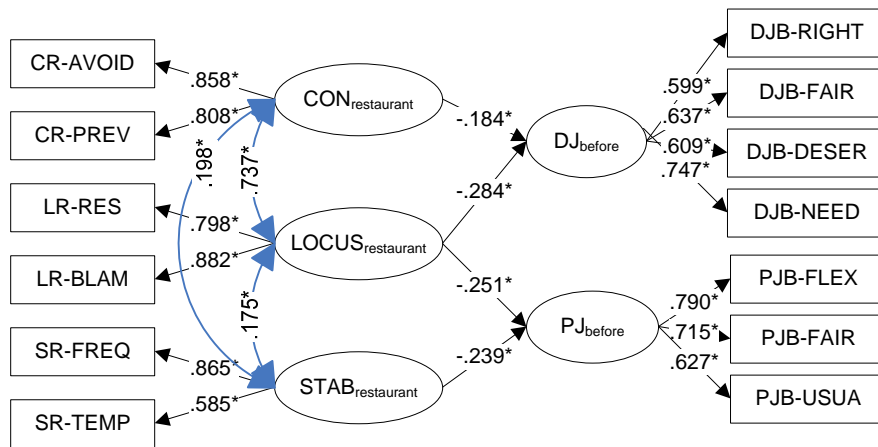
Note: \* $p < .05$ .

Figure 5.8 Relations between Perceived Justice and Recovery Expectation ( $\chi^2 = 52.952$ ,  $df = 28$ ,  $p < .001$ , NNFI = .972, CFI = .982, RMSEA = .044)



Note: \* $p < .05$ .

Figure 5.9 Relations between Attribution and Perceived Justice ( $\chi^2 = 168.47$ ,  $df = 57$ ,  $p < .001$ , NNFI = .921, CFI = .942, RMSEA = .066)



Note: \* $p < .05$ .

Table 5.1 Measurement Invariance for Attribution across Causal Agents

Model	$\chi^2$	df	Compare	$\Delta\chi^2$	$\Delta df$	RMSEA	NNFI	CFI
M1 (Baseline Model)	35.180	18				.026	.987	.995
M2 (Factor loadings are constrained to be equal)	49.590	24	M1	14.410*	6	.028	.985	.992
M2a (Free factor loading for Locus-Responsible)	41.175	22	M1	5.995	4	.025	.988	.994
M3 (Error variances are constrained to be equal)	92.621	34	M2a	51.446*	12	.036	.971	.983
M3a (Free error variances for Stab-Freq and Stab-Temp)	55.500	30	M2a	14.33	8	.025	.987	.992
M4 (Covariance are constrained to be equal)	118.147	36	M3a	62.647*	6	.041	.964	.975
M4 (Free all covariance)	55.500	30	M3a			.025	.987	.992

Note. \* $p < .05$

Table 5.2 Measurement Invariance for Perceived Justice BEFORE and AFTER Recovery

Model	$\chi^2$	df	Compare	$\Delta\chi^2$	$\Delta df$	RMSEA	NNFI	CFI
M1 (Baseline Model)	29.78	22				.020	.995	.998
M2 (Factor loadings are constrained to be equal)	54.47	27	M1	24.69*	5	.033	.987	.991
M2a (Free factor loading for DJ-NEED and PJ-FAIR)	32.93	25	M1	3.15	3	.019	.996	.998
M3 (Error variances are constrained to be equal)	68.91	32	M2a	35.98*	7	.036	.984	.989
M3a (Free error variances for DJ-DESER,DJ-NEED,PJ-FLEX)	38.98	29	M2a	6.05	4	.019	.995	.997
M4 (Covariance are constrained to be equal)	194.30	30	M3a	155.32*	1	.078	.925	.951

Note. \* $p < .05$

Table 5.3 Cell Means and F Statistics for Change in Distributive Justice

Dependent Variable	Independent Variables		Mean	Std. Deviation
	Compensation	Speed		
Change in Distributive Justice	No Compensation	Slow Response	-.93	1.22
		Fast Response	-.73	1.15
		Total	-.83	1.19
	Compensation	Slow Response	1.43	1.49
		Fast Response	2.10	1.64
		Total	1.77	1.60
	Total	Slow Response	.26	1.80
		Fast Response	.71	2.00
		Total	.48	1.92
F Statistics:				
	F statistics	P value		
Main Effects				
Compensation	395.62	<.001		
Speed	11.34	.001		
Interaction	3.22	.073		
Model	137.03	<.001		

