

A STUDY OF SPILLOVER EFFECTS OF MULTIPLE
HOTEL BRAND EXTENSIONS

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HOTEL BRAND EXTENSIONS

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CHAPTER I

INTRODUCTION

Brand Equity Extensions

A “brand” is not just a name, logo, sign, or symbol given to a product. It is a highly valuable asset of the company (Aaker, 1996). A strong brand leads to an increase in customer loyalty, which results in higher profits for the company (Aaker, 1992). In the services sector, Berry (2000) highlighted, “strong brands enable customers to better visualize and understand intangible products. They reduce customers’ perceived monetary, social, and safety risk in buying services, which are difficult to evaluate prior to purchase” (p.128).

According to Aaker (1991), brand equity is “a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firms’ customers” (p.15). By this definition, assets include brand loyalty, brand awareness, perceived quality, brand associations, and other proprietary brand assets (e.g., patents, trademarks, channel relationships).

Brand equity, like other assets, can be leveraged by a company to enhance and maintain competitive advantages. According to Aaker (1996) and Aaker and Keller (1990), leveraging the strength of a brand can be achieved in two ways: co-branding and brand equity extension. Co-branding occurs when a company introduces a new product/service into the market by collaborating with other brands, for example Betty Crocker has co-branded with Hershey and Amazon.com has collaborated with Chase. By contrast, brand equity extension occurs when a company attaches its existing brand name to a new product/service regardless of whether it is being sold in a different product category or not. Examples of this include BIC corporation extending its brand “BIC” from stationery, to lighters, and shavers; Ralph Lauren Corporation extending its brand “Ralph Lauren” from clothing to home furnishings such as bedding and towels; Hyatt Hotels Corporation extending its brand to serve different markets such as Hyatt Regency and Hyatt Summerfield Suites. Specifically, brand equity extension strategies can be categorized into two groups, namely category extension and line extension. Category extension occurs when the existing brand name is attached to a new product/service that is in an entirely different product/service category from the parent brand, such as BIC and Ralph Lauren, whereas line extension occurs when the existing brand name is attached to a new product/service within the same product category as the parent brand, such as Hyatt. Furthermore, line extensions can be achieved by adopting two approaches (Lei, de Ruyter, & Wetzels, 2008; Randall, Ulrich, & Reibstein, 1998). Horizontal line extension is when a new product/service is launched within the original product/service but with different features, such as new flavors, packaging options, or sizes. Coca-Cola is an example of a company that uses horizontal line extension. The company has extended its core brand Coke to Coke Zero, and Coke Bubbler. By contrast,

vertical line extension is when a new product/service is introduced within the original product/service but at a different price or quality level (Kim & Lavack, 1996). Specifically, vertical line extension can be extended either above (called step-up extension) or below (called step-down extension) the parent brand's current position (Kim, Lavack, & Smith, 2001). American Express Platinum is an example of a step-up extension by American Express (Lei et al., 2008). The Courtyard by Marriott is an example of a step-down extension by Marriott (Jiang, Dev, & Rao, 2002). According to Kirmani, Sood, and Bridges (1999), the goal of stretching the brand into the downscale market is "to attract customers who may not be able to afford the brands' current offerings" (p. 88), while stretching the brand into the upscale market aims "to offer current customers who are looking for more features, greater prestige, or higher quality" (p.88). It is important to note that most line extensions in the marketplace use the parent brand name in conjunction with a new name (for the extension) to demonstrate the link between the parent brand and brand extension (Kim & Lavack, 1996). According to Bhat, Kelley, and O'Donnell (1998), naming a new line alongside the parent name can be carried out by following two options: sub-branding or nested branding. The sub-branding strategy is the use of a new brand name adjacent to the core brand name, such as Holiday Inn Resort, AC Hotels by Marriott, and Hilton Garden Inn. The nested branding strategy is the use of the core brand name as a descriptor in order to create further distance between a parent brand and its extended brands, such as Dockers by Levi's, SpringHill Suites By Marriott and Four Points by Sheraton. In summary, a sub-branding name ties the parent brand to the extension more closely than does a nested brand name.

Launching new products/services with an established brand name has become a powerful tool for marketing managers because the costs of introducing a new product and the risk of new product failure are considerable. It has been estimated that the cost of developing and introducing a new product into the market is somewhere between \$50 and \$150 million (Aaker & Keller, 1990). Unfortunately, in a highly competitive market, such high investment does not guarantee high returns. The failure rate for new product introduction is 30% to 35% (Hem, de Chernatony, & Iversen, 2003). In general, brand equity extension strategies minimize the risk of new product failure (Chowdhury, 2007). By taking advantage of consumer knowledge and experiences of an established brand, companies can decrease the advertising and marketing costs of new product launches (Morris, 1999). Given the benefits of brand equity leveraging, about half of all new products/services were marketed under existing well-known brand names during the 1980s (Aaker & Keller, 1990). Today, only 5% of new food and household products are introduced into the market with new brand names (Musante, 2007).

