

國立交通大學

管理科學系碩士班

碩士論文

探討品牌權益與服務失敗歸因之交互作用對於顧客
滿意度的影響



The Interactive Effects between Brand Equity and
Firm's Controllability over a Service Failure on
Customer Satisfaction

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中華民國九十七年六月

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中文摘要

本篇論文主要是在研究品牌權益與服務失敗歸因之交互作用對顧客滿意度的影響。本篇作者檢視兩種對立的假設，一個是愛是盲目的效果，另一個是由愛生恨效果。過去文獻指出高品牌權益公司代表顧客有大量的品牌知識和許多容易取得且正面的品牌連結，此時當消費者將服務失敗歸因為公司不可控制時，會強化消費者對高品牌權益公司的同化謬誤，產生愛是盲目效果，為公司創造了一個避免滿意度受創的緩衝機制；反言之，一旦消費者認知到服務失敗是公司可以高度控制時，則強化對比效果，消費者會擴大對產品表現和預期之間的差異，由愛生恨，高品牌權益的消費者變得更不滿意。本研究結果暗示公司除了引導顧客瞭解發生服務失敗的原因，讓顧客瞭解在某些特定情況下，公司只有有限的失敗控制能力，展現公司有進行預防失敗的努力；另外，管理者必須重視公司的品牌權益，則發生低度控制的失敗時，對公司產生有利的緩衝機制。

關鍵字：品牌權益、服務失敗歸因、負面情緒

The Interactive Effects between Brand Equity and Firm's Controllability over a Service Failure on Customer Satisfaction

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Abstract

This study investigates the effects of brand equity on customer satisfaction after service failures. We posit that the effects of brand equity are contingent upon the attributions customers make about the firm's controllability over a service failure. Two competing hypotheses are examined and reconciled. The "love is blind" hypothesis posits that when low controllability is inferred, the satisfaction reduction after a service failure (compared to satisfaction before a service failure) will be smaller for high-equity brand than for low-equity brand. On the other hand, the "love becomes hate" hypothesis specifies that when high controllability is inferred, the satisfaction reduction after a service failure will be stronger for high-equity brand than for low-equity brand. The hypotheses are tested with a scenario methodology and this study conducted research in two service industries: hair salons and restaurants.

Key words: brand equity, firm's Controllability over a service failure, negative emotions

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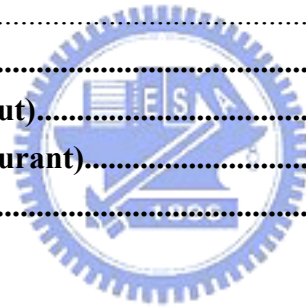


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Chapter 1 Introduction

1.1 Research Background

No one in the service industry can entirely escape failure (Fisk, Brown, & Bitner, 1993). Although service firms try to offer a high level of quality in their activities, they are unlikely to be able to eliminate all service failures (Miller et al. 2000; Lewis & Spyropoulos, 2001). The very personal and intangible characteristics of service delivery frequently produces situations in which customer needs are misjudged or mishandled, resulting in customer dissatisfaction. Even well-respected and highly esteemed brands sometimes fail their customers. Most of us have had the experience of purchasing a venerable brand, but eventually finding that after-sales service is quite disappointing. When a failed brand possesses high a priori equity, how customers react is a very important issue. We need to examine the relationship between brand equity and consumer response to service failure.

Branding theory suggests that the benefit of positive associations enjoyed by a high-equity brands predisposes favorable responses to it (Keller, 1998). Previous research has stressed that high-equity brands are more profitable because customers shop more regularly, spend more per visit (Wulf, Odekerken-Schroder, & Iacobucci, 2001) and are willing to pay a premium on the products and services they buy (Dowling & Uncles, 1997). Brand equity represents a key asset for service firms, but it also is at risk of a failed service experience.

There are two rival explanations for when customers are confronted with service failure

of a high-equity brand. First, according to the disconfirmation paradigm (Richard L. Oliver, 1981), customers' expectations serve as a salient reference point when evaluating the current consumption experience. Therefore, as frustration is compounded by the high expectations attached to brands of strong stature, consumers' adverse reactions may escalate. Second, other researchers have found that high brand equity provides an important buffer to service firms when service failures occur, resulting in less dissatisfaction (Goodman, Fichman, Lerch, & Snyder, 1995; Hess Jr, Ganesan, & Klein, 2003; Kelley & Davis, 1994).

Therefore, it is imperative that managers should carefully consider what conditions might "soften the blow", or may mitigate customers' negative responses toward the failure of a high-equity brand. This issue is at the center of this research.



1.2 Research Motivation

Service failures are the leading cause of customer switching behaviors (Keaveney, 1995). For decades researchers have studied branding theory and service failures. Understanding how brand equity affects customer responses to service failure is important because service failures have the potential to switch loyal customers to "enemies". The consequences are very serious for a firm's reputation and long-term profitability. Therefore, we focus on the effects of brand equity upon customers' negative emotions and satisfaction after service failures.

In addition, integrating the contributions of brand equity and the investigation into service failure attributions, this study seeks to investigate whether consumers' perceptions

about the causes of service failures (causal attributions) moderate the relationship between brand equity and satisfaction. This is an issue that has not been sufficiently studied to date.

Finally, this study offers a framework that reconciles these two competing explanations: the “love is blind” versus the “love becomes hate” effects.

1.3 Research Objectives

In view of the above, the research aims to find:

1. The differences of customer responses to service failures by high-equity brands and low-equity brands.

2. Whether the role of causal attributions (controllability) would moderate the effect of brand equity on customer responses to service failures.



1.4 Literature Structure

This research includes five chapters, and the outline of each chapter is as follows:

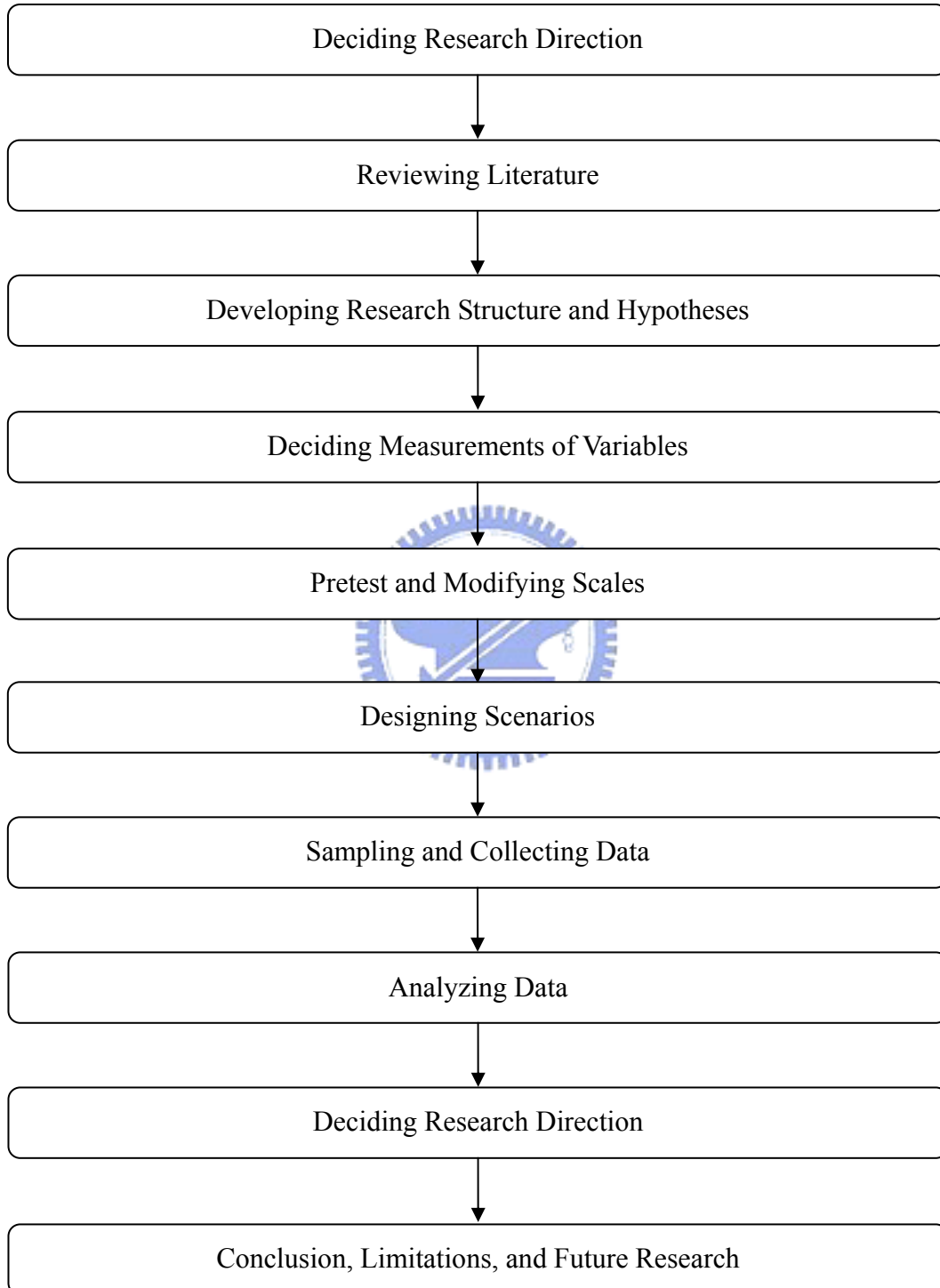


Figure 1 Research Flow

Chapter 2 Literature Review

This research posits that the effects of brand equity on customers' responses depend on the attributions customers make about a firm's control over failures.

First, we need to know that when services or products fail, people tend to engage in causal attributions (Weiner, 2000). Typically, causal attributions can result in three types of blame: customers think it was the service firm's fault, they don't know exactly who to blame, or they become aware that they are partly to blame (Laufer, David, & Mayer, 2005). If the failure is perceived to be partly attributable to the customer, or if the service firm's ability to control the failure is ambiguous, the negative effect is lessened. Conversely, if the firm is seen as having had control over the failure but did not prevent it, then customer reactions are highly negative (Sunmee C & Mattila, 2006). Attributions about controllability are important in this research because they are thought to increase the customers' negative emotions and dissatisfaction toward a firm after service failures (Folkes, 1988).

2.1. Brand equity

After the term "Brand Equity" appeared in the 1980s, it became more and more popular in marketing theory and practice. Aaker (1991) noted that brand equity is a set of brand assets and liabilities linked to a brand, its name and symbol, which add to or subtract from the value provided by a product or service to a firm and to that firm's customers.

Understanding the brand equity situation properly requires tapping into the full scope of

brand equity, including brand associations, brand awareness, perceived quality and loyalty (Aaker, 1991). The concept of brand equity is shown in Figure 2.