Table 5.4 Cell Means and F Statistics for Change in Procedural Justice

Dependent Variable	Independent Variables		Mean	Std. Deviation
	Compensation	Speed		
Change in Procedural Justice	No Compensation	Slow Response	-1.15	1.39
		Fast Response	-1.04	1.38
		Total	-1.10	1.38
	Compensation	Slow Response	.95	1.36
		Fast Response	1.63	1.50
		Total	1.30	1.47
	Total	Slow Response	-.09	1.73
		Fast Response	.31	1.97
		Total	.11	1.86

F Statistics:

	F statistics	P value
Main Effects		
Compensation	327.16	<.001
Speed	8.84	.003
Interaction	4.66	.031
Model	113.85	<.001



Table 5.5 Matching Conditions and Cell Sizes for Recovery Strategies

Perceived Justice		Compensation/Speed/Apology	Matching Conditions	Cell Size
DJ <sub>before</sub>	PJ <sub>before</sub>			
Low	Low	(LLL), (LLH), (LHL), (LHH) (HLL), (HLH)	Inferior Recovery	101
		(HHL)	Adequate Recovery	12
		(HHH)	Superior Recovery	19
Low	High	(LLL), (LLH), (LHL), (LHH) (HLL)	Inferior Recovery	51
		(HLH), (HHL), (HHH)	Adequate Recovery	13
			Superior Recovery	45
High	Low	(LLL), (LLH), (HLL), (HLH) (HLH)	Inferior Recovery	32
		(LHH), (LHH)	Adequate Recovery	7
			Superior Recovery	34
High	High		Inferior Recovery	0
		(LLL)	Adequate Recovery	16
		(LLH), (LHL), (LHH) (HLL), (HLH), (HHL), (HHH)	Superior Recovery	125
			Insufficient Recovery	184
Total			Adequate Recovery	48
			Superior Recovery	223

Table 5.6 Results for the Effect of Recovery Strategies

Dependent Variables	Insufficient Recovery (N=184)	Adequate Recovery (N=48)	Superior Recovery (N=223)	F-Stat.	p-value	Tukey
	Mean	Mean	Mean			
DJ <sub>after</sub>	2.56	3.55	4.45	83.02	<.001	(1,2),(1,3),(2,3)
CHANGE-DJ	.06	.39	.85	9.06	<.01	(1,3)
PJ <sub>after</sub>	3.00	3.74	4.77	62.70	<.001	(1,2),(1,3),(2,3)
CHANGE-PJ	-.23	-.05	.43	6.66	.001	(1,3)
SESAT <sub>after</sub>	2.65	3.78	4.63	75.47	<.001	(1,2),(1,3),(2,3)

Table 5.7 Recovery Strategies Based on the Aggregate Recovery Expectations

Overall Recovery Expectation	Number of Recovery Attributes	Matching Conditions	Cell Size
Low	Low	Adequate Recovery	85
Low	High	Superior Recovery	135
High	Low	Inferior Recovery	102
High	High	Adequate Recovery	133

Table 5.8 The Effect of Recovery Strategies Based on the Aggregate Recovery Expectations

Dependent Variables	Insufficient Recovery (N=184)	Adequate Recovery (N=48)	Superior Recovery (N=223)	F-Stat.	p-value	Tukey
	Mean	Mean	Mean			
DJ <sub>after</sub>	2.15	3.74	4.43	68.15	<.001	(1,2),(1,3),(2,3)
CHANG-DJ	-.6	.7	.95	52.39	<.001	(1,2),(1,3)
PJ <sub>after</sub>	2.58	4.11	4.72	49.42	<.001	(1,2),(1,3),(2,3)
CHANGE-PJ	-1.02	.27	.71	23.76	<.001	(1,2),(1,3)
SESAT <sub>after</sub>	2.4	3.84	4.59	30.26	<.001	(1,2),(1,3),(2,3)