Brand Equity Extensions in the U.S. Lodging Industry

A well-established brand offers a hotel numerous benefits. As with firms in general, a brand is a valuable asset and potential source of strategic advantage for hotels (O'Neill & Mattila, 2004). Consequently, branding becomes one of the most dominant trends in the U.S. lodging industry. According to the American Hotel and Lodging Association (2011), there were approximately 50,000 hotels nationwide in 2009, and over 70% of these properties were branded (Kayaman & Arasli, 2007). Many of these brands were extended from existing brand names such as Hilton Garden Inn, Four Points by Sheraton, and Holiday Inn Express.

Brand equity extension has been embraced in the hotel industry since the 1970s (Rompf, 1999). According to Jiang et al. (2002), the earliest examples of brand equity extension in the hotel industry were Quality Hotel (now Choice Hotel) and Radisson. During the 1970s, Radisson extended its line to Radisson Inns, Radisson Resorts and Radisson Plaza Hotel. Later, Marriott introduced Courtyard by Marriott in 1984 and Holiday Inn introduced Holiday Inn Express in 1991. Today, most major hotel companies have at least one extension that has a name associated with the core brand name, as shown in Table 1.

Table 1

Top Branded Hotels and Its Extended Brands

| Companies | Core Brand* | Extended Brand |
|--|------------------------|--|
| Hilton Hotels Corporation | Hilton | Hilton Hotels & Resorts Hilton Grand Vacations Double Tree by Hilton Hilton Garden Inn Homewood Suites by Hilton Home2 Suites by Hilton |
| HVM L.L.C. | Extended Stay | Extended Stay America Extended Stay Deluxe |
| Hyatt Hotels Corporation | Hyatt | Hyatt Regency Grand Hyatt Park Hyatt Hyatt Place Hyatt Summerfield Suites Hyatt Resorts Hyatt Vacation Club |
| InterContinental Hotels Group | Holiday Inn | Holiday Inn Hotels Holiday Inn Express Holiday Inn Resort Holiday Inn Club Vacations |
| La Quinta Management | La Quinta Inn | La Quinta Inn La Quinta Inn & Suites |
| Marriott International | Marriott | Marriott Hotels & Resorts JW Marriott Hotels & Resorts Courtyard by Marriott AC Hotels by Marriott Residence Inn by Marriott Fairfield Inn & Suites by Marriott Marriott Conference Centers TownePlace Suites by Marriott SpringHill Suites by Marriott Marriott Vacation Club Marriott Executive Apartments Grand Residences by Marriott |
| Starwood Hotels & Resorts Worldwide | Sheraton Westin | Sheraton Hotels & Resort Four Points by Sheraton Westin Hotels & Resorts Element by Westin |
| Wyndham Worldwide | Wyndham | Wyndham Hotels and Resorts Wingate by Wyndham |

Source: LodgingHospitality/December 2009

Note: *Core brand or family brand, in this study, is referred to as an established brand name that has been used, either as the sub-branding or nested branding, on new hotels, presumably to target new market segments.

In addition to leveraging brand equity using vertical line extension, some hotels have taken advantage of their strong brands by extending into other product categories. For example, Westin Hotels & Resorts has extended its core brand, Westin, to Westin at Home selling bedroom products and bathroom products.

Although, both brand equity extensions (category extension and line extension) have been used in the hotel industry, this study focuses only on the latter, particularly vertical line extension because this approach is a core strategy for growth for several hotel companies.

Although there are several benefits associated with implementing brand extension strategies, such as lower marketing costs for introduction of new products, there are also unfavorable consequences including cannibalization and brand image dilution (Jiang et al., 2002). Thus, before adopting a step-down or step-up vertical line extension, hotel management should have a clear understanding of how customers evaluate extended hotels and how extension strategies affect the core brand.

Problem Statement

Given the popularity of brand extensions in the marketplace, a number of studies in this area have been carried out, with initial research efforts on brand extension focused on exploring factors influencing customer attitudes toward brand extensions (e.g., Aaker & Keller, 1990; Sobodh Bhat & Reddy, 2001; Bottomley & Doyle, 1996). Common findings from these works are that the strength of the parent brand and perceptions of similarity or fit between the core product and extended products play important roles in customer responses to brand extensions (Broniarczyk & Alba, 1994). In other words, consumers hold positive

attitudes toward a parent brand that can be transferred to an extension, and the transfer is greater when there is a similarity between the original and the new products (Aaker & Keller, 1990). Subsequent studies have focused on examining the reciprocal effects of brand extensions (e.g., Ahluwalia & Gürhan-Canli, 2000; Gürhan-Canli & Maheswaran, 1998; Swaminathan, Fox, & Reddy, 2001). These have found that brand extensions have both positive and negative impacts on the parent brand.