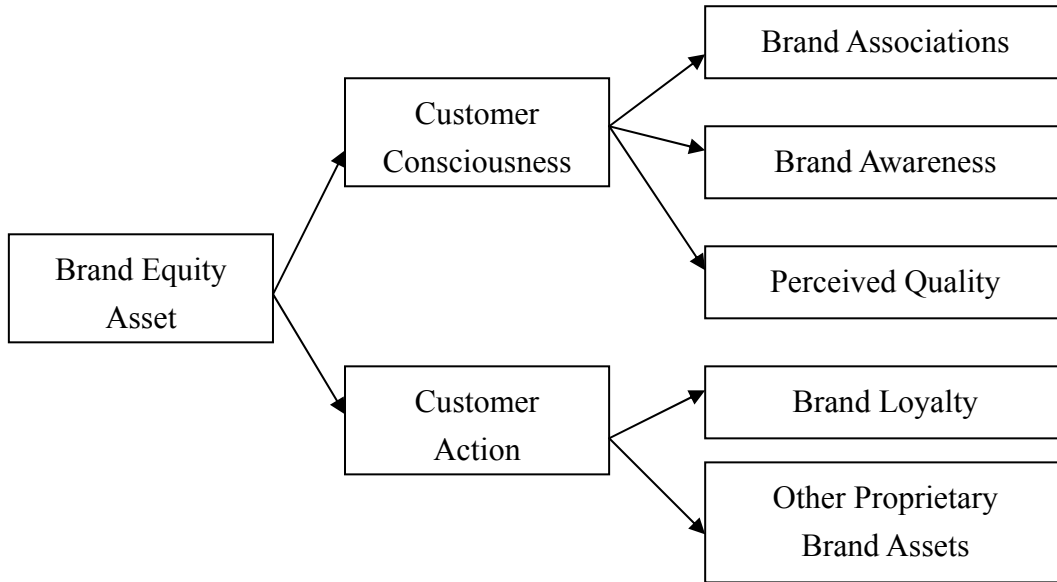


Figure 2 Composition of Brand Equity

Zeithaml (1988) defines perceived quality as “the consumer’s judgment about a product’s overall excellence or superiority”. High perceived quality means that, through the long-term experience related to a brand, consumers recognize the differentiation and superiority of the brand. They are confident that a brand is dependable and can be relied on to serve them well. Therefore, high perceived quality would drive a consumer to choose a particular brand rather than other, competing brands.

Brand loyalty makes consumers purchase a brand routinely and resist switching to another brand. Loyal consumers show more favorable responses to a brand than non-loyal or switching consumers do. They love to maintain their relationship with a firm.

Brand awareness can provide familiarity with a brand and a signal of substantiality and

promise. If customers know the brand, they usually select familiar products when making purchase decision.

Brand associations are complicated and connected to one another, and consist of multiple ideas, episodes, instances and facts that establish a solid ground of brand knowledge. Brand association can assist a customer to deal with or memorize information. The information becomes the basis of product differentiation and product extension, and which will provide a purchasing reason for customers, and give rise to positive feeling.

According to the literature, brand equity is a multidimensional concept. The appraisal of brand equity can be assessed from the viewpoint of the manufacturer, distributor or customer. This study focus on a “customer-based” conceptualization of brand equity to characterize high-equity brands as those for which consumers have substantial knowledge structures that often include associations that are both readily accessible and positive in valence (Aaker, 1991, 1996; Keller, 1993, 1998). By these criteria, Disney would constitute an example of a brand with strong equity for many consumers, because favorable associations may be available in long-term memory as a result of personal experience or exposure to heavy advertising campaigns and other communications about the very prominent Disney brand. Branding theory suggests that a cache of positive associations enjoyed by a high-equity brand predisposes favorable responses to it (Keller, 1998).

By contrast, low-equity brands, which by definition are those for which consumers can

access relatively few positive associations, may experience comparatively little change in the wake of a performance failure. Knowing fairly little about a brand prior to interaction with it, may suggest little in the way of performance expectations that could be mismatched by a failure. Disappointment may thus be comparatively minimal, and evaluations of the brand may change only negligibly as a result of the failed engagement.

2.2 Two rival explanations: “Love is blind” versus “Love becomes hate”

When customers are confronted with service failures of high-equity brands, two rival explanations exist for the effects of brand equity on customers’ responses: the “love is blind” versus the “love becomes hate” effect.

2.2.1 *Love is blind*

The “love is blind” effect argues that customers are more reluctant to hurt a valued service partner or to terminate a meaningful relationship with high-equity brand (Lind & Tyler, 1988). These customers are more likely to forgive a service failure of a high-equity brand. Hence, when the failed brand is a high-equity brand, the reduction of consumer satisfaction will be smaller compared to that for a low-equity brand. It suggests that high-equity brands provide an important buffer to service firms when service failures occur (Goodman et al., 1995; Hess Jr et al., 2003; Kelley & Davis, 1994). This effect finds support in the literature on assimilation bias (Herr, Sherman, & Fazio, 1983) and interpretation bias (Ahluwalia, 2000).

Assimilation theory posits that any discrepancy between expectations and product

performance will be minimized or assimilated by the consumer adjusting his/her perception of the product so as to be more consistent with the expectations. In an ambiguous situation, an assimilation bias leads customers to overlook or underweigh information that is inconsistent with their positive priors because of their strong connection and trust with the firm. Consequently, customers of high-equity brands are less likely to feel unhappy by a service failure. In order to maintain consistency between their positive priors and the current perceptions of being involved in a service failure, customers may reduce the weight and the spillover effects of the inconvenience occurred by high-equity brand. Because of these cognitive biases, they are more likely to forgive a service failure by a high-equity brand.

In addition, customers of high-equity brands may feel reluctant to hurt a valued exchange partner with whom they feel connected and whom they trust. For those customers, the connections with high-equity brands are so important that they become reluctant to hurt the firm because, by doing so, they create negative reflection of their self-esteem and how they define themselves (Bhattacharya, Rao, & Glynn, 1995).

2.2.2 Love becomes hate

The “love becomes hate” effect posits that a high-equity brand’s favorable associations lead customers to expect strong utilitarian benefits (Chandon, Wansink, & Laurent, 2000). A failure by such a brand may engender particularly keen disappointment. When this occurs, a position of strong equity may backfire and create an especially negative response to the

performance disruption. This, in turn, may tarnish the consumer's view of the formerly admired brand. As such, a service failure by a high-equity brand represents a sharper contrast with the customers' expectations, and as result customers see a service failure as an act of betrayal and result in more negative satisfactions and emotions (Robinson, 1996).

In this study, this explanation suggests that customers experience more dissatisfaction from high-equity brand than low-equity brand in service failure contexts. This effect finds support in the literatures on contrast effect (Herr et al., 1983). When expectations are not matched by actual product performance, contrast theory suggests that the surprise effect or contrast between expectations and outcome will cause the consumer to exaggerate the difference between the what the product delivered and what was expected from the product, i.e., if the objective performance of the product fails to meet a customer's expectations, the customer will evaluate the product less favorably than if he/she had no prior expectations of it. Contrast is thus the opposite of assimilation. Since a high-equity brand's favorable associations lead customers to expect strong benefits, customers have higher expectations about high-equity brand service than they believe they deserve. Being involved in a service failure sharply contrasts with their expectations, and may result in more negative responses (Brockner, Tyler, & Cooper-Schneider, 1992). A similar contrast effect has been observed in the information processing literature, when individuals face extreme examples that conflict with positive prior experiences (Herr et al., 1983).

In addition, customers of high-equity brands are more likely to feel betrayed than customers of low-equity brands after service failure. Because of high-equity brand, customers have more confidence in a firm, a service failure may generate feelings of broken trust and will therefore be viewed as an act of betrayal (Robinson, 1996). A feeling of betrayal will lead customers to be even more dissatisfied.

2.3 Firm's controllability over failure

When services or products fail, people tend to engage in causal attribution (Weiner, 2000). Causal attribution theory suggests that consumers make inferences about the causes of failure in the delivery of services (Heider 1958). These inferences have three dimensions (Weiner 1985, 1986): locus of causality, stability and control. Locus of causality refers to whether the consumer believes the cause of the service failure is related to the firm or to the consumer. Stability is the extent to which a cause is viewed as temporary (expected to vary over time), or predictable and permanent (expected to persist over time). Control attribution involves the consumers' belief about whether the firm could prevent a failure from occurring, or alternatively it is the situation that forces the firm to follow a certain course of action. Heider (1958) argued that consumers often use consistency principles to form attributions. An excellent service organization should have less tolerance for stable failures. Thus, consumers who have experienced excellent quality past service performance are less likely to make stable attributions when a failure occurs. In other words, positive attitudes make consumers

less likely to attribute failures to stable causes, and they can be very beneficial for a firm (Hess et al. 2003; Bagozzi et al. 2002). In this study the focus is restricted to control attributions because they are thought to affect customer satisfaction toward a firm after service failures (Folkes, 1984).

Control attribution deals with the perception that the firm could have controlled the outcome (Hui, Tse, & Zhou, 2006; Weiner, 1985, 2000). If a failure is seen to be partly attributable to a customer, or if a service firm's controllability over the failure is ambiguous, the negative effect is lessened. Conversely, if a firm is seen as having had control over a failure but did not prevent it, then customer reactions tend to be highly negative (Sunmee C & Mattila, 2006). Formally, the attributions of a firm's controlling ability are defined as customer assessment of the degree to which the firm had control over a service failure and can be blamed for its occurrence (Folkes, 1984).

The greater the perception of past service quality, the more likely consumers will attribute high levels of competence and effort to avoid service failures to the service organization (Narayandas 1998). As Hess et al. (2003) find, when a service failure occurs in the context of high-quality past service performance, consumers are likely to infer that the organization is highly competent and had little control over the failure, which would otherwise have been avoided.

2.4 Negative emotions

The literature on consumer behavior (Folkes 1988; Oliver & DeSarbo 1988; Spreng et al. 1996; Oliver 1997) suggests that individuals' emotional responses to a service failure are influenced by their causal explanation for the failure and that causal attributions about the problem imply negative affective reactions. Specifically, it is argued that consumers express more negative emotions (e.g. anger) after a service failure when the firm has control over the problem.

This attribution–emotion relationship is also consistent with Bagozzi et al. (1999) contribution from Cognitive Appraisal Theory. These authors point out that “*emotions arise in response to appraisals one makes for something of relevance to one's wellbeing*” (p. 185). In other words, it is not the service failure that creates the emotions, but rather the evaluations that individuals make about the causes of the problems in the service. Additionally, several empirical studies from other research areas, such as customer satisfaction (Mattila & Wirtz 2000; Oliver et al. 1997) and perceived justice with service recovery (Schoefer & Ennew 2005; Chebat & Slusarczyk 2005), provide support for the argument that cognitive elements explain individuals' emotions.

Therefore, the sequence of events after a service failure would be as follows: first the customer makes attributions about the control of the causes of the service failure; then, the service user will show negative emotions (such as anger, offence or disappointment), which

subsequently will have a negative effect on satisfaction. In this study, customer negative emotions are the first dependent variable.

2.5 Satisfaction Reduction

Consumer satisfaction has been discussed for several decades since Cardozo (1965) first brought it up, and has various definitions in the literature. From a consumer's perspective, satisfaction represents a pleasurable consumption experience. It can influence a consumer's attitude towards a product and his intention to repurchase (R. L. Oliver, 1980). From a firm's perspective, satisfaction considerably contributes to the increase of its profitability. Research has supported the existence of a positive relationship between customer satisfaction and financial performance (Anderson, Fornell, 1997).

Customer satisfaction could be characterized as an evaluative judgment, with an evaluation being made between expectation and product or service performance, after a purchase has been completed (R. L. Oliver, 1980). Expectancy-disconfirmation theory is one of the most influential topics in customer satisfaction studies (Zwick, Pieters, & Baumgartner, 1995), and in which consumer satisfaction can be specified as a function of initial standard judgment which is compared to the level of perceived performance (Westbrook & Oliver, 1991). Consumers are assumed to assess a product before actually purchasing it. If performance exceeds expectation, a positive disconfirmation will be expected and people will feel satisfied about the product. By contrast, people will feel dissatisfied if there is a negative

disconfirmation when performance does not meet their expectations (Zwick et al., 1995).

Cognitive dissonance theory suggests that individuals will adopt a dissonance reduction strategy if they experience disconfirmation consumption (Tse & Wilton, 1988). People may distort their cognition of how the service is performed and assimilate their judgments into their initial expectations if they don't want to admit the difference between expected and actual experience (Anderson, 1973). When consumers experience dissonance after consumption, they will align their assessments with their expectations.

Maxham & Netemeyer (2002) examined overall firm satisfaction as a customer's cumulative satisfaction after multiple experiences, transactions and encounters with a service organization (Maxham & Netemeyer, 2002; Smith & Bolton, 1998). Since some customers may view a service failure as a single specific experience which may result in slight differences in overall firm satisfaction, this study examines two kinds of satisfaction constructs: overall satisfaction before a service failure, and satisfaction after service failure. The difference between the satisfaction based on the past experience and the consumer satisfaction after service failure as satisfaction reduction is used, to see the effect of a single service failure. This is the dependent variable in this study.