Table 5.9 MANOVA Results for the Effect of the Number of Recovery Attributes

Dependent Variables	No Recovery Attribute (N=37)	One Recovery Attribute (N=150)	Two Recovery Attributes (N=191)	Three Recovery Attributes (N=77)	F-Stat.	p-value	Tukey
	Mean	Mean	Mean	Mean			
DJ <sub>after</sub>	2.29	2.65	3.93	5.19	67.62	<.001	(1,3),(1,4), (2,3), (2,4), (3,4)
CHANG-DJ	-1.15	-.35	.82	2.04	63.742	<.00	(1,3),(1,4), (2,3), (2,4), (3,4)
PJ <sub>after</sub>	2.34	3.10	4.26	5.61	61.799	<.001	(1,2),(1,3), (1,4), (2,3),(2,4), (3,4)
CHANGE-PJ	-1.39	-.64	.38	1.64	49.200	<.001	(1,3),(1,4), (2,3), (2,4),(3,4)
SESAT <sub>after</sub>	2.49	2.77	4.02	5.53	45.004	<.001	(1,3),(1,4), (2,3), (2,4),(3,4)

Table 5.10 Interaction between Locus and Compensation on Distributive Justice

Dependent Variable	Independent Variables		Mean	Std. Deviation
	Locus	Compensation		
Distributive Justice after Recoveries (DJ <sub>after</sub> )	Others	No Compensation	2.55	1.12
		Compensation	4.91	1.08
		Total	3.76	1.62
	Restaurant	No Compensation	2.00	1.02
		Compensation	4.83	1.22
		Total	3.41	1.81
	Total	No Compensation	2.28	1.10
		Compensation	4.87	1.15
		Total	3.59	1.72
F Statistics:				
	F statistics	P value		
Locus	9.37	.002		
Compensation	663.27	<.001		
Speed	21.69	<.001		
Locus* Compensation	5.07	.025		
Locus* Speed	.25	.619		
Compensation*Locus	9.80	.002		
Model	101.68	<.001		

Table 5.11 Interaction between Locus and Speed on Procedural Justice

Dependent Variable	Independent Variables		Mean	Std. Deviation
	Locus	Speed		
Procedural Justice after Recoveries (PJ <sub>after</sub> )	Others	Slow Response	3.97	1.58
		Fast Response	4.21	1.75
		Total	4.10	1.68
	Restaurant	Slow	3.54	1.75
		Fast	4.07	2.04
		Total	3.79	1.91
	Total	Slow	3.75	1.68
		Fast	4.15	1.89
		Total	3.95	1.80
F Statistics:				
	F statistics	P value		
Locus	5.75	.017		
Compensation	624.47	<.001		
Speed	11.86	.001		
Locus* Compensation	7.40	.007		
Locus* Speed	.39	.532		
Compensation*Speed	7.21	.008		
Model	94.06	<.001		

Table 5.12 Interaction between Locus and Compensation on Procedural Justice

Dependent Variable	Independent Variables		Mean	Std. Deviation
	Locus	Compensation		
Procedural Justice after Recoveries (PJ <sub>after</sub> )	Others	No Compensation	2.86	1.17
		Compensation	5.27	1.15
		Total	4.10	1.68
	Restaurant	No Compensation	2.30	1.14
		Compensation	5.30	1.22
		Total	3.79	1.91
	Total	No Compensation	2.58	1.19
		Compensation	5.28	1.19
		Total	3.95	1.80



## **CHAPTER 6**

### **DISCUSSION AND CONCLUSIONS**

The final chapter addresses the following four topics. First, a discussion of the research results is presented. Next, the contributions and implications for this study are described. The last two topics include limitations of this study and future research directions in this area.

#### **Discussion**

This study specifies three sets of relationships in a service encounter involving failure and recovery. Due to the importance of disconfirmation-expectancy paradigm in customer satisfaction studies, this study focuses on the role of recovery expectations in customer satisfaction and identifies consumer attribution as an antecedent of recovery expectations and perceived justice as the basis of recovery expectations. Therefore, the first set of relationships specifies the causal relationships among attribution, perceived justice, and recovery expectations. Second, this study examines the effect of recovery strategies in the context of expectancy-disconfirmation on consumer satisfaction.

#### **Causal Attributions, Perceived Justice, and Recovery Expectations**

This study first hypothesizes that consumer causal attributions influence their overall recovery expectations. In particular, the more consumers blame the firm for a failure, the higher the recovery expectations will be. The more controllable the perceived causes related to the firm, the higher the recovery expectations will be. The more stable the perceived causes related to the firm, the higher the recovery expectations will be. The results show that locus of causality and controllability affect recovery expectations as predicted. However, stability has a negative

effect on recovery expectations rather than a positive effect hypothesized in this study. It seems that the more stable the cause of the failure related to the firm, the lower consumer recovery expectation will be. It is possible that the stability of causes indicates the level of service quality. The more stable are the causes of failures related to the firm, the lower the perceived service quality will be. Therefore, consumers may not hold a high recovery expectation from a firm that cannot provide high quality services.