Although substantial research on brand extensions is available, two issues have received little attention thus far. First, much of the existing research has focused on customer perceptions of the parent brand and the relationship between the parent brand and the extension. The author believes, however, that another important but under-investigated aspect may influence customer evaluations of the extension. The author expects that for a brand that has already been extended to other product/service categories or lines, the performances of any previously extended products/services may influence customer evaluations of subsequent extensions, their perceptions of the core brand reputation and their loyalty to the company. These arguments are based on suggestions from previous research. Erdem (1998) pointed out that a strong parent brand and a good fit do not guarantee success of brand equity extensions if the quality of the extension does not match customer expectations. Sullivan (1990) stated that after a brand has been extended, information about the product or service is continually disclosed from customer experiences and that this affects how customers view new extended products or services. This is because extensions cannot be insulated from information on other products or services labeled with the same brand name. Keller and Aaker (1992) suggested that for a brand that has already been extended to other

products, customers might use their knowledge of previously extended products, besides those of the parent brand, to form their attitudes toward a proposed or new extension.

Despite the fact that several companies, especially in the lodging industry, have already extended their brands to more than one product category or line, limited research (e.g., Dacin & Smith, 1994; Keller & Aaker, 1992; Swaminathan, 2003) has been carried out on the effects of previous brand extensions on customer evaluations of subsequent brand extensions. Of these few studies, Keller and Aaker (1992) found that the perceived quality of previous extensions influences customer evaluations of a new extension as well as the core brand. Specifically, they showed that for core brands that have an average quality, successful extensions increase the favorable evaluations of the subsequent extension and the core brand. For high quality core brands, unsuccessful extensions decrease the favorable evaluations of the subsequent extension. For both average and high quality core brands, unsuccessful extensions do not affect customer attitudes toward the core brand. Swaminathan (2003) examined how brand extension influences the trial and repeat of a subsequent brand extension as well as the reciprocal effects of a subsequent brand extension on the parent brand and previous brand extension. Her results, based on household scanner panel data, suggested that customer experiences with either the parent brand or previous extension influence customer purchase behavior of a subsequent extension.

Second, the majority of previous research has focused on brand equity extensions in the context of consumer goods, but relatively little interest had been paid to brand equity extensions in a service context, especially in the hotel industry where a vertical brand extension strategy has been widely used. It is important to note that the different characteristics between consumer goods and services have long been acknowledged in the

marketing literature (Parasuraman, Zeithaml, & Berry, 1985). Consequently, the knowledge accumulated from empirical evidence on consumer products might be insufficient to understand service brand extensions. Specifically, in a hotel services context, the following questions have not been answered:

1. How do customers form their attitudes toward a hotel brand extension, especially when the core brand name has been extended to other hotels?
2. Do customers' experiences with any previous hotel brand extensions affect their attitudes toward a subsequent hotel brand extension?
3. Does the perceived service quality of any previous hotel brand extension affect the perceived service quality of a subsequent hotel brand extension? Would this effect be enhanced if customers perceived the previous extension and the subsequent extension similarly?
4. Can hotel brand equity extensions enhance core brand reputation and loyalty?

To respond to the above questions, this study examined a theoretical framework to understand how the service quality of one hotel affects the evaluation of another hotel when they are attached to the same brand name, and how that service quality influences core brand loyalty. The model of this study was developed based on a signaling theory of umbrella branding and empirical research. Knowledge about these aspects enhances how hotel management implements a multiple hotel brand extension strategy in the way that strengthens hotel brand equity rather than weakening it.

Purposes of the Study

The purposes of the study were as follows:

1. To propose and test a theoretical model that explores the spillover effects of previous hotel brand extensions on customer attitudes toward a subsequent hotel brand extension, customer perceptions of core brand reputation, and of core brand loyalty; and
2. To provide practical implications and suggestions for the hotel and lodging industry and future research.

Objectives of the Study

The specific objectives of the study were:

1. To examine the theoretical model proposed by investigating path relationships as follows:
 - (1.1) To test the direct effects of perceived service quality of previous brand extensions on perceived overall service quality of a subsequent hotel brand extension;
 - (1.2) To examine the mediating roles of perceived overall service quality of a subsequent brand extension on the relationship between perceived service quality of previous brand extensions and attitudes toward the subsequent brand extension;
 - (1.3) To test the direct effects of perceived service quality of previous brand extensions on core brand reputation;

- (1.4) To examine the mediating roles of core brand reputation on the relationship between perceived service quality of previous brand extensions and perceived overall service quality of a subsequent brand extension, and attitudes toward the subsequent brand extension;
 - (1.5) To test the direct effects of attitudes toward a subsequent brand extension on core brand loyalty;
 - (1.6) To test the direct effects of core brand reputation on core brand loyalty; and
 - (1.7) To explore the moderating effects of perceived similarity and perceived risk on the relationship between perceived service quality of previous extensions and perceived overall service quality of a subsequent extension.
2. To provide recommendations to hotel managers regarding a multiple hotel brand extension strategy and to suggest future research avenues.

Significance of the Study

Despite the fact that a multiple brand equity extension strategy—attaching a single brand name to multiple product/service categories or lines—has been adopted by several companies, knowledge in relation to the services context is limited. The goal of this study was to fill this knowledge gap in the literature by developing and testing the proposed theoretical model to explain the spillover effects of previous brand extensions on a subsequent brand extension and the core brand. The results of the study contribute to both academic research and practitioners as discussed below.