2.6 Patronage Reduction

Satisfaction literature strongly supports the idea that increased satisfaction with a service encounter leads to an increased intention to repurchase, which is the tendency to return to the

same service provider (Harris, Grewal, Mohr, & Bernhardt, 2006). After service failure, customers dissatisfaction and negative emotions should influence customers' intentions and behavior (Fishbein & Ajzen, 1975; Perugini & Bagozzi, 2001), such as the intent to repurchase from the firm.

In this section, we examine complaint behavior examined in service failure literature (Singh, 1988). i.e. patronage reduction. Customers can remove the benefits that their future patronage would have generated. More specifically, patronage reduction is defined as a customer's efforts to reduce the frequency of his or her visits, spend less per visit, and to frequent competitors more intensively (Wulf et al., 2001). Customer could decide to avoid a firm because he or she does not want to repeat a negative experience.



2.7 Hypotheses

In this research, it is hypothesized that the “love is blind” versus the “love becomes hate” effects are contingent upon the attributions made by customers about a firm's ability to control the service failure. Controllability attributions reflect the customers' beliefs that the service firm could have prevented the failure (Folkes, 1984; Hamilton, 1980; Hess Jr et al., 2003; Weiner, 2000). Attributions about a firm's controllability are defined as customers' judgments of the degree to which the firm had control over a service failure and can be blamed for its occurrence (Folkes, 1984).

When customers perceive that a firm had little control over a failure, the “love is blind”

effect explains the influence of brand equity on customer responses to service failures. Consistent with the logic supporting this effect, customers of high-equity brands, compared to low-equity brands, experience smaller satisfaction reductions for two reasons. First, their perceptions of high-equity brands bias the way they assimilate and interpret information related to the service failure. For high-equity brands, customers overlook or reduce the effect of the inconvenience associated with an uncontrollable service failure. Second, dissatisfaction and negative images seem contrary to maintaining a strong and positive psychological connection, especially when the service failure is beyond the control of the firm. In this context, customers of high-equity brands experienced smaller satisfaction reductions for a firm they trust and with which they strongly identify. In addition, when customers believe that the firm did not have the ability to do anything, or when external forces caused the failure (Folkes et al., 1987), their negative emotions are less intense (Folkes, 1984). Last, patronage reduction is defined as a customer's efforts to reduce the frequency of his or her visits, spend less per visit, and to frequent competitors more intensively (Wulf et al., 2001). However, when attributions of low controllability are made, customers of high-equity brand may feel reluctant to hurt a valued exchange partner to whom they feel connected and in whom they trusted. Then:

***Hypothesis 1a:* When customers attribute a service failure to a low controllable cause, their negative emotions toward high-equity brands will be significantly lower**

than toward low-equity brands (i.e., “love is blind” effect).

Hypothesis 1b: When customers attribute a service failure to a low controllable cause, their satisfaction reductions after a service failure (compared to satisfaction before a service failure) will be smaller for high-equity brands than for low-equity brands (i.e., “love is blind” effect).

Hypothesis 1c: When customers attribute a service failure to a low controllable cause, their patronage reductions will be significantly smaller for high-equity brands than for low-equity brands (i.e., “love is blind” effect).

On the other hand, when customers infer that a firm had control over the service failure; the “love becomes hate” effect explains the effect of service failures by high-equity brands. Compared to low-equity brands, customers of high-equity brands experience greater satisfaction reduction for two reasons. First, customers of high-equity brands have higher expectations about the service they believe they deserve, and therefore a controllable service failure more sharply contrasts with their expectations. In addition, they are more likely to feel betrayed by the actions of a high-equity brand than low-equity brand (Robinson, 1996). Also, controllable service failures are likely to be viewed as grounds for anger because a deliberate act is a more significant breach of trust for customers who have a strong belief in and connections with the firm. When customers believe that the firm had the ability to do but chose not to (Folkes et al., 1987), their negative emotions are more intense (Folkes, 1984).

Formally:

Hypothesis 2a: When customers attribute a service failure to a high controllable cause, their negative emotions toward high-equity brands will be significantly stronger than toward low-equity brands (i.e., “love becomes hate” effect).

Hypothesis 2b: When customers attribute a service failure to a high controllable cause, their satisfaction reductions after a service failure (compared to satisfaction before a service failure) will be greater for high-equity brands than for low-equity brands (i.e., “love becomes hate” effect).

Hypothesis 2c: When customers attribute a service failure to a high controllable cause, their patronage reductions will be significantly greater for high-equity brands than for low-equity brands (i.e., “love becomes hate” effect).



2.8 Research Framework

The major focuses of this study is to identify (1) the contingency effect of a firm’s controllability and (2) the interaction between brand equity and firm’s controllability. The model guiding the overall research is presented in Figure 3.

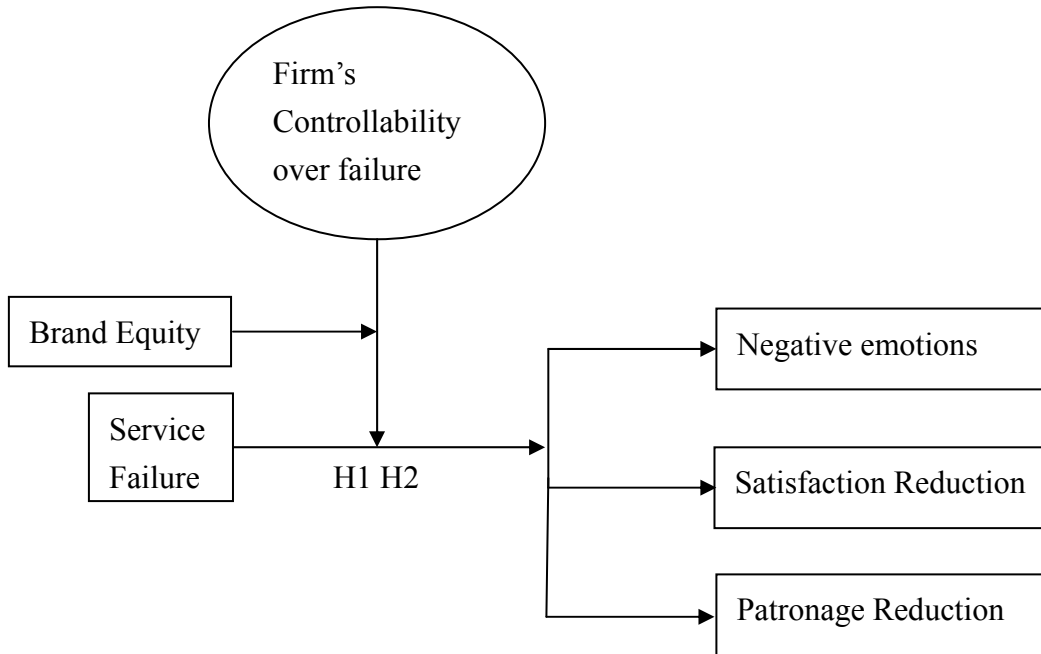


Figure 3 Research Framework (1)

Depending on the attributions made about a firm's controllability, this study posits that customers experience a smaller or a greater reduction of satisfaction of high-equity brands than do customers of low-equity brands. The two components of hypothesis 1 and 2 are represented in Figure 4.

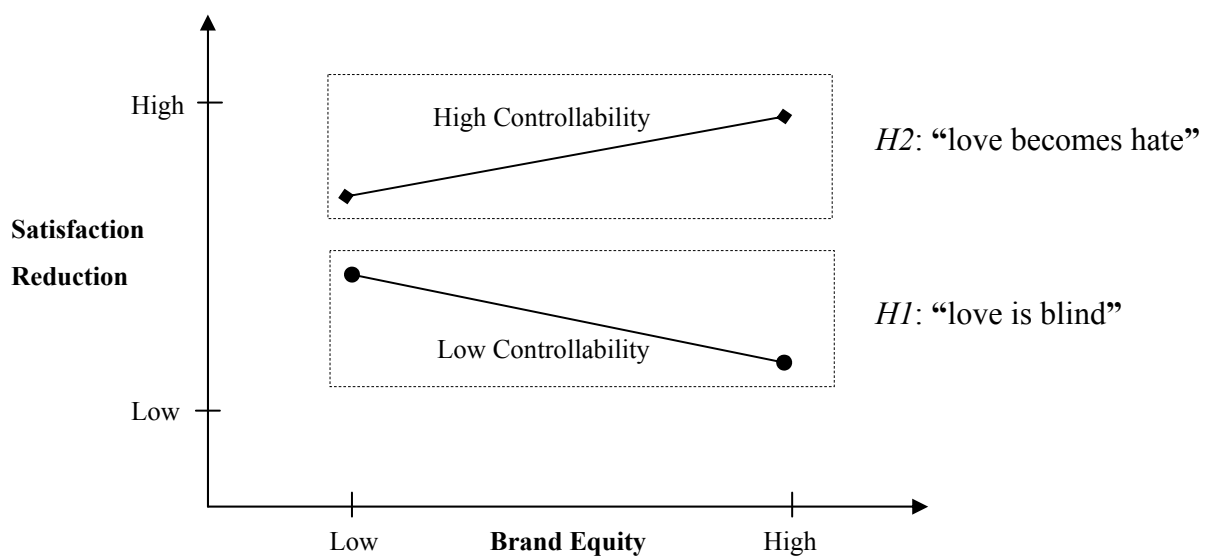
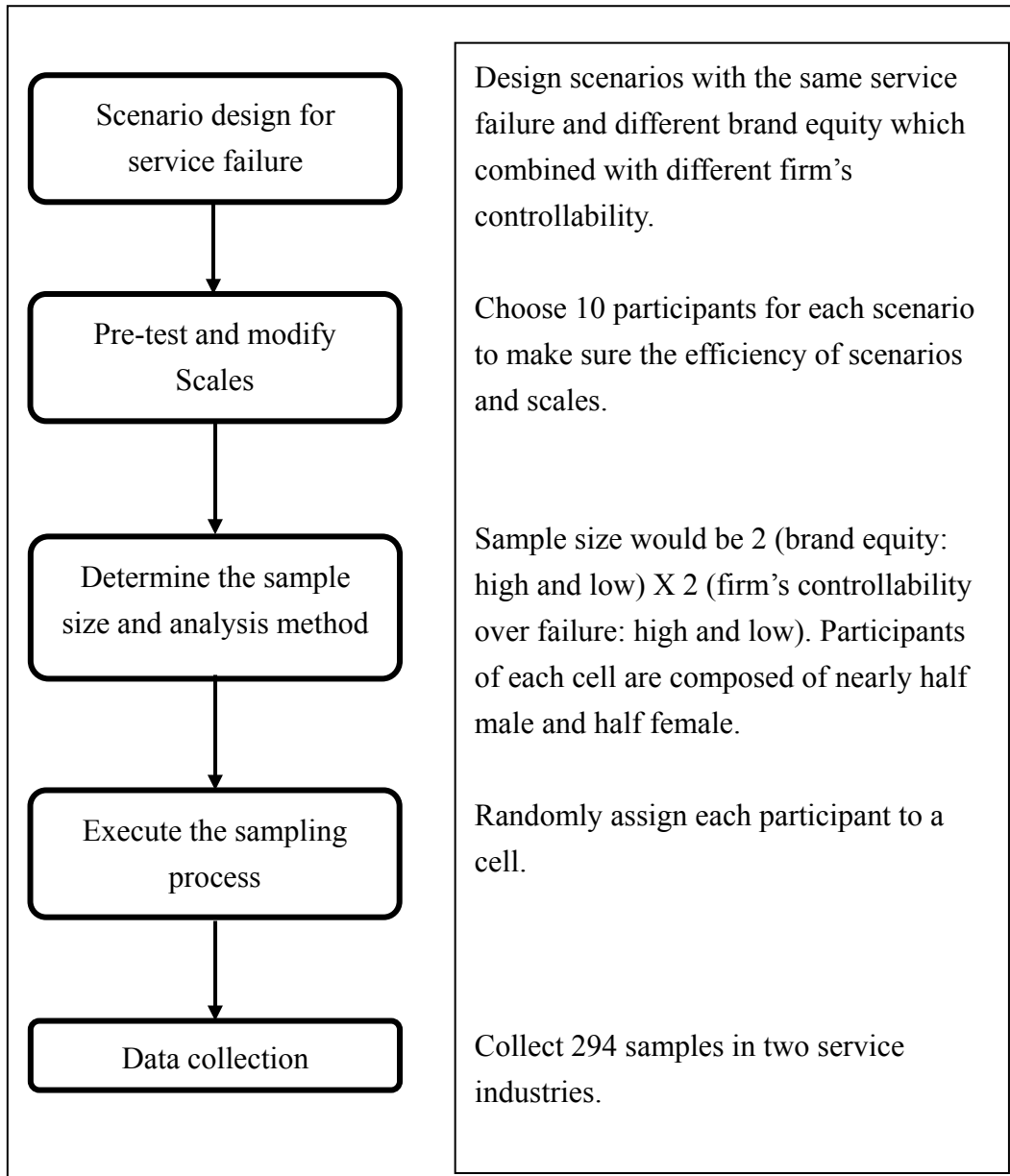