This study adopts the normative standard (perceived justice) as the basis of expectation. The results reveal that between the two dimensions of perceived justice (distributive justice and procedural justice) distributive justice plays a salient role in the formation of recovery expectations. Procedural justice is not associated to the recovery expectations directly. However, procedural justice is correlated with distributive justice. It appears that when a procedural justice is violated, it leads to a low level of distributive justice and further a high level of recovery expectations.

The relationship between causal attributions and perceived justice is also tested. The locus of causality anchored on the restaurant has a significant effect on both distributive justice and procedural justice. However, controllability does not affect distributive justice directly as hypothesized but it is highly correlated with the locus of causality. The stability is found to have a negative effect on procedural justice as hypothesized. That is when the cause of failure related to the firm is perceived as stable, the evaluation of procedural justice will be lower.

### **Effects of Recovery Attributes**

Previous studies exclusively focus on the effect of recovery attributes on the evaluation of perceived justice after recovery. Nobody has investigated whether recovery attributes have an effect on the change in perceived justice. The results from this study show that compensation has

a greater effect on the change in distributive justice while the speed of reactions has a greater effect on the change in procedural justice.

This study also examines the different effects of recovery strategies across various consumer expectations on perceived justice after recovery, the change in perceived justice, and service encounter satisfaction. Based on the disconfirmation between consumer recovery expectation and recovery attributes contained in a strategy, three types of matching condition were formed. The three types of matching condition are named as inferior, adequate, and superior recovery. The three types of matching condition are formulated in two ways. In the first method, recovery expectations are based on the two dimensions of perceived justice (disaggregate recovery expectation). Recovery attributes-compensation and speedy reaction-are used to meet consumer needs along the two dimensions of perceived justice. In the second method, the recovery expectations are evaluated as the overall expectations from the firm. The number of recovery attributes is used as a comparison of expectation. Based on the disconfirmation between consumer recovery expectation and recovery performance, the three types of matching conditions are named as inferior, adequate, and superior recovery. Both methods demonstrate a significant main effect of the type of matching conditions on dependent variables such as the change in perceived justice, perceived justice after recovery, and service encounter satisfaction. Superior recovery always generates the highest evaluation of perceived justice and service encounter satisfaction. In addition, superior recovery has the greatest impact on the change in perceived justice.

Similar to the type of strategies, the number of recovery attributes in a strategy is also hypothesized to have a main effect on perceived justice after recovery, the change in perceived justice, and service encounter satisfaction. The results suggest that the more attributes a recovery strategy contained, the higher the evaluation of perceived justice and service encounter

satisfaction will be. However, a recovery strategy containing only one attribute did not yield a better result than a strategy without any recovery attributes. It appears that after a failure occurs, consumers have a minimal level of recovery expectations. Once the recovery strategy is below the minimal level of recovery expectations, consumers will nevertheless feel unjust and be dissatisfied.

An additional finding also suggests that an apology does not show a significant effect on distributive justice, procedural justice, and service encounter satisfaction. The non-significant effect on distributive justice and procedural justice is understandable because an apology mainly affects interactional justice (Smith et al. 1999). This study views procedural justice and interactional justice as one dimension. If an apology does have an impact on interactional justice and interactional justice influences service encounter satisfaction, an apology should have shown a significant main effect on service encounter satisfaction.

### **Interactions between Locus of Causality and Recovery Attributes**

The service failure context influences the effect of recovery attributes on perceived justice after recovery and service encounter satisfaction (Smith et al. 1999). This study examines whether the locus of causality interacts with recovery attributes. The results show that compensation does have a greater impact on distributive justice after recovery for consumers who blame the firm for the failure than for consumers who blame themselves or environmental situations for the failure. The locus of causality does not interact with the speed of recovery on procedural justice. The reason is probably due to the service failure scenario used in this study. The results from this study consistently show that distributive justice plays a major role in determining recovery expectations. It is reasonable to conclude that compensation is the most effective recovery attribute in determining consumers' evaluation of perceived justice after

recovery and service encounter satisfaction in this study.