Theoretical Contribution

This study contributed to the existing brand equity extension literature, especially in a services context, in three aspects. First, it added to the body of knowledge on hotel brand equity extension in the context of a multiple brand extension strategy. Most previous studies on brand equity extensions in the hospitality literature have investigated only a single brand extension (e.g., Kwun, 2010; Kwun & Oh, 2007; Lei et al., 2008), thus, providing limited knowledge on the aspect of a multiple brand equity extension. Specifically, using four actual lodging brands (Renaissance Hotels and Resorts, Fairfield Inn, Embassy Suites, and Hampton Inn) as sample products, Kwun and Oh (2007) explained the role of brand-specific associations (quality, brand image, brand awareness and brand attitude) in forming brand attitudes toward extended brands. In particular, they showed that the extension's quality, image, awareness, and attitudes toward the parent brand have positive impacts on how attitudes toward the extension are formed. However, they did not address the questions about how successful or unsuccessful previous hotel extensions affect consumer evaluations of a subsequent hotel extension and the parent brand. In this study, the effects of previous hotel brand extensions on a subsequent hotel brand extension and the core brand were examined.

Second, although the effects of previous brand extensions on subsequent extensions in the context of goods have been investigated (Keller & Aaker, 1992; Swaminathan, 2003), these studies have tested the relationships between independent and dependent variable separately. In other words, they did not examine a series of structural relationships among variables. In this study, the spillover effect model included the following variables (constructs), namely perceived service quality, overall service quality, core brand reputation,

attitude toward the extension, and core brand loyalty, which were examined in path relationships in order to take into account the structural relationships among these constructs.

Third, this study provided a richer understanding of the hotel brand extensions phenomenon by testing the moderating role of perceived similarity and perceived risk associated with the extension. Previous studies (Aaker & Keller, 1990; Volckner & Sattler, 2006) have identified perceived similarity between the core brand and the extension as a variable that serves as a condition for the positive influence of the core brand service quality on extension evaluations; however, the role of perceived risk in this area has been ignored. In this study, moderating effects of both perceived similarity and perceived risk were examined. By doing so, the literature will gain a better knowledge of the conditions under which previous extensions benefit or damage a subsequent brand extension.

Practical and Managerial Contribution

This study provided three main managerial implications. First, a multiple brand equity extension strategy provides benefits to hotel companies in several ways, such as minimizing risks as well as the costs of introducing a brand new hotel (Chowdhury, 2007; Morrin, 1999). It also helps companies build brand equity (Dacin & Smith, 1994). However, to apply this strategy in a way that strengthens hotel brand equity rather than weakening it, hotel management needs to understand how customers form their attitudes toward a hotel brand extension, especially when the core brand name has already been attached to other hotels. The results of this study help hotel management better understand how the service quality of one hotel affects customer evaluations of another hotel as well as their perceptions of core brand reputation and loyalty. Second, the perceived service quality construct is built

on the hierarchical model of service quality by Brady and Cronin (2001). This model suggested that the service quality of the previously extended hotel could be measured in three dimensions, namely outcomes, interactions with service employees, and the service environment. Consequently, this study provided insights into the relative importance of each service quality dimension on customer expectations of a new extended hotel service's quality and on customer perceptions of core brand reputation and loyalty. Third, the study tested whether the effects of previously extended hotels on the new extended hotel depend on customer perceptions of image similarity between the two hotels. The results help hotel management decide on the extension of either a new hotel that has brand image similarity or dissimilarity to previously extended hotels.

Organization of the Study

This dissertation is organized into five chapters. Chapter one provides an overview of brand equity extensions as well as the problem statement, purposes, objectives, and significance of the present study. Chapter two reviews the previous research on brand equity extensions, theory, conceptual frameworks, and hypotheses, and the proposed theoretical model. Chapter three includes an overview of research design, survey instrument, and sampling and data collection process and data analysis methods. Chapter four presents the results of the study. Chapter five provides conclusions and implications for future research.

CHAPTER II

REVIEW OF LITERATURE

This chapter provides a review of relevant studies for developing hypotheses and the conceptual model. For this purpose, the chapter is structured as follows. First, previous studies on brand equity extensions are reviewed. This is followed by a discussion of signaling theory (of umbrella branding), which is employed as a theory base for the study. Finally, a conceptual model and research hypotheses are developed based on the theory and literature reviews.

Brand Equity Extension Research

Given the growing competitiveness of the marketing environment and increase in risk of introduction of new products, the concept of brand equity extensions has received much attention from both professionals and academic researchers. The literature on brand equity extensions can be categorized into two major groups. The first group focuses on finding factors that influence favorable customer acceptance of a new product when the company launches a brand equity extension. The second group is concerned with identifying the reciprocal effects of the brand equity extension on the parent brand.

With regard to studies on the area of identifying factors affecting consumer acceptance of extensions, researchers have examined three main aspects that affect the evaluation of brand equity extension, as shown in Table 2. These aspects include parent brand characteristics, relationship between the parent brand and extensions, and extension category characteristics.