Figure 4 Research Framework (2)

Chapter 3 Methodology

3.1 Conceptual Research Framework



3.2 Experimental Design

This study set out to determine how the attributions customers make about a firm's control over failures influences the effects of brand equity on customers' responses, when they are confronted with service failures. To increase generalizability, this study conducted research in two service industries: hair salons and restaurants. Hair salons and restaurants were ideal for the study because both are commonly used by and familiar to a wide range of consumers, which should provide a diverse group of respondents who could meaningfully complete the survey. In addition, both service industries maintain a strong presence in high-equity brand contexts

Testing the model in these two services therefore should have implications for existing theories and for managers of high-equity brands.



3.2.1 Experiment Procedure

This study constructed scenarios to manipulate the brand equity and firm's controllability over service failure across the two service industries with a completely randomized full factorial design. The participants were randomly assigned to one of the four cells in a 2×2 (firm's controllability over the failure: low or high \times brand equity: high versus low) between-subject experiment. The experimental design for this study is summarized in Table 1.

Table 1 *Experimental design*

Brand Equity	Firm's Controllability Over the Failure	
	Low	High
Low		
High		

Low: partial blame to other customers or who to blame is unknown;

High: the firm is perceived to have had the ability to prevent the failure but did not.

Written scenarios were used to create the four experimental conditions in the two service industries. A scenario methodology was chosen for the study, in which subjects were asked to imagine themselves in the scenarios presented. Scenario methodology has been used in previous studies of customer reaction to service failure. There is strong evidence that individuals respond to an experimental scenario in the same manner as they would respond to a similar, actual experience (Maxham & III, 2001).

Initially, respondents learned that they would participate in one study about the service experiences. In the scenarios, participants were asked to recall an actual hair salon (restaurant) where they received service before. In both service industries, participants were randomly assigned to two brand equity conditions, to complete the brand equity scales and the customer satisfaction scales depending on the quality of past experiences.

Respondents first read a short description of a firm. In the case of the hair salons, respondents were told to imagine that they had already made an appointment to get their hair cut. However, when they arrived on time, the respondents find out that they have to wait for 35 minutes to get served.

In the restaurant scenario, respondents were asked to imagine that they had already made an appointment for dinner. Then the respondents subsequently learn that they have to wait for 35 minutes to become seated. Next, both groups of respondents read scenarios describing one of two controllability manipulations. Last, respondents were asked to complete the customers' satisfaction scales again after service failure in order to examine the intensity of their negative emotions, and the degree of satisfaction reductions was analyzed. In addition, patronage reduction was used to exam the customers' response after service.

3.2.2 Stimulus Development

Manipulation of brand equity

To manipulate brand equity, the study selected some pictures for different brand equities. There were three exclusive and luxurious hair salon pictures for a high-equity brand manipulation and three pictures of university-affiliated haircut service for a low-equity brand (Appendix A). In addition, this study provided a description about the service and the quality of the hair salon corresponding to the pictures in order to induce customers to recall one hair salon that he/she has been to (Appendix A). In this study, we used perceived quality, which is one dimension of brand equity to do the manipulation check since it is the most obvious and external concept to evaluate brand equity. Therefore, consistent with well-established measures of brand equity (e.g., Aaker and Keller 1990; Smith and Park 1992), we considered previous research and measure brand equity based on perceived quality, where perceived

quality reflects a global brand evaluation (DelVecchio, Jarvis, Klink, & Dineen, 2007). For the purpose of a manipulation check, participants were asked to report the name of the hair salon he chooses and to complete the brand equity scale adapted from Yoo & Donthu (2001). Examples included, “The likely quality of this hair salon is extremely high.” and “This hair salon’s quality appears to be reliable.” (1 = “strongly disagree,” 7 = “strongly agree”). Results supported the high- and low-equity brands’ intuitive designations. In addition, the pictures and description that represents high equity was rated significantly higher on the brand-equity scale than the low-equity hair salon brand. The results of the manipulation will be reported in Chapter 4.

Manipulation of a firm’s controllability over failure



A service failure scenario was designed to stimulate participants into an unsatisfactory service experience due to an unnecessarily long wait. The respondents were randomly assigned to two scenarios about the firm’s controllability over failure.

To manipulate the controllability variable, we depicted in two scenarios. Both scenarios were that customers had to wait 35 minutes for their hair cuts even if they had already made an appointment three days previously (occurrence of service failure). However, in a firm’s high controllability over failure situation, the reason for making the customers wait was that the salon forgot to make the appointment. In a low controllability scenario, failure happened because the last customer was so critical that he/she kept complaining about the hairstyle. The

firm's controllability over failure depends on how the participants attribute the service failure.

This study used the scale of attributions about the firm's controllability developed by Maxham and Netemeyer (2002). (e.g. "The service failure was entirely the organization's fault.", on a scale from 1 = strongly disagree, to 7 = strongly agree)

3.3 Measurements

3.3.1 Brand Equity

The Scale of Brand equity adapted from Yoo & Donthu (2001) was used to check the effect of the brand equity manipulation. It measures perceived quality of high- and low-equity

hair salon brands. The 7-point Likert scale was chosen. Seven points represents "strongly agree", and one point represents "strongly disagree."

Scale Items:

1. The likely service quality of this hair salon is extremely high.
2. The skill of hair stylist in this hair salon is extremely high.
3. The quality of this hair salon appears to be reliable.

3.3.2 Negative emotions

Respondents assessed the degree to which they would feel anger, shock, irritation (Richins, 1997), regret, and betrayal. This scale has a reliability alpha of 0.883.

Scale Items:

1. I would feel very angry.
2. I would feel regret.
3. I would feel betrayed.
4. I would feel shocked.
5. I would feel irritated.

3.3.3 Satisfaction

The 7-points Likert scale was chosen. Seven points represents “strongly agree”, and one point represents “strongly disagree. Following prior research we modified the words to fit this study, and measured customer satisfaction after the service recovery on a three-item scale (adapted from Maxham III & Netemeyer (2002).

Scale Items:

1. On the whole, I am/was very satisfied with my experience with this/that service.
2. In general, I am/was happy with the service experience.
3. Overall, my positive experience outweighs/outweighed my negative experience with this/that service.

3.3.4 Patronage Reduction

Patronage Reduction was measured by a four-item, seven-point scale which was used by Wulf et al.(2001).



Scale Items:

1. I spent less money at this business.
2. I stopped doing business with this firm.
3. I reduced frequency of interaction with the firm.
4. I took a significant part of my business to a competitor.

3.3.5 Firm's Controllability Over Failure

Attributions about the firm's controllability were measured with a three-item scale developed by Maxham and Netemeyer (2002). This scale was based on semantic differential items.

Scale Items:

1. This hair salon was entirely responsible for the problem that I experienced.
2. The problem that I encountered was solely this hair salon's fault.
3. I entirely blame this hair salon for this problem.

3.4 Data Collection and Analysis Methods

First, an Independent-Sample T Test was employed to determine if brand equity (high vs. low) and firm's controllability over failure have significant differences under stimulus manipulation. Then, ANOVA was used to determine the firm's controllability over failure on the effect of brand equity on the decline of satisfaction, and thus understand the influence of moderator.

3.5 Pretest

A pilot study was conducted to test the validity and reliability of the questionnaire. Researchers use this method to discover problems or misunderstandings in the design of the experiment and then modify it before the official study. After our questionnaires failed and were modified four times, the fifth edition of pilot study was successful.

The pretest was made by giving forty participants the experimental questionnaires, telling them the research purpose was concerned with consumer behavior. There were twenty male and twenty female participants. Twenty-two of the forty participants were students. The reliability of customer satisfaction scales was 0.891, the reliability of the negative emotions scales was 0.968, and the reliability of the patronage reduction scales was 0.924. All reliabilities of scales were higher than 0.7. In addition, there was significant difference between high-equity brand and low-equity brand ($p < 0.00$). The difference between high and low controllability was significant, too ($p < 0.00$).

Chapter 4 Research Analysis and Results

This chapter contains the analysis and the results of this study, including the background of respondents, manipulation checks, reliability and validity of the results. A 2 (brand equity) \times 2 (firm's controllability over failure) between-subjects experiment was conducted. Also, this study conducted research in two service industries (hair salon and restaurant) to determine the generalizability of our model. The type of service didn't affect any dependent variables as we expected. In other words, there was no significant difference between the service types. However, since the scenarios are different in two service industries, this study discussed the results separately, which has been used in previous studies of customer reaction to service failure (DeWitt & Brady, 2003; Gremler & Gwinner, 2000). Therefore, this study first gave the results of haircut scenario and then the results of restaurant scenario. Data analysis techniques such as ANOVA, multi-comparison, and Independent-Sample T Test were employed to test the hypotheses. The study used SPSS 12.0 to analyze the data.

4.1 Background of Participants

In the haircut scenario, from the total sample of 145 participants, 55.17% were students, 53.8% were female, 40% were between 21 and 25 years old, 57.93% have college degree, 39.31% have a graduate or higher degree, 35.86% have incomes between NT10,000 to NT30,000.

In the restaurant scenario, from the total samples of 149 participants, 60% were students,

51.2% were female, 42.4% were between 21 and 25 years old, 61.8% have college degree, 37.1% have a graduate or higher degree, 47.6% have income less than NT10,000. The demographics of all respondents are listed in Table 2.

Table 2 Demographics of Participants

Demographics	Category	Number of Participants		Percentage	
		Hair salon	Restaurant	Hair salon	Restaurant
Gender	Male	67	73	46.2	48.8
	Female	78	76	53.8	51.2
	Total	145	149	100.0	100.0
Age	16~20	7	3	4.8	2.4
	21~25	58	62	40	42.4
	26~30	51	41	35.1	28.2
	31~35	16	11	11	7.6
	36~40	7	13	4.83	8.8
	41~45	4	5	2.76	2.9
	46~50	5	5	2.9	2.9
	Over 51		9	1.38	6
	Total	145	149	100.0	100.0
Education Degree	Senior high	4	2	2.76	1.3
	College	84	92	57.93	61.8
	Graduate upward	57	55	39.31	37.1
	Total	145	149	100.0	100.0
Occupation	Students	80	89	55.17	60.0
	Others	65	60	44.83	40.0
	Total	145	149	100.0	100.0
Income	Less than 10,000	47	70	32.41	47.6
	10,001~30,000	52	44	35.86	30.0
	30,001~50,000	36	20	24.83	13.5
	50,001~70,000	7	9	4.83	6.5
	70,001~90,000	2	5	1.38	1.8
	More than 90,001	1	1	0.69	.6
	Total	145	149	100.0	100.0

4.2 Reliabilities

In both service industries, the reliabilities of all constructs in this research were tested with Cronbach's alpha. Table 3 shows that reliabilities are all above 7 across all factors, which indicate the high internal consistency of each item of the same factor.