### **Managerial Implications**

This study provides some managerial implications for managers in dealing with service failures. Folkes and Kotsos (1986) have suggested that there is a discrepancy between a buyer and seller's attribution. Recovering failures based on a firm's causal attributions may either under-reward or over-reward consumers. To maximize the benefit of a recovery strategy, firms should understand consumer recovery expectations and make a decision according to consumer causal attributions. This study examines the effect of consumer causal attributions on recovery expectations and provides a guideline for managers to make an appropriate recovery strategy.

Another implication for this study is to provide an answer for what constitutes an effective recovery strategy. In general, compensation is the most effective recovery attribute in influencing consumer perceived justice and service encounter satisfaction. However, how fast firms deal with a service failure is also important in determining service encounter satisfaction. The study also reveals that offering consumers more than what they expect can delight consumers and make them more satisfied. Matching consumer needs both economically and psychologically elevates consumer perceived justice and service encounter satisfaction.

Recovery attributes do not have to be monetary. Frontline employees' responsiveness, courtesy, and their willingness to help consumers to get out from inequitable situations add value to a recovery strategy as well (Bitner et al. 1990). It does not cost firms more to do so but does create additional value for the firms.

### **Limitations and Future Research Directions**

The study is not perfect without any limitation. First, the failure scenario used in this study only has information regarding the locus of causality. Controllability and stability are inferred by consumers based on their experiences and knowledge with the restaurant. This study does not distinguish the outcome failure and the process failure in the scenario. It is unknown whether different types of service failure (outcome failures or process failures) influences consumer attributional search. Another limitation of this study is that only three recovery attributes are manipulated. More attributes can be added to examine whether there is a diminishing effect of the number of attributes on service encounter satisfaction.

The limitations of this study indicate future research extensions for this study. It is particularly interesting to examine the relationship between consumers' background and their causal attributions such as whether loyal customers reach a different causal attribution and recovery expectations from non-loyal customers. This can provide a guideline for firms to segment the market and provide evidence for firms with respect to whether they should prioritize consumers based on their usage of services and the loyalty to the firm.

Another possible extension of current study is to add more recovery attributes to a strategy and find out the best combination of recovery attributes to optimize the mutual benefit between consumers and firms. Possible recovery attributes include but are not limited to compensation, apology, speed of response, explanation, reinstatement, manager/employee and consumer intervention, and empathy. Some of attributes are monetary related and some of them are not. Therefore, offering a recovery strategy with more non-monetary related attributes bring firms more benefits than offering a recovery strategy with compensation only.

The next possible extension of the current study is to investigate the effect of recovery on the covariance change in perceived justice. This study only examined the mean differences due to

the direct effect of recovery attributes. It is unknown whether the covariance of the perceived justice also change due to the effect of recovery attributes and how the changes take place.

### **Conclusions**

This study develops an integrated model to deepen our understanding of consumers' causal attributions after a service failure and the effects of recovery attributes on service encounter satisfaction. It provides answers for questions regarding how consumers make a causal attribution, how their causal attributions influence their reactions to service failures, and how their causal attributions affect the effect of recoveries on perceived justice and service encounter satisfaction.

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**APPENDIX I**  
**QUESTIONNAIRE FORM**

**KENT STATE UNIVERSITY****(Q1)****CONSENT FORM**

**This study is concerned with how customers evaluate service encounters with restaurants. We estimate that your participation will take approximately twenty to thirty minutes. This study is completely anonymous and there are no risks involved in participating in the study that are greater than those encountered in everyday life. Whether or not you participate, you will not be subject to any penalty of any kind. You can cease your participation in the research at anytime without penalty of any kind. You should be at least 18 years old to participate in this study. For additional information, please contact Jun Ma (330-672-1270 or jma@kent.edu). KSU's rules for research can be obtained from Dr. John West, Vice President and Dean, Research and Graduate Studies (330-672-2704).**

**To obtain extra credit, please print your name below:**

**Name \_\_\_\_\_**

**GENERAL INSTRUCTIONS**

**This study is divided into three sections. In each section, you are given instructions. Based on those instructions, please respond to the set of questions that follow. If at any time you feel unsure about what exactly you are being asked to do, or what a question means, please feel free to raise your hand and ask for help.**

## Section I

**Think about an up-scale restaurant (not a buffet-type or fast food restaurant) that you have visited at least once in the past three months.**