Table 2

Key Success Factors of Brand Equity Extension

| Area of Investigation | Success Factor | Finding | Published Studies |
|---|--|--|--|
| Parent Brand Characteristics: | Perceived quality | Higher the perceived quality of the parent brand, the more favorable evaluations of the brand extensions. | Aaker and Keller (1990); Bottomley and Doyle (1996); Dacin and Smith (1994). |
| | History of previous extensions | Success of previous extension has impact on evaluations of the new extensions. | Keller and Aaker (1992) |
| | Parent brand image/ reputation | The higher the perceived reputations/ image of the parent brand, the more favorable evaluations of the brand extensions. | Milewicz and Herbig (1994); Hem et al., (2003) |
| Relationship between the parent brand and extensions: | Perceived fit | The higher levels of perceived fit elicit more favorable brand extension evaluation. | Bottomley and Doyle (1996); Park, Milberg, and Lawson (1991); Broniarczyk and Alba (1994); Dacin and Smith (1994). |
| | Brand concept consistency (functional vs. prestigious) | Consistency between the type of the brand concept and the extension category concept lead to a favorable evaluation of the extension even if the parent brand and the extension were dissimilar at the product category level. | Park, Milberg and Lawson (1991). |
| Extension Category Characteristics: | Perceived risk | Higher the perceived risk associated with the extension, the less favorable evaluations of the brand extensions. | Hem et al., (2003); Volckner and Sattle (2006); Thamaraiselvan and Raja (2008). |
| | Consumer innovativeness | Higher consumers' innovativeness, the more favorable evaluations of the brand extensions. | Hem et al., (2003) Volckner and Sattle (2006). |

Source: Adapted from Volckner and Sattle (2006)

Aaker and Keller's (1990) exploratory research revealed that brand equity extension evaluations are contingent on the fit between the parent brand and the extension. That is, if customers perceive fit or similarity between the parent brand and the extensions, positive beliefs and effect of the parent brand will be transferred to the extension. Dacin and Smith (1994) studied the effects of the parent brand's portfolio characteristics on brand extensions. They found that the number of extensions affect customer confidence in the quality of the extensions. However, this does not negatively affect their confidence in the parent brand as long as there is no quality variance between the extension and the parent brand. Bottomley and Holden (2001) examine the empirical generalizability of Aaker and Keller's (1990) brand extension evaluation model. Their results confirmed that brand extension evaluations depend on perceived quality, perceived fit, and the interaction between the two variables. They also found that the levels of contribution of each variable vary by brand and culture.

As shown in Table 2, in addition to perceived service quality and perceived fit, brand reputation, and perceived risk have been acknowledged as the contributors for customer attitudes toward brand equity extensions. DelVecchio and Smith (2005) studied the effects of perceived risk on brand-extension price premiums. They found that the levels of financial and social risk associated with the extension affect brand extension price premium, because a well-known brand reduces perceived risk by customers in relation to making purchase decisions. Similarly, Volckner and Sattler (2006) found that customers evaluate brand equity extension more favorably if they perceive less social and financial risk regarding the extension.

With regard to studies on the reciprocal effects of brand extensions on the parent brand, the literature have found that brand equity extensions have potential positive and negative effects on the parent brand in terms of brand beliefs, attitude toward the parent brand, brand name dilution, brand reputation, and brand choice (D. R. John, Loken, & Joiner, 1998; Kim et al., 2001; Loken & John, 1993; Martínez, Montaner, & Pina, 2009; Swaminathan et al., 2001).

Loken and John (1993) studied the effects of brand extensions on the parent brand equity dilution. They found that new information from the extension is transferred to the core brand. This means that if customer beliefs about attributes associated with brand extension are weak, those beliefs with respect to the parent brand are weak as well. Kim et al. (2001) revealed that line extensions, either step-up or step-down extensions, have negative impact on the parent brand. Swaminathan, Fox, and Reddy (2001) investigated the reciprocal effect of a trial of successful and unsuccessful brand extension on parent brand choice. They found that extension trial has a positive effect on parent brand choice, and consequently increasing the likelihood of purchasing the parent brand. Martinez, Montaner, and Pina (2009) proposed a theoretical model formed by five main factors related to brand associations, extension congruency, and extension attitude. The model indicated that attitudes toward the extensions have a positive impact on the parent brand image/reputation.

Based on the literature review on brand equity extension, the author believes that, in case of multiple brand extensions, customer attitudes toward the new hotel extension are influenced by perceived service quality of the previous extensions, and the core brand reputation. However, the effects depend on customer perceptions of similarity between

the previous and new extensions, as well as their perceptions of risk associated with the extension. With respect to the reciprocal effects on the core brand, the author expects that core brand loyalty and reputation are also influenced by perceived service quality of the previous extensions.

In the next section, signaling theory, which was served as a theoretical background of this study, is presented. Following that, a conceptual framework was discussed, and then the hypotheses were developed.