Table 3 Reliability Statistics

Factors	Cronbach's Alpha		N of Items
	<i>Hair salon</i>	<i>Restaurant</i>	
Brand equity	.937	.946	3
Controllability	.938	.940	3
Satisfaction	.895	.927	3
Satisfaction after failure	.924	.938	3
Negative emotions	.883	.936	5
Patronage Reduction	.918	.952	4

4.3 Manipulation Check

4.3.1 Manipulation Check of brand equity

In the haircut scenario, there were 73 participants in the high-equity brand and 72 in the second group, with the low-equity brand. An Independent-Sample T Test was conducted to investigate the differences of brand equity between the two groups. It is shown that the brand equity of low-equity brand is significant lower than high-equity brand (t -statistics = -8.336, $p < 0.000$). The results are showed in Table 4.

Table 4 Manipulation Check of Brand Equity

Brand Equity		N	Mean	Std. Deviation	T	Sig.(2-tailed)
<i>Hair salon</i>	Low	72	4.0926	1.03797	-8.336	.000*
	High	73	5.5525	1.07039		
<i>Restaurant</i>	Low	72	3.7725	.99498	-17.011	.000*
	High	77	6.0863	.76316		

4.3.2 Manipulation Check of Controllability

There were 73 participants in the low controllability group, and 72 in the high controllability group. An Independent-Sample T Test was conducted to investigate the difference of brand equity between the two groups. It was shown that the brand equity of low controllability is significantly lower than for high controllability (t-statistics = -6.551, $p < 0.000$). The results are showed in Table 5.

Table 5 Manipulation Check of Controllability

Controllability		N	Mean	Std. Deviation	T	Sig.(2-tailed)
<i>Hair salon</i>	Low	73	3.6758	1.35739	-6.551	.000*
	High	72	5.0880	1.23460		
<i>Restaurant</i>	Low	81	2.7500	1.30844	-14.080	.000*
	High	68	5.4472	1.17964		

4.4 Analysis of Results

After confirming all manipulation checks and the reliability of the scales, ANOVA was applied to test the hypotheses.

4.4.1 Service Industries

This study conducted research in two service industries (hair salons and restaurants). The type of service didn't affect any dependent variables as we expected. In other words, there

was no significant difference between the service industries ($p>0.05$). See as Tables 6, 7 and 8.

However, since the scenarios in two service industries are different, this study discussed the results separately, which has been used in previous studies of customer reaction to service failure (DeWitt & Brady, 2003; Gremler & Gwinner, 2000).

Table 6 Tests of Between-Subjects Effects

Dependent Variable: negative emotions

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	258.068 ^a	7	36.867	41.240	.000
Intercept	5472.628	1	5472.628	6121.723	.000
SI	.143	1	.143	.160	.690
BE	1.376	1	1.376	1.539	.216
CON	203.763	1	203.763	227.931	.000
SI * BE	.006	1	.006	.007	.935
SI * CON	13.027	1	13.027	14.572	.000
BE * CON	32.635	1	32.635	36.506	.000
SI * BE * CON	.002	1	.002	.002	.965
Error	255.675	286	.894		
Total	5891.480	294			
Corrected Total	513.743	293			

a. R Squared = .502 (Adjusted R Squared = .490)

Note: BE represents Brand Equity; CON represents Controllability; SI represents Service Industries.

Table 7 Tests of Between-Subjects Effects

Dependent Variable: Satisfaction Reduction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	301.482 ^a	7	43.069	53.751	.000*
Intercept	1267.742	1	1267.742	1582.187	.000*
SI	1.127	1	1.127	1.407	.237
BE	5.293	1	5.293	6.606	.011*
CON	230.397	1	230.397	287.544	.000*
SI * BE	6.627	1	6.627	8.271	.004*
SI * CON	5.505	1	5.505	6.871	.009*
BE * CON	47.831	1	47.831	59.695	.000*
SI * BE * CON	2.639	1	2.639	3.293	.071
Error	229.160	286	.801		
Total	1755.050	294			
Corrected Total	530.642	293			

a. R Squared = .568 (Adjusted R Squared = .558)

Note: BE represents Brand Equity; CON represents Controllability; SI represents Service Industries.

Table 8 Tests of Between-Subjects Effects

Dependent Variable: Patronage Reduction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	274.569 ^a	7	39.224	29.147	.000*
Intercept	5095.501	1	5095.501	3786.389	.000*
SI	.619	1	.619	.460	.498
BE	90.970	1	90.970	67.598	.000*
CON	131.410	1	131.410	97.648	.000*
SI * BE	1.500	1	1.500	1.114	.292
SI * CON	27.733	1	27.733	20.608	.000*
BE * CON	9.633	1	9.633	7.158	.008*
SI * BE * CON	3.325	1	3.325	2.471	.117
Error	384.882	286	1.346		
Total	5643.500	294			
Corrected Total	659.452	293			

a. R Squared = .416 (Adjusted R Squared = .402)

Note: BE represents Brand Equity; CON represents Controllability; SI represents Service Industries.

4.4.2 Brand Equity with Firm's Controllability over failure and Negative Emotions

Hypothesis 1a indicated that when attributions of low controllability are made, customers will experience weaker negative emotions with high-equity brands than with low-equity brands. Hypothesis 2a speculated that when attributions of high controllability are made, customers will experience stronger negative emotions with high-equity brands than with low-equity brands.

Table 9 shows the descriptive statistics of brand equity and controllability. Table 10

contains the results of ANOVA and shows that a firm's controllability could significantly affect customers' negative emotions ($p < 0.01$). Further, the interaction between brand equity and a firm's controllability over failure is given in Table 10 (also see Figure 5). When attributions of a firm's low controllability over failure are made, there were significant differences between high-equity and low-equity brands ($p < 0.01$); the same results happened when attributions of a firm's high controllability are made.

Table 11 shows that after a service failure, when attributions of low firm's controllability are made, customers' negative emotions are significantly weaker with high-equity brands than with low-equity brands. Hypothesis 1a is supported ($p < 0.05$). It also confirms that when attributions of a firm's high controllability are made, customers' negative emotions are significantly stronger with high-equity brands than with low-equity brands. Hypothesis 2a was supported ($p < 0.05$). Both service industries support hypothesis 1a and hypothesis 2a.

- **Hair salon**

Table 9 Descriptive Statistics (Hair salon)

	Controllability			
	Low		High	
	Mean (Std. Deviation)	N	Mean (Std. Deviation)	N
Low-equity brand	4.12 (.699)	37	4.70 (.871)	35
High-equity brand	3.33 (1.034)	36	5.24 (.683)	37

Table 10 Tests of Between-Subjects Effects (Hair salon)

Dependent Variable: Negative Emotions

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	73.117 ^a	3	24.372	35.186	.000*
Intercept	2738.338	1	2738.338	3953.338	.000*
BE	.594	1	.594	.858	.356
CON	56.339	1	56.339	81.337	.000*
BE * CON	15.929	1	15.929	22.997	.000*
Error	97.666	141	.693		
Total	2913.240	145			
Corrected Total	170.782	144			

a. R Squared = .428 (Adjusted R Squared = .416)

Note: BE represents Brand Equity; CON represents Controllability.



Table 11 Multiple Comparisons of Brand Equity and Controllability (LSD)

Dependent Variable: Negative Emotions

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
1	2	-.5839*	.19624	.003
	3	.7911*	.19484	.000
	4	-1.1189*	.19350	.000
2	1	.5839*	.19624	.003
	3	1.3751*	.19756	.000
	4	-.5350*	.19624	.007
3	1	-.7911*	.19484	.000
	2	-1.3751*	.19756	.000
	4	-1.9101*	.19484	.000
4	1	1.1189*	.19350	.000
	2	.5350*	.19624	.007
	3	1.9101*	.19484	.000

Based on observed means.

The error term is Mean Square (Error) = .693.

*. The mean difference is significant at the 0.05 level.

The mean difference is significant at the .05 level.

Note: 1 represents low brand equity and low controllability;
 2 represents low brand equity and high controllability;
 3 represents high brand equity and low controllability; and
 4 represents high brand equity and high controllability.

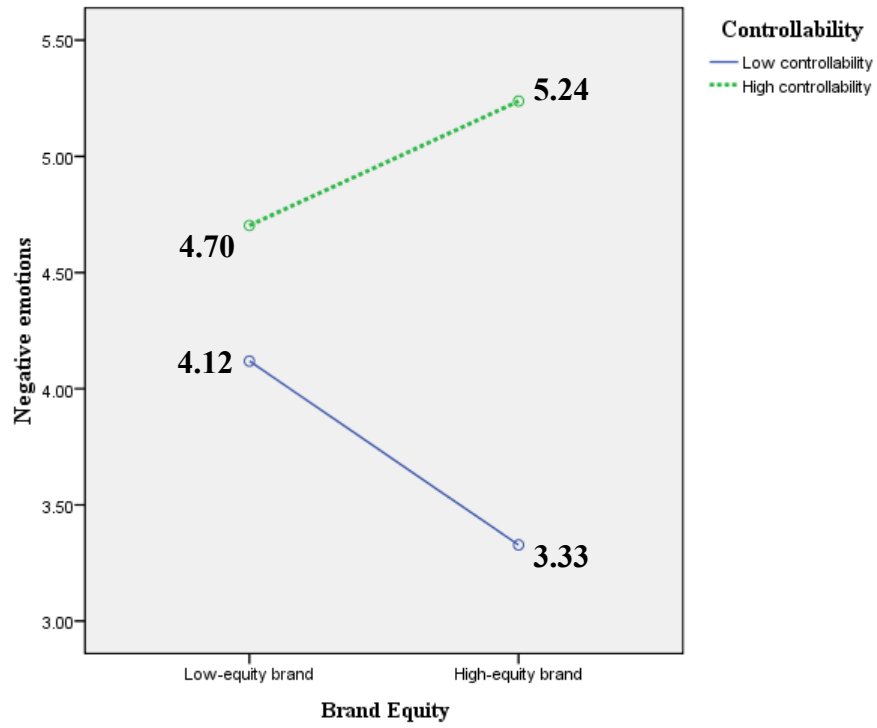


Figure 5 Interactions between Brand Equity and Controllability (Hair salon)



• **Restaurant**

Table 12 Descriptive Statistics (Restaurant)

	Controllability			
	Low		High	
	Mean (Std. Deviation)	N	Mean (Std. Deviation)	N
Low-equity brand	3.67 (1.294)	39	5.08 (.995)	33
High-equity brand	2.85 (1.073)	42	5.61 (.673)	35

Table 13 Tests of Between-Subjects Effects (Restaurant)

Dependent Variable: Negative emotions

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	183.464 ^a	3	61.155	56.120	.000*
Intercept	2734.396	1	2734.396	2509.267	.000*
BE	.790	1	.790	.725	.396
CON	161.450	1	161.450	148.157	.000*
BE * CON	16.716	1	16.716	15.339	.000*
Error	158.009	145	1.090		
Total	2978.240	149			
Corrected Total	341.473	148			

a. R Squared = .537 (Adjusted R Squared = .528)

Note: BE represents Brand Equity; CON represents Controllability.