**Please print the name of the restaurant in the space below.**

\_\_\_\_\_

1. How long ago (in weeks) did you last visit this restaurant? \_\_\_\_\_ week(s)  
(If less than one week, write "< 1").
2. When you last visited this restaurant, how many people (total) were in your party?  
\_\_\_\_\_ person(s)
3. Approximately how much was your total bill on this last visit? \$ \_\_\_\_\_

**Based on all of your experience, how do you describe your history with this restaurant?  
Please place an "X" on the line that most closely corresponds to how you feel about the restaurant.**

- |   | Strongly<br>Disagree |                | Neither        |                | Strongly<br>Agree |                |                |
|---|----------------------|----------------|----------------|----------------|-------------------|----------------|----------------|
| 4. I have visited this restaurant many times in the past. | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 5. I am a frequent visitor of this restaurant.            | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 6. I normally go to this restaurant.                      | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 7. I am a loyal customer of this restaurant.              | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 8. I am committed to this restaurant.                     | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |

**Based on all of your experiences, how do you feel overall about this restaurant?**

- |   | Strongly<br>Disagree |                | Neither        |                | Strongly<br>Agree |                |                |
|---|----------------------|----------------|----------------|----------------|-------------------|----------------|----------------|
| 9. The food and services provided by this restaurant<br>has been exceptional. | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 10. The food and service provided by this restaurant<br>have been excellent.  | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 11. The restaurant provides superior food and services.                       | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 12. I am very satisfied with the restaurant.                                  | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 13. I am happy with the restaurant.   | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |
| 14. I am pleased with the restaurant.   | : _____ :<br>1       | : _____ :<br>2 | : _____ :<br>3 | : _____ :<br>4 | : _____ :<br>5    | : _____ :<br>6 | : _____ :<br>7 |

**Please check to make sure that you have filled out all questions in this section. Then turn to the next page.**



19. How much do you blame you and your friends for the failure(s) occurred to you?  
Not at all:     :     :     :     :     :     :     :     :     : Completely  
                  1      2      3      4      5      6      7      8      9
20. How much do you blame the situation or "pure chance" for the failure(s) occurred to you?  
Not at all:     :     :     :     :     :     :     :     :     : Completely  
                  1      2      3      4      5      6      7      8      9
21. To what extent do you believe the restaurant could have avoided what happened to you?  
Not at all:     :     :     :     :     :     :     :     :     : Completely  
                  1      2      3      4      5      6      7      8      9
22. To what extent do you believe that you and your friends could have avoided what happened to you?  
Not at all:     :     :     :     :     :     :     :     :     : Completely  
                  1      2      3      4      5      6      7      8      9
23. To what extent do you believe that what happened to you could have been avoided by chance?  
Not at all:     :     :     :     :     :     :     :     :     : Completely  
                  1      2      3      4      5      6      7      8      9
24. To what extent that the failure(s) occurred to you could have been prevented by the restaurant?  
Unpreventable:     :     :     :     :     :     :     :     :     : Preventable  
                  1      2      3      4      5      6      7      8      9
25. To what extent that the problem(s) occurred to you could have been prevented by you and your friends?  
Unpreventable:     :     :     :     :     :     :     :     :     : Preventable  
                  1      2      3      4      5      6      7      8      9
26. To what extent that the problem(s) occurred could have been prevented by chance?  
Unpreventable:     :     :     :     :     :     :     :     :     : Preventable  
                  1      2      3      4      5      6      7      8      9
27. The restaurant causes this kind of failures  
Infrequently:     :     :     :     :     :     :     :     :     : Frequently  
                  1      2      3      4      5      6      7      8      9
28. You and your friends cause this kind of failures  
Infrequently:     :     :     :     :     :     :     :     :     : Frequently  
                  1      2      3      4      5      6      7      8      9
29. The situation causes this kind of failures  
Infrequently:     :     :     :     :     :     :     :     :     : Frequently  
                  1      2      3      4      5      6      7      8      9
30. The cause within the restaurant is likely to be  
Temporary:     :     :     :     :     :     :     :     :     : Permanent  
                  1      2      3      4      5      6      7      8      9
31. The cause related to you and your friends is likely to be  
Temporary :     :     :     :     :     :     :     :     :     : Permanent  
                  1      2      3      4      5      6      7      8      9
32. The cause related to situations is likely to be  
Temporary :     :     :     :     :     :     :     :     :     : Permanent  
                  1      2      3      4      5      6      7      8      9

**Please turn to the next page.**



33. How much do you blame each of the following entities for the failures occurred during the eating out experience? Please assign a percentage of blame to each entity, so that the overall assignment of blame totals 100%.