Signaling Theory

Signaling theory has been used extensively to describe situations characterized by information asymmetry (Srivastava & Lurie, 2004). The foundation of signaling theory lies in the study of information economics under conditions that different parties in a transaction possess different levels or types of information regarding the transaction (Boulding & Kirmani, 1993). Imperfect or asymmetric information occurs when one party holds more or better information than the other does, and this situation leads to uncertainty regarding the transaction. Information asymmetry may exist in a variety of settings, such as in an organization where employers are uncertain about the abilities of workers, and in a marketplace where customers are uncertain about the quality of products or services (Kirmani & Rao, 2000). In any case, one party assumes to have greater risk because he/she has less information to make a decision than the other party does. Consequently, that party wants to be compensated for the assumption of greater risk.

As discussed in the literature (e.g., Boulding & Kirmani, 1993; Erdem & Swait, 1998), a market is often characterized by asymmetric information, in which companies know more about the quality of products or services than customers do. In this setting, customers cannot readily evaluate the quality of the products or services because of their lack of complete information. To overcome this situation, they will seek a variety of sources for information that allow them to reduce the information gap between themselves and companies, and to reduce the risk associated with a purchase decision. That is, when customers are placed in a position to purchase experience products, for which quality is unobservable prior to purchase but is observable after purchase, they will look for cues that assist them to distinguish a high quality product or service from a low quality product or service. If customers are unable to access information they need or they have limited information at hand, they will take actions to compensate the additional risk associated with the lack of information (Akerlof, 1970), such that, information asymmetry is said to be a problem for experience products, as well as services (Rao & Ruekert, 1994).

Signaling theory suggests that to overcome the information asymmetry problem between companies and customers, companies need to send prepurchase signals to customers regarding the quality of their products or services because they know better than customers do (Erdem & Swait, 1998). Srivastava and Lurie (2004) suggested that prepurchase signals should be observable traits, so that customers can use them to infer the unobservable attributes. Signaling theory posits that rational customers are aware that rational firms are unlikely to send false signals if those signals increase costs in terms of immediate profits, future profits, and reputation (Nelson, 1970). Therefore, customers

expect a company to honor the implicit commitment conveyed through a signal because dishonest commitments bring harmful monetary consequences to the company (Kirmani & Rao, 2000).

In a marketing context, signals are referred to as any actions or strategies that companies employ to convey information about the quality of products or services to the customers (Rao, Qu, & Ruekert, 1999). Based on signaling theory, a company can use various marketing strategies, such as charging a high price, offering a certain warranty, or using advertising, to signal quality (Erdem & Swait, 2004; Erdem, Swait, & Valenzuela, 2006). Apart from using marketing-mix elements as cues to infer quality, a company can use its brand as a signal to reduce customer uncertainty about the quality of products or services (Erdem & Swait, 1998).

Brand as a Signal of Quality

A brand is referred to as “a name, term, sign, symbol or design, or a combination of them which is intended to identify the goods and services of one seller or a group of sellers, and to differentiate them from those of competitors” (Kotler, 1997, p. 443). One function of a brand name, besides serving as identity of products or services, is to give customers information about the quality of products and services (Rao & Ruekert, 1994).

When a market is characterized by imperfect and asymmetric information, customer uncertainty about a product or service affects their perceptions and beliefs of brand attributes, as well as their confidence in the product or service. Thus, it is important for companies to inform customers credibly about the quality of their products or services (Erdem & Swait, 1998; J. Sweeney & Swait, 2008). According to Sweeney and Swait

(2008), brands are said to be credible signals because “they motivate firms to be truthful about their products/services and to deliver on claims made about them” (p. 181).

Based on signaling theory, a brand can serve as a signal of unobservable quality because of two major reasons (Gammoh, Voss, & Chakraborty, 2006). First, it reduces perceived risk associated with a purchase decision. Because branded products and services are perceived to have small variance in their quality (Gammoh et al., 2006). Consequently, when purchasing branded products or services the risk of getting a bad outcome is minimized. Second, a brand serves as a bond for the quality. A brand name can convey credible information regarding the quality of products and services because the company realizes that false claims might result in unbearable economic losses, such as brand-building costs and future profits (Tsao, Pitt, & Berthon, 2006). That is, the company will not attach its brand name to a low-quality product or service and claims those to be of high quality because when the true quality is revealed after purchase, consumers will hold the brand responsible for a failure of such claims (Wernerfelt, 1988). Thus, a brand name is said to be a quality assurance device (Rao et al., 1999).

Signaling Theory of Umbrella branding

To take advantage of valuable brand equity, most companies introduce new products and services under an existing brand name as brand extensions. The practice of labeling more than one product with a single name is called umbrella branding (Sullivan, 1990). An umbrella branding strategy becomes a common practice for companies in a variety of markets because, for the company, it helps to reduce the cost of introducing a new product and service, and for the customer, it helps to decide whether to buy a new

products or service, especially when its quality is difficult to observe prior to purchase (Sullivan, 1990). The literature views umbrella branding as a quality assurance mechanism (Erdem, 1998; Rao et al., 1999) and a risk reduction device (Erdem, 1998; Montgomery & Wernerfelt, 1992). As quality-guaranteeing, umbrella branding encourages consumers to draw inference about a new product or service from previous experience with products or services under the same umbrella brand in order to reduce the quality uncertainty of the extension (Wernerfelt, 1988). As risk-reducing, umbrella branding reduces risk associated with a new product or service because experiences with products or services under the same umbrella brand provide customers with information about the new product or service, this might reduce customers' perceived risk associated with the extension (Erdem, 1998).