Table 14 Multiple Comparisons of Brand Equity and Controllability (LSD)

Dependent Variable: Negative emotions

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
1	2	-1.4182*	.24691	.000
	3	.8190*	.23214	.001
	4	-1.9448*	.24306	.000
2	1	1.4182*	.24691	.000
	3	2.2372*	.24283	.000
	4	-.5266*	.25329	.039
3	1	-.8190*	.23214	.001
	2	-2.2372*	.24283	.000
	4	-2.7638*	.23892	.000
4	1	1.9448*	.24306	.000
	2	.5266*	.25329	.039
	3	2.7638*	.23892	.000

Based on observed means.

The error term is Mean Square (Error) = 1.090.

*. The mean difference is significant at the .05 level.

Note: 1 represents low brand equity and low controllability;
 2 represents low brand equity and high controllability;
 3 represents high brand equity and low controllability; and
 4 represents high brand equity and high controllability.

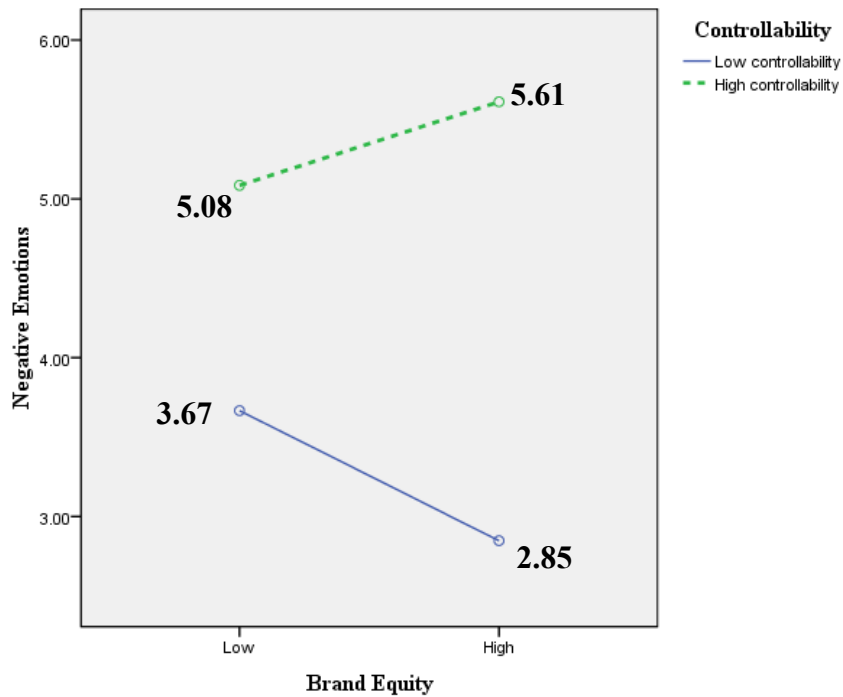


Figure 6 Interactions between Brand Equity and Controllability (Restaurant)

4.4.3 Brand Equity with Firm’s Controllability over failure and Satisfaction reduction

This part of the project attempts to establish whether there is an interactive effect between brand equity and firm’s controllability over failure on the satisfaction reduction.

Hypothesis 1b speculated that when attributions of low controllability are made, customers will experience smaller satisfaction reductions with high-equity brands than with low-equity brands (i.e. the “love is blind” effect). Hypothesis 2b showed that when attributions of high controllability are made, customers will experience greater satisfaction reductions with high-equity brands than with low-equity brands (i.e. the “love becomes hate” effect).

Table 15 shows the descriptive statistics of brand equity and controllability. Table 16

shows the results of ANOVA and that firm's controllability could significantly affect the reduction of customers' satisfaction ($p < 0.01$). Table 16 also shows the interaction between brand equity and firm's controllability over failure (see Figure 7 also). When attributions of low controllability are made, there were significant differences in the reduction of satisfaction between high-equity and low-equity brands ($p < 0.01$); the same results were obtained when attributions of high firm's controllability over failure were made ($p < 0.01$).

Table 17 shows that after a service failure, when attributions of low firm's controllability are made, the reduction of customers' satisfaction is significantly lower with high-equity brands than with low-equity brands. Hypothesis 1b was supported ($p < 0.05$). It also confirms that when attributions of high firm's controllability over failure are made, the reduction of customers' satisfaction is significantly higher with high-equity brands than with low-equity brands. Hypothesis 2b was supported ($p < 0.05$). Both service industries support hypothesis 1b and hypothesis 2b.

- **Haircut**

Table 15 Descriptive Statistics (Hair salon)

	Controllability			
	Low		High	
	Mean (Std. Deviation)	N	Mean (Std. Deviation)	N
Low-equity brand	1.59 (.609)	37	2.48 (1.291)	35
High-equity brand	0.94 (.749)	36	3.06 (.846)	37

Table 16 Tests of Brand Equity and Controllability (Hair salon)

Dependent Variable: Satisfaction Reduction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	95.880 ^a	3	31.960	39.016	.000*
Intercept	591.095	1	591.095	721.584	.000*
BE	.036	1	.036	.044	.834
CON	81.531	1	81.531	99.530	.000*
BE * CON	13.860	1	13.860	16.920	.000*
Error	115.502	141	.819		
Total	803.444	145			
Corrected Total	211.382	144			

a. R Squared = .454 (Adjusted R Squared = .442)

Note: BE represents Brand Equity; CON represents Controllability.



Table 17 Multiple Comparisons of Brand Equity and Controllability (LSD)

Dependent Variable: Satisfaction Reduction

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
1	2	-.8816*	.21341	.000
	3	.6502*	.21188	.003
	4	-1.4685*	.21043	.000
2	1	.8816*	.21341	.000
	3	1.5317*	.21485	.000
	4	-.5869*	.21341	.007
3	1	-.6502*	.21188	.003
	2	-1.5317*	.21485	.000
	4	-2.1186*	.21188	.000
4	1	1.4685*	.21043	.000
	2	.5869*	.21341	.007
	3	2.1186*	.21188	.000

Based on observed means.

The error term is Mean Square (Error) = .819.

*. The mean difference is significant at the 0.05 level.

Note: 1 represents low brand equity and low controllability;
 2 represents low brand equity and high controllability;
 3 represents high brand equity and low controllability; and
 4 represents high brand equity and high controllability.

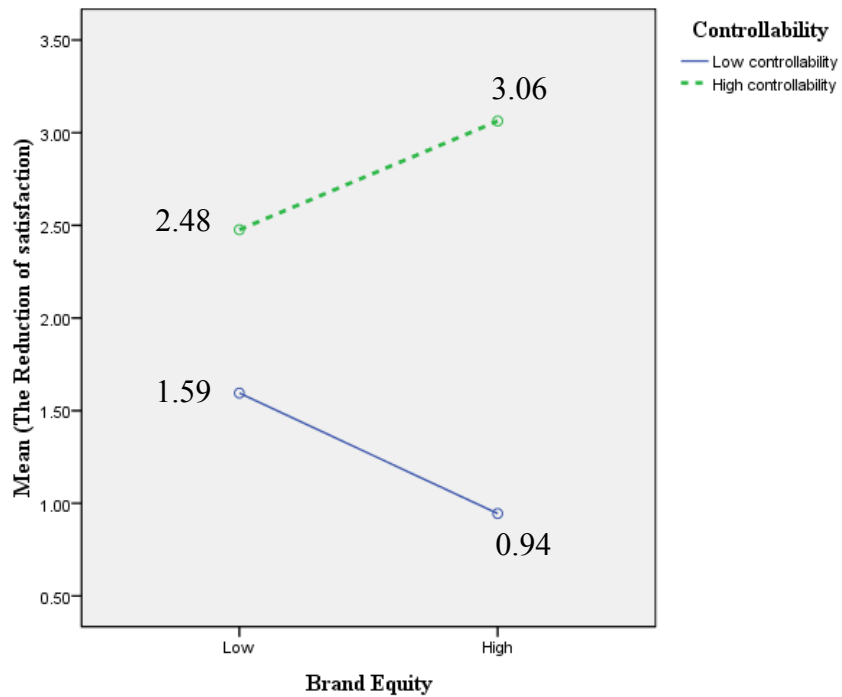


Figure 7 Interactions between Brand Equity and Controllability (Haircut)



• **Restaurant**

Table 18 Descriptive Statistics (Restaurant)

	Controllability			
	Low		High	
	Mean (Std. Deviation)	N	Mean (Std. Deviation)	N
Low-equity brand	1.33 (.831)	39	2.38 (1.077)	33
High-equity brand	0.90 (.542)	42	3.95 (1.061)	35

Table 19 Tests of Brand Equity and Controllability (Restaurant)

Dependent Variable: Satisfaction Reduction

Source	Type III Sum		Mean Square	F	Sig.
	of Squares	df			
Corrected Model	205.445 ^a	3	68.482	87.351	.000*
Intercept	678.688	1	678.688	865.691	.000*
BE	11.997	1	11.997	15.302	.000*
CON	155.039	1	155.039	197.758	.000*
BE * CON	36.819	1	36.819	46.964	.000*
Error	113.678	145	.784		
Total	951.667	149			
Corrected Total	319.123	148			

a. R Squared = .644 (Adjusted R Squared = .636)

Note: BE represents Brand Equity; CON represents Controllability.



Table 20 Multiple Comparisons (LSD)(Restaurant)

Dependent Variable: Satisfaction Reduction

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
1	2	-1.0505*	.20943	.000
	3	.4286*	.19690	.031
	4	-2.6190*	.20616	.000
2	1	1.0505*	.20943	.000
	3	1.4791*	.20597	.000
	4	-1.5685*	.21484	.000
3	1	-.4286*	.19690	.031
	2	-1.4791*	.20597	.000
	4	-3.0476*	.20265	.000
4	1	2.6190*	.20616	.000
	2	1.5685*	.21484	.000
	3	3.0476*	.20265	.000

Based on observed means.

The error term is Mean Square (Error) = .784.

*. The mean difference is significant at the .05 level.

Note: 1 represents low brand equity and low controllability;

2 represents low brand equity and high controllability;

3 represents high brand equity and low controllability; and

4 represents high brand equity and high controllability.

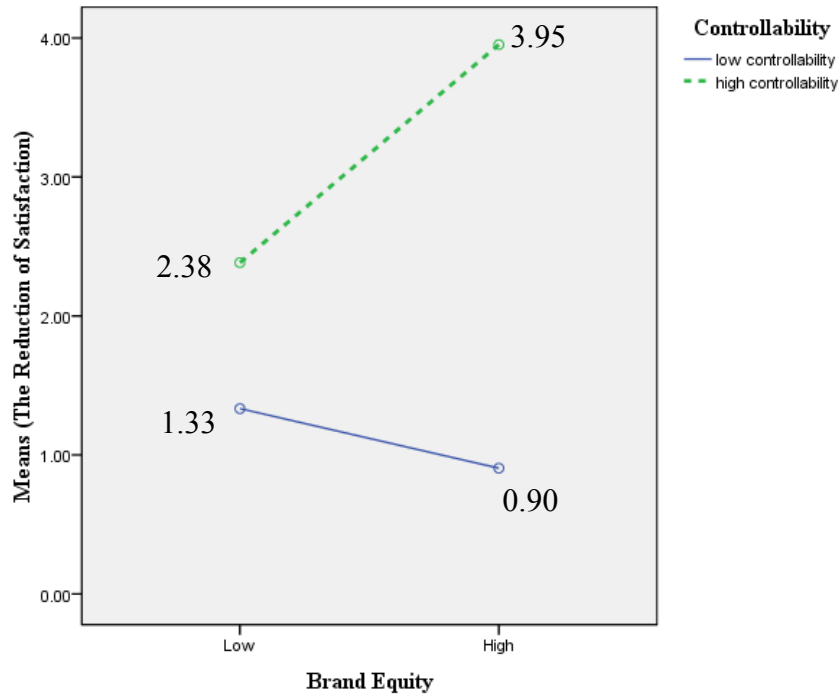


Figure 8 Interactions between Brand Equity and Controllability (Restaurant)

4.4.4 Brand Equity with Firm's Controllability over failure and Patronage Reduction

In this section, patronage reduction is defined as a customer's efforts to reduce the frequency of his or her visits, spend less per visit, and to frequent competitors more intensively (Wulf et al., 2001). Hypothesis 1c stated that when customers attribute a service failure to a low controllability cause, their patronage reduction with high-equity brands will be significantly smaller than with low-equity brands. Hypothesis 2c indicated customers' patronage reduction with high-equity brands will be significantly larger than with low-equity brands when attributions of low controllability are made.