Restaurant\_\_\_\_\_ You and your friends\_\_\_\_\_ Situation or chance \_\_\_\_\_

**Assuming that the failure(s) described above happened to you, at this point of time how do you feel about this particular eating-out experience with the restaurant you named?**

34. The outcome of the eating-out experience was  
worse than expected :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ : better than expected.  
1 2 3 4 5 6 7

35. The result of the eating-out experience was  
worse than anticipated :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ :\_\_\_\_\_ : better than anticipated.  
1 2 3 4 5 6 7

	Strongly Disagree		Neither		Strongly Agree		
36. I was pleased with the eating-out experience.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
37. I was unhappy with the eating-out experience.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
38. I was dissatisfied with the eating-out experience.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
39. The outcome of the eating-out experience was not right.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
40. The outcome of the eating-out experience was fair.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
41. I got what I deserved.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
42. I did not get what I needed.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
43. The quality of services provided by the restaurant	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
44. The restaurant was not flexible in providing services.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
45. The process of service delivery of the restaurant was not fair.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
46. The restaurant did not have instructions to deal with unusual situations.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
47. I felt angry towards the restaurant.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
48. I felt vindictive towards the restaurant.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
49. I felt upset about what have occurred to us.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7
50. I was frustrated by what we have encountered.	:_____ : 1	_____ : 2	_____ : 3	_____ : 4	_____ : 5	_____ : 6	_____ : 7

**Please turn to the next page.**

51. I was very surprised that this kind of failure happened to us. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

52. I didn't anticipate that this kind of failures occurred to us. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

**Given the failure(s) that you encountered during the eating-out experience, how do you expect the following situations to occur?**

53. I expect the restaurant to do something in its power to solve the problem. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

54. I don't expect the restaurant to exert much effort to solve the problem. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

55. I expect the restaurant to try to make up for my lost. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

56. We will plan better to avoid the recurrence of this kind of failures in the future. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

57. I expect that the traffic will not be so heavy next time when we go out for dinner. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

58. We will come out earlier to avoid the traffic jam next time when we go out for dinner. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

59. Based on all of your experience with restaurants, how would you view this failure(s)?  
Minor : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Major  
1 2 3 4 5 6 7

60. Based on all of your experiences with the restaurant you named, how likely is it that a similar problem would occur again in the future at this restaurant?  
Not At All Likely : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Very Likely  
1 2 3 4 5 6 7

**Please check to make sure that you have filled out all questions in this section. Then turn to the next page.**

### Section III

In a service encounter involving failures, the service provider could do the following to increase customer satisfaction. In the scenario described above, the employees of the restaurant could react in different ways. They could (1) give you a quick response or delayed response (2) show sympathy, admit fault, or do nothing, and (3) offer you a discount or do not offer you discount.

Imagining that the failures happened to you at the restaurant you named and the employee of the restaurant reacted in the following ways:

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress did not say anything. She went back to the kitchen and came back after 30 minutes or so to check you again but nothing has been done to make you happy.

The next set of questions is about your reactions to the whole eating-out experience after the restaurant handled the failure situation. At this point of time, think about the whole eating-out experience and respond the following questions by placing an “X” on the line that most closely corresponds to your evaluations.

61. The restaurant's response is  
worse than what I expected :  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  : better than what I expected.
62. The way the restaurant handle the problem  
worse than what I anticipated :  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  : better than what I anticipated.
63. I was pleased with the eating-out experience.  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  :
64. I was unhappy with the eating-out experience.  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  :
65. I was dissatisfied with the eating-out experience.  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  :
66. The outcome of the eating-out experience was  
not right.  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  :
67. The outcome of the eating out experience was fair.  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  :
68. I got what I deserved.  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  :
69. I did not get what I needed.  $\frac{\quad}{1} : \frac{\quad}{2} : \frac{\quad}{3} : \frac{\quad}{4} : \frac{\quad}{5} : \frac{\quad}{6} : \frac{\quad}{7}$  :