Wernerfelt's (1988) signal theory of umbrella branding posits that when a new product is introduced, customers are often uncertain about its quality; as such, customers use their experience with the parent brand product or other products under the same umbrella brand as a signal of the quality of the extension. The theory is built on the premises that uncertainty about product or service quality exists, and customers believe that the extension of a high-quality brand is likely to be of high quality as well (Erdem, 1998). Umbrella branding works as a signal because other products under the same umbrella brand act as a bond for quality for any of the umbrella branded products (Wernerfelt, 1988). As a result, if a company launches a low-quality product under an existing brand name, it will lead customers to conclude that all other products under the same umbrella brand name are also of low quality (Balachander & Ghose, 2003). Therefore, a high-quality company would extend its established brand names only to

high-quality products and services, in order to protect its brand reputation from a poor-quality extension (Erdem, 1998).

In sum, signaling theory of umbrella branding suggests that experience with any of the products or services is expected to affect the quality perceptions of other products or services that share the same brand name.

Conceptual Framework and Hypotheses

The goal of this research was to provide insights in a hotel brand equity extension phenomenon. The theoretical model proposed in this study examined the spillover effects of previous hotel brand extensions on customer attitudes toward a subsequent hotel brand extension (new extension), core brand reputation, and core brand loyalty. The proposed conceptual model hypothesized that perceived service quality of any previous hotel extensions impacts customer attitudes toward a new extension through their perceptions of overall service quality of the new extension. However, the effects depend on customer perceptions of similarity between the previous and new extensions, as well as their perceptions of risk associated with the extension. Perceived service quality of the previous extension also affects the core brand reputation, which consequently impacts customer attitudes toward the new extension, as well as the core brand loyalty. The constructs of the conceptual model, namely, perceived service quality, brand reputation, attitude toward the extension, brand loyalty, perceived risk, and perceived similarity, are presented in the following section.

Perceived Service Quality

Perceived service quality is an imperative concept in the service marketing literature. It has been acknowledged as one out of five assets that comprise brand equity. Perceived service quality has found to have an influence on customer behavior, their evaluations of products and services (such as customer satisfaction, customer loyalty), and business performance (Cronin, Brady, & Hult, 2000; Zeithaml, 2000). In a brand equity extension context, perceived service quality has been acknowledged as a key factor for brand equity extension success (van Riel, Lemmink, & Ouwersloot, 2001; Volckner & Sattler, 2006), especially when the line extension is a complementary product or service, or when it is a substitute product or service (Aaker, 1990). The literature also found that a high quality brand could extend farther than an average quality brand. Moreover, customer acceptance of a proposed extension depends on the success or failure of the previous extensions in relation to the quality of the core brand (Keller & Aaker, 1992).

Given the important roles of service quality in the brand equity extension phenomenon, perceived service quality is adapted as a focal construct of the proposed conceptual model. It is expected that under the same umbrella brand, perceived service quality of one hotel has an effect on customer attitudes toward another hotel, as well as core brand reputation and the core brand loyalty. To understand the roles of perceived service quality more clearly in brand equity extension, its definitions and measurements are discussed as follows.

Service quality is considered an elusive and abstract construct (Brady & Cronin, 2001; Parasuraman et al., 1985), such that its definitions and how it should be measured have been proposed from various perspectives. For example, Gronroos (1984) viewed services as “products which require high consumer involvement in the consumption process” (p.37). With high involvement, customers will be able to find many activities to evaluate performance of the service. As a result, Gronroos (1984) defined service quality as perceived by customers as “the outcome of an evaluation process, where the consumer compares his expectations with the service he perceives he has received” (p.37). With this perspective, the quality of any given service depends on two factors: perceived service and expected service.

Unlike Gronroos (1984) that viewed service as a product with high involvement, Parasuraman, Zeithaml and Berry (1988) viewed service differently from product. They mentioned that distinguishing service from product was necessary in understanding service quality because products and services have different characteristics. In particular, products are tangible, standardized, production separate from consumption, whereas, services are intangible, heterogeneous, simultaneous of production and consumption, and perishable. As a result, quality evaluations of services are different from those of products. Specifically, because products are tangible, when evaluating the quality of products, customers can employ many tangible cues, such as package, label, and color, to evaluate the quality of products. In contrast, services are intangible, when making judgment on service quality, customers must employ other cues along with tangible evidence to evaluate the quality of the service. In addition, customers do not evaluate service quality solely on the outcome of the service, but they evaluate the process of

service delivery as well. Consequently, the qualities of a service are more difficult to evaluate than those of a product are. In summary, Parasuraman, Zeithaml and Berry (1988) viewed perceived service quality as a form of attitude, related but not equivalent to satisfaction. They defined perceived service quality as “a global judgment, or attitude, relating to the superiority of the service” (p. 16). The global judgment is a comparison of expectations with perception of performance.