- **Hair Salon**

Table 21 shows the descriptive statistics of brand equity and controllability on patronage reduction. However, brand equity and firm's controllability over failure showed no interaction effect on patronage reduction (Table 22; Figure 9).

Table 21 Descriptive Statistics (Hair salon)

	Controllability			
	Low		High	
	Mean (Std. Deviation)	N	Mean (Std. Deviation)	N
Low-equity brand	4.56 (.964)	37	5.13 (.980)	35
High-equity brand	3.15 (1.20)	36	4.03 (1.20)	37



Table 22 Tests of Between-Subjects Effects (Hair salon)

Dependent Variable: Patronage Reduction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	76.021 ^a	3	25.340	21.129	.000*
Intercept	2579.729	1	2579.729	2151.030	.000*
BE	57.370	1	57.370	47.837	.000*
CON	19.022	1	19.022	15.861	.000*
BE * CON	.812	1	.812	.677	.412
Error	169.101	141	1.199		
Total	2819.750	145			
Corrected Total	245.122	144			

a. R Squared = .310 (Adjusted R Squared = .295)

Note: BE represents Brand Equity; CON represents Controllability.

Table 23 shows that after a service failure, when customers make low control attributions, customers' patronage reduction are significantly lower with high-equity brands than with low-equity brands. Hypothesis 1b was supported ($p < 0.05$). However, hypothesis 2b was not supported. When customers make high control attribution, customers' patronage reduction is significantly lower with high-equity than with low-equity brands.

Table 23 Multiple Comparisons of Brand Equity and Controllability (LSD)

Dependent Variable: Patronage Reduction

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
1	2	-.5749*	.25822	.028
	3	1.4080*	.25637	.000
	4	.5338*	.25461	.038
2	1	.5749*	.25822	.028
	3	1.9829*	.25996	.000
	4	1.1087*	.25822	.000
3	1	-1.4080*	.25637	.000
	2	-1.9829*	.25996	.000
	4	-.8742*	.25637	.001
4	1	-.5338*	.25461	.038
	2	-1.1087*	.25822	.000
	3	.8742*	.25637	.001

Based on observed means.

The error term is Mean Square(Error) = 1.199.

*. The mean difference is significant at the 0.05 level.

Note: 1 represents low brand equity and low controllability;

2 represents low brand equity and high controllability;

3 represents high brand equity and low controllability; and

4 represents high brand equity and high controllability.

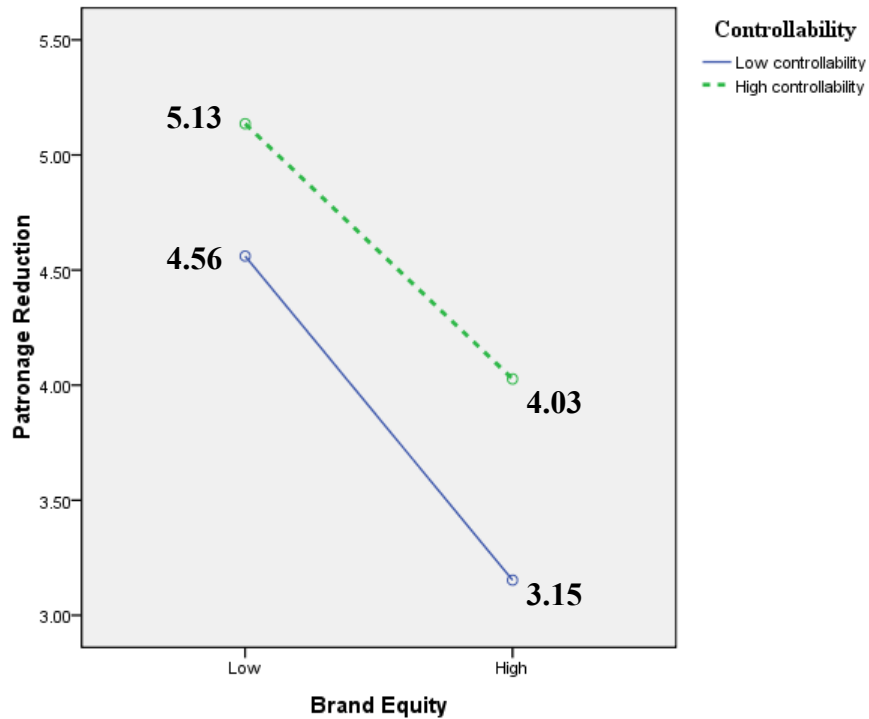


Figure 9 Interactions between Brand Equity and Controllability (Haircut)

- **Restaurant**

Table 24 shows the descriptive statistics of brand equity and controllability on patronage reduction. In the restaurant scenario, brand equity and firm's controllability over failure showed interaction effect on patronage reduction (Table 25; Figure 10).

Table 26 shows that after a service failure, when customers make low control attribution, customers' patronage reduction are significantly lower with high-equity brands than with low-equity brands. Hypothesis 1c was supported ($p < 0.05$), but hypothesis 2c was not supported ($p > 0.05$).

Table 24 Descriptive Statistics (Restaurant)

	Controllability			
	Low		High	
	Mean (Std. Deviation)	N	Mean (Std. Deviation)	N
Low-equity brand	3.92 (1.442)	39	5.30 (1.280)	33
High-equity brand	2.38 (1.065)	42	4.91 (1.054)	35

Table 25 Tests of Between-Subjects Effects (Restaurant)

Dependent Variable: Patronage Reduction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	195.887 ^a	3	65.296	43.877	.000*
Intercept	2515.784	1	2515.784	1690.551	.000*
BE	34.886	1	34.886	23.442	.000*
CON	141.283	1	141.283	94.939	.000*
BE * CON	12.255	1	12.255	8.235	.005*
Error	215.781	145	1.488		
Total	2823.750	149			
Corrected Total	411.668	148			

a. R Squared = .476 (Adjusted R Squared = .465)

Note: BE represents Brand Equity; CON represents Controllability.

Table 26 Multiple Comparisons of Brand Equity and Controllability (LSD)

Dependent Variable: Patronage Reduction

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
1	2	-1.3800*	.28854	.000
	3	1.5481*	.27127	.000
	4	-.9841*	.28404	.001
2	1	1.3800*	.28854	.000
	3	2.9280*	.28377	.000
	4	.3959	.29600	.183
3	1	-1.5481*	.27127	.000
	2	-2.9280*	.28377	.000
	4	-2.5321*	.27920	.000
4	1	.9841*	.28404	.001
	2	-.3959	.29600	.183
	3	2.5321*	.27920	.000

Based on observed means.

The error term is Mean Square (Error) = 1.488.

*. The mean difference is significant at the .05 level.

Note: 1 represents low brand equity and low controllability;
 2 represents low brand equity and high controllability;
 3 represents high brand equity and low controllability; and
 4 represents high brand equity and high controllability.

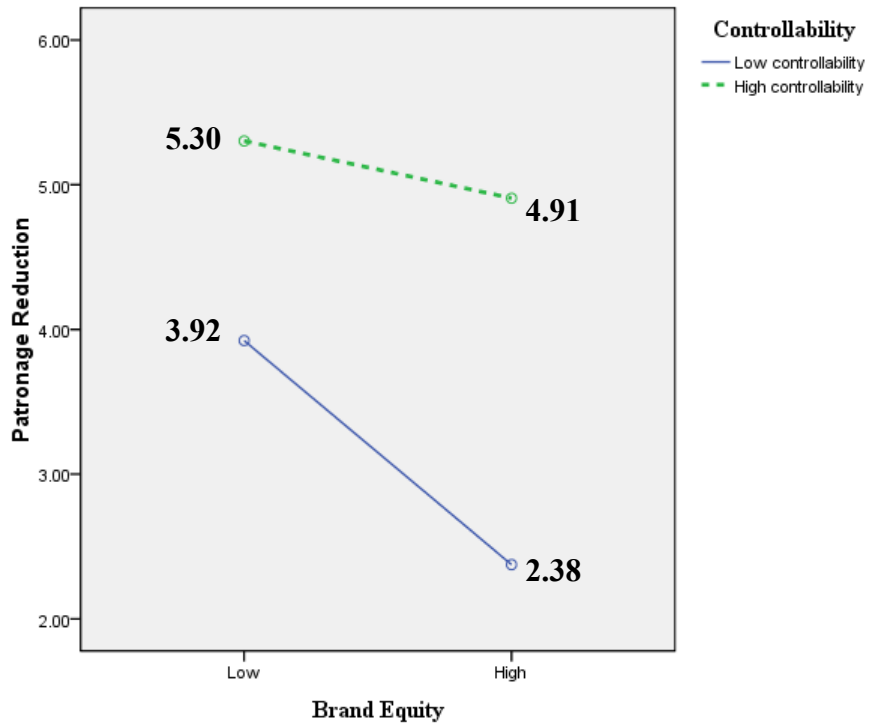


Figure 10 Interactions between Brand Equity and Controllability (Restaurant)



Chapter 5 Discussion and Future Research

5.1 Discussion of Results

This study focused on how brand equity affects consumer satisfaction. The central research question was to determine if the brand equity buffers the negative impact of failures on consumer satisfaction.

5.1.1 The “Love is blind” effect

The results of the study find strong support for hypothesis 1 and the “love is blind” effect. The results indicated that in the first place, when low controllability is inferred, customers will show a much weaker negative emotions (such as anger, offence, or disappointment) with high-equity brands, which subsequently will experience smaller reduction of satisfaction between pre-failure and post-failure compared to low-equity brands. When customers of high-equity brands attribute a service failure to uncontrollable factors, they feel reluctant to engage in complaining behavior that would hurt the firm. Otherwise, because of cognitive biases, they experienced weaker negative emotions after service failure by high-equity brand, in order to maintain their prior perceptions.

5.1.2 The “Love becomes hate” effect

Our results also support for Hypothesis 2 and the “love becomes hate” effect. When the service failure is believed to be under the control of the firm, customers experience stronger negative emotions toward high-equity brands compared to low-equity brands. The difference

of both the negative emotions and the reduction of satisfaction between high- and low-equity brands are significant.

However, customers didn't engage in complaining behavior with high-equity brands, such as patronage reduction. Neither of the two service industries investigated supported hypothesis 2c. There are two explanations for this: one is that a single negative experience is insufficient to transform customers into committed "enemies" trying to punish the firm. As a future research avenue, it is suggested examining service failure contexts within which customers experience a series of service failures. The other is the effect of scenario-based experiments. In this study two service industries that consumers were familiar with (hair salons and restaurants) were used to make these scenarios easily recalled. However, it may be difficult to stimulate the same emotional and cognitive involvement that is generated by actual service failures.

Two major conclusions can be drawn from the above. First, brand equity help protect companies from the negative effects of service failures on overall consumer satisfaction when the failure's cause is less controllable, which in turn exert an indirect influence on satisfaction through emotions. Second, control attributions are a moderating variable of the brand equity and customer satisfaction.

5.2 Implications

With regard to the managerial implications of the study, the results indicate that

high-equity brand only prevents customers from negative emotions when they infer that the firm has little control or responsibility for service failure.

First, brand equity exerts a halo effect that buffers the effect of the service failures on consumer satisfaction. For this reason, providing services with a high level of technical and functional quality valued by the consumer should be a priority in the day-to-day work of the firm, so that the effect of the accumulated experience plays in the firm's favour at critical moments of service failure.