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70. The quality of services provided by the restaurant was not consistent. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7
71. The restaurant was not flexible in providing services. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7
72. The process of service delivery of the restaurant was not fair. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7
73. The restaurant did not have instructions to deal with unusual situations. : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ :  
1 2 3 4 5 6 7

**Based on all of your actual experiences, as well as the experience described in this scenario, how do you feel overall about this restaurant?**

74. Displeased : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Pleased  
1 2 3 4 5 6 7
75. Dissatisfied : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Satisfied  
1 2 3 4 5 6 7
76. Unhappy : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Happy  
1 2 3 4 5 6 7

**Think about your intentions toward the restaurant after this experience:**

77. I would visit this restaurant again.  
Not At All Likely : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Very Likely  
1 2 3 4 5 6 7
78. I would recommend this restaurant to others.  
Not At All Likely : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Very Likely  
1 2 3 4 5 6 7
79. I would go to this restaurant more often.  
Not At All Likely : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Very Likely  
1 2 3 4 5 6 7

**Think about all of the experiences that people have at restaurants:**

80. How realistic was the problem that was described to you?  
Not At All Realistic : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Very Realistic  
1 2 3 4 5 6 7
81. How realistic were the descriptions of the various ways in which a restaurant might handle the problem(s)?  
Not At All Realistic : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : \_\_\_\_ : Very Realistic  
1 2 3 4 5 6 7

**Please check to make sure that you have filled out all questions in this section. Then turn to the next page.**

**GENERAL INFORMATION**

82. What's your gender?

☐ Male

☐ Female

83. What is your age?

\_\_\_\_\_

84. What's your academic rank?

☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior ☐ Special Status

85. Do you currently work at a restaurant?

☐ Yes ☐ No

86. Have you ever worked at a restaurant?

☐ Yes ☐ No

**This is the end of this study. Please check to make sure that you filled out all questions.**

**Thank you for your participation.**

**APPENDIX II**  
**SERVICE RECOVERY PROFILES**

**Profile 1: No Compensation/No Apology/Slow Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress did not say anything. She went back to the kitchen and came back after 30 minutes or so to check you again but nothing has been done to make you happy.

**Profile 2: No Compensation/No Apology/Fast Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress did not say anything. She went back to the kitchen and came back immediately and told you that they were so busy and couldn't do anything to make you happy.

**Profile 3: No Compensation/Partial Apology/Slow Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you. She went back to the kitchen and came back after 30 minutes or so to check you again but nothing has been done to make you happy.

**Profile 4: No Compensation/Partial Apology/Fast Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you. She went back to the kitchen and came back immediately and told you that they were so busy and couldn't do anything to make you happy.

**Profile 5: No Compensation/Apology/Slow Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you and apologized for the mistakes the restaurant made. She went back to the kitchen and came back after 30 minutes or so to check you again but nothing has been done to make you happy.

**Profile 6: No Compensation/Apology/Fast Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you and apologized for the mistakes the restaurant made. She went back to the kitchen and came back immediately and told you that they were so busy and couldn't do anything to make you happy.

**Profile 7: Compensation/No Apology/Slow Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress did not say anything. She went back to the kitchen and came back after 30 minutes or so with another dish of steak which is exactly what you want. The waitress also promised to give you 20% discount.

**Profile 8: Compensation/No Apology/Fast Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress did not say anything. She went back to the kitchen and came back immediately with another dish of steak which is exactly what you want. The waitress also promised to give you 20% discount.

**Profile 9: Compensation/Partial Apology/Slow Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you. She went back to the kitchen and came back after 30 minutes or so with another dish of steak which is exactly what you want. The waitress also promised to give you 20% discount.

**Profile 10: Compensation/Partial Apology/Fast Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you. She went back to the kitchen and came back immediately with another dish of steak which is exactly what you want. The waitress also promised to give you 20% discount.

**Profile 11: Compensation/Apology/Slow Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you and apologized for the mistakes the restaurant made. She went back to the kitchen and came back after 30 minutes or so with the another dish of steak which is exactly what you want. The waitress also promised to give you 20% discount.

**Profile 12: Compensation/Apology/Fast Response**

Your waitress came to check how your food was. You told her what had happened in the eating out experience. The waitress felt so sorry for what has occurred to you and apologized for the mistakes the restaurant made. She went back to the kitchen and came back immediately with the another dish of steak which is exactly what you want. The waitress also promised to give you 20% discount.