Measuring service quality

To identify what aspects of service quality should be measured, several perceived service quality models have been proposed (e.g., Brady & Cronin, 2001; Cronin & Taylor, 1992; Rust & Oliver, 1994). According to Brady and Cronin (2001), most of these models were developed based on either Gronroos’ (1984) service quality model, which defined the dimensions of service quality in global terms, or Parasuraman, Zeithaml, and Berry’s (1988) SERVQUAL model, where the dimensions of service quality re used to describe service encounter characteristics. Both models were built based on the disconfirmation paradigm. That is, service quality as perceived by customers is formed by a comparison of the customer expectations about the performance of a product or service with actual performance of that product and service.

According to Gronroos’ (1984) model, service quality has two dimensions, including technical quality and functional quality. Technical quality refers to outcomes or what customers receive from their interaction with a service provider. Functional quality is concern with the process of service deliver or how the service is performed and delivered to customers. In summary, Gronroos’ (1984) service quality model suggested

that customers evaluate the quality of any given service providers on two aspects including outputs and process of the service.

According to Parasuraman, Zeithaml, and Berry's (1988) SERVQUAL model, service quality perception can be measured by five dimensions as follows:

- tangibles: physical facilities, equipment, appearance of personnel;
- reliability: ability to perform the promised service dependably and accurately;
- responsiveness: willingness to help customers and provide prompt service;
- assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence; and
- empathy: caring, individualized attention that the firm provides its customers.

Measuring Service Quality in the Hospitality Industry

In the hospitality literature, the conceptualization and measurement of hotel service quality were dominated by Parasuraman, Zeithaml, and Berry's (1988) SERVQUAL model. For example, Knutson et al. (1990) developed a model called LODGSERV to measure customer expectations for service quality in the hotel experience. The five dimensions of this model were similar to the SERVQUAL model. Mei, Dean, and White (1999) developed a new scale called HOLSERV to measure hotel service quality. This model is comprised of three dimensions, including employee, tangibles, and reliability. Recently, Akbaba (2006) applied the SERVQUAL model to measure hotel service quality perception in an international environment setting.

Although the SERVQUAL model is a well-recognized model and has been adapted to measure service quality across a range of businesses including the hospitality industry, it has been questioned from various scholars. For example, Finn and Lamb (1991) challenged the validity of the SERVQUAL scales in a retail setting. Their empirical results showed that perceived service quality in retailing was not a function of the SERVQUAL's five dimensions. SERVQUAL scales did not capture the essence of the service quality construct in retailing. As such, they concluded that the SERVQUAL model is not useful in measuring service quality in a retail setting. Similarly, Buttle (1996) criticized that the dimensions of the SERVQUAL model are not universals. Its 22 items measuring service quality do not always load on the five dimensions. In addition, it only focuses on the process of service, ignoring the outputs of service.

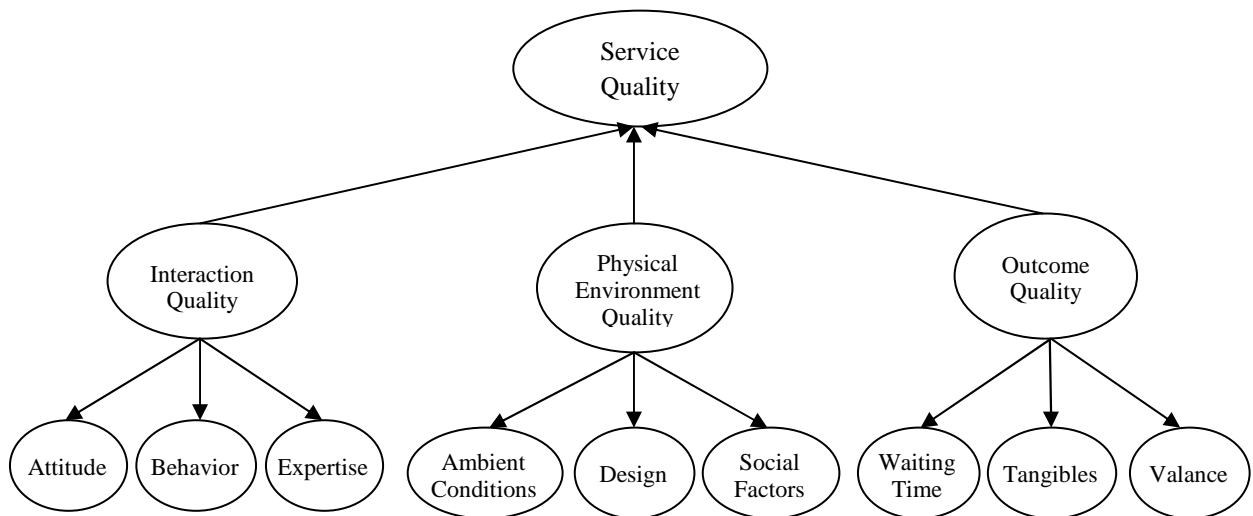
Correspondingly, the empirical results in the hospitality industry have shown that service quality dimensions in a hotel setting were different from the five dimensions of the SERVQUAL model. For example, using the SERVQUAL