Second, the results highlight the importance of ensuring that managers should help customers recognize situations where the firm has limited control over a failure. Let your customers understand that service failure is inevitable. Attributions of low controllability have the potential to substantively reduce customer negative responses toward the firm. In addition, it is important to carry out appropriate service recovery actions (such as apology, explanation or offer of compensation) to alleviate the negative effects of causal attributions on post-failure satisfaction. Service recovery strategies should reinforce the halo effect of service quality on satisfaction. For this, they need to be oriented so that the consumer perceives that the service failure is due to causes unconnected to the firm and over which the firm has no control.

Last, the "love becomes hate" effect also has important repercussions for practice because it indicates that firms with high-equity brands cannot be taken for granted in all situations, and they will not always be forgiven. They should pay more attention to

maintaining service quality. Service failure will otherwise cause much more severe consequences.

5.3 Limitations

This study has tried to increase the understanding of brand equity and service failure, but it suffered from various limitations that restricted the generalization of its findings, and which offer directions for future research.

First, although scenario-based experiments have been widely used in service failure literature, there are potential problems where it may be difficult to stimulate the same emotional and cognitive involvement that result from actual service failures.

Second, in the questionnaire we measured customer satisfaction right after service failure, which may lead customers to believe that they will need to change their attitude. Also, for high-equity brands, customers have higher satisfaction before service failure compared to low-equity brands thus it may affect magnitude of the reductions of satisfaction.

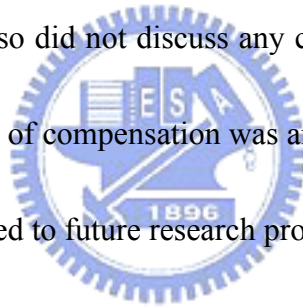
Finally, the interaction between brand equity and firm's controllability on service failure may affect the effects of brand equity on customer satisfaction since when a service failure occurs in the context of high-equity brand, consumers are likely to infer that the organization is highly competent and had little control over the failure.

5.4 Future Research

In order to increase the real feelings of past experience and to enhance the relationship between customers and firms, future research could consider the frequency customers have gone to the company to confirm the “love” connection and the relationships between customers and companies.

Also, further research is needed to find out whether the severity of the failure or the stability of failure would lead to a stronger direct influence of company’s control ability on service failure.

Furthermore, this study also did not discuss any compensation for service failure. Many studies confirmed that the level of compensation was an important variable to service failures, and this variable should be added to future research programs.



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Appendix A Scenarios (Haircut)

Scenario A (Low brand equity and Low Controllability)



In the haircut X, the room is very small and it is decorated poorly, which provides ordinary hairdressing and curling services. Since the price is reasonable, sometimes there will be visitors to get served.

* Please imagine one haircut where you received service before. The rank of this haircut is similar with the above description of haircut X. Your impression toward this haircut is very ordinary. In other words, you don't have particular impression toward it.

Now supposed something happened to this ordinary haircut. One day you already made an appointment previously and you also arrived there on time. Since the last customer kept complaining about his/her hairstyle and nitpicking designer's service, you wait for 35 minutes there.

Scenario B (Low brand equity and High Controllability)



In the haircut X, the room is very small and it is decorated poorly, which provides ordinary hairdressing and curling services. Since the price is reasonable, sometimes there will be visitors to get served.

* Please imagine one haircut where you received service before. The rank of this haircut is similar with the above description of haircut X. Your impression toward this haircut is very ordinary. In other words, you don't have particular impression toward it.

Now supposed something happened to this ordinary haircut. One day you already made an appointment previously and you also arrived there on time. However, the salon forgot to make your appointment, this made you wait for 35 minutes there.

Scenario C (High brand equity and Low Controllability)



Entering high-level and well-known hair salon X, it has the bright and spacious environment.

Hair salon X insisted their specialty and service quality which enables each customer to get the most intimate service.

* please imagine one hair salon where you received service before. The rank of this high-level hair salon is similar with the above description of hair salon X. And you got very good service experiences before.



Now supposed something happened to this high-level haircut. One day you already made an appointment previously and you also arrived there on time. Since the last customer kept complaining about his/her hairstyle and nitpicking designer's service, you wait for 35 minutes there.

Scenario D (High brand equity and High Controllability)



Entering high-level and well-known hair salon X, it has the bright and spacious environment.

Hair salon X insisted their specialty and service quality which enables each customer to get the most intimate service.

* please imagine one hair salon where you received service before. The rank of this high-level hair salon is similar with the above description of hair salon X. And you got very good service experiences before.



Now supposed something happened to this high-level hair salon. One day you already made an appointment previously and you also arrived there on time. However, the salon forgot to make your appointment, this made you wait for 35 minutes there.

Appendix B Scenarios (Restaurant)

Scenario A (Low brand equity and Low Controllability)



In the restaurant X, the room is very small and it is decorated poorly, which provides ordinary food and services. Since the price is reasonable, sometimes there will be visitors.

* please imagine one restaurant where you received service before. The rank of this restaurant is similar with the above description of restaurant X. Your impression toward this restaurant is very ordinary. In other words, you don't have particular impression toward it.

Now supposed one day something happened to this ordinary restaurant. One day, you went to that restaurant and there are many customers, the waiter came and led you to take a seat quickly. The ordering process is very smooth; 20 minutes later, while the waiter is serving your meal, a rude customer hit from behind, which caused your meal needed to be made again.

New meal took another 15 minutes.

Scenario B (Low brand equity and High Controllability)



In the restaurant X, the room is very small and it is decorated poorly, which provides ordinary food and services. Since the price is reasonable, sometimes there will be visitors.

* please imagine one restaurant where you received service before. The rank of this restaurant is similar with the above description of restaurant X. Your impression toward this restaurant is very ordinary. In other words, you don't have particular impression toward it.

Now supposed something happened to this ordinary restaurant. One day you already made an appointment previously and you also arrived there on time. However, the restaurant forgot to make your appointment, this made you wait for 35 minutes there.

Scenario C (High brand equity and Low Controllability)



Some high-level and well-known restaurant X insisted the high quality food and its elegant decoration receives everybody's affection and made it very popular.

* please imagine one high-level restaurant where you received service before. The rank of this high-level restaurant is similar with the above description of restaurant X. And you got very good service experiences before.

Now supposed something happened to this high-level restaurant. One day, you went to that restaurant and there are many customers, the waiter came and led you to take a seat quickly.

The ordering process is very smooth; 20 minutes later, while the waiter is serving your meal, a rude customer hit from behind, which caused your meal needed to be made again. New meal took another 15 minutes.

Scenario D (High brand equity and High Controllability)



Some high-level and well-known restaurant X insisted the high quality food and its elegant decoration receives everybody's affection and made it very popular.

* please imagine one high-level restaurant where you received service before. The rank of this high-level restaurant is similar with the above description of restaurant X. And you got very good service experiences before.

Now supposed something happened to this high-level restaurant. One day you already made an appointment previously and you also arrived there on time. However, the restaurant forgot to make your appointment, this made you wait for 35 minutes there.



Appendix C Questionnaires

(Taking Scenario D for example)

問卷

您好：

非常感謝您撥冗回答以下問題，您的回答對我們的研究將有極大的幫助。

本研究目的在於了解消費者對服務業的看法。我們會請您先讀一小段情境故事，再請您針對故事情境回答問題。本問卷約六分鐘可以完成，採不記名方式，所有資料僅供學術研究之用，絕不對外公開，請您安心作答。衷心感謝您的合作！

敬祝 健康快樂、萬事如意

國立交通大學管理科學研究所

指導教授：張家齊 博士

學生： 施慧妤 敬上

這份問卷共有三個部分。在第一部份中，您會先讀一段有關餐廳品牌的描述，第二部分您會讀到一段情境故事，在閱讀情境故事時，想像自己就是故事中的主角，我們將會詢問您一些跟情境故事相關的問題，請您以故事主角的立場去回答這些問題。最後在第三部分中，請您留下您的個人資訊。謝謝您！

第一部分—餐廳品牌描述



某高級知名的頂級餐廳 X，一直以來都以堅持高品質餐點，而受到廣大消費族群的喜愛，

精緻俐落的線條，用餐環境寬敞明亮，讓頂級餐廳 X 能夠在消費者心目中脫穎而出。

*現在請想像一間您知道且去過的高級知名餐廳，這間高級知名餐廳和上述頂級餐廳 X 的等級相同，而您心目中的這間餐廳，之前您去過，且都有良好的用餐經驗。

1. 您心目中印象良好的高級餐廳是_____ (請填店名)

2. 請問您最近六個月來去過幾次那間印象良好的高級餐廳?

0次 1次 2次 3次 4次 5次 6次 7次以上

請您根據您心目中印象良好的那間高級餐廳，依照過去所接受的服務經驗，逐一回答下列題目，勾選出最能代表您意見的方格，以表示您對各個題項的同意程度，其中1表示非常不同意，7表示非常同意。

	非 常 不 同 意	不 同 意	有 點 不 同 意	沒 意 見	有 點 同 意	同 意	非 常 同 意
	1	2	3	4	5	6	7
1. 我對這間餐廳所提供的服務是滿意的	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 我感到高興我選擇了這間餐廳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. 整體而言，對於這間餐廳我的正面經驗高於我的負面經驗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 這間餐廳的服務品質是非常高的	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. 這間餐廳的餐點品質是非常好的	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. 這間餐廳的品質是可以信賴的	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

第二部分—情境描述

在這個部分裡，您會讀到一段有關服務失敗的情境故事，在閱讀情境故事時，請想像自己就是故事中的主角。

現在假設故事發生在上述您心目中印象良好的那間高級餐廳，某天，您事前已經預約了那間餐廳六點用餐，當天您也準時六點到店內，到現場卻發現餐廳忘記幫您訂位，讓您在旁等候了35分鐘。

請您針對上述問題（餐廳忘記幫您訂位，讓您等候了35分鐘），逐一回答下列題目，勾選出最能代表您意見的方格，以表示您對各個題項的同意程度，其

中 1 表示非常不同意，7 表示非常同意。

	非常 不同 意	不 同 意	有 點 不 同 意	沒 意 見	有 點 同 意	同 意	非 常 同 意
	1	2	3	4	5	6	7
7. 發生上述事件之後，我對這間餐廳所提供的服務感到滿意	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. 發生上述事件之後，我感到高興我選擇了這間餐廳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. 發生上述事件之後，對這間餐廳我的正面經驗高於我的負面經驗	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. 發生上述事件之後，我對這間餐廳感到很生氣	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. 發生上述事件之後，我後悔我選擇了這間餐廳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. 發生上述事件之後，我感到被這間餐廳背叛	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. 我對這間餐廳發生上述事件感到震驚	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. 發生上述事件之後，對這間餐廳我感到惱怒	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. 發生上述事件之後，我會花較少的錢在這間餐廳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. 發生上述事件之後，我將不再到這間餐廳接受服務	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. 發生上述事件之後，我會減少和這間餐廳互動的頻率	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. 發生上述事件之後，我會將大部份的生意轉向競爭者	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. 對於餐廳忘記幫我訂位，讓我等候 35 分鐘的問題，這間餐廳要負完全責任	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. 對於上述我所遭遇的問題，完全是這間餐廳的錯	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. 對於我所遭遇到的錯誤，我會完全責怪這間餐廳	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. 故事中類似的情況是有可能發生的	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. 發生在這間餐廳的故事是可能在真實世界中發生的	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

第三部分—個人資料

1. 性別 男 女
2. 每個月可支配所得
10,000 以下 10,001~30,000 30,001~50,000 50,001-70,000 70,001-90,000
90,001 以上
3. 年齡 15 以下 16~20 21~25 26~30 31~35 36~40 41~45 46~50
51 以上
4. 最高教育程度 國中或初中 高中、高職 專科 大學或學院 研究所以上
5. 請問您目前的職業 軍、公、教 資訊科技 工商、貿易 農林漁牧業
服務業 家管 學生 其他_____

~本問卷到此結束，謝謝您的填答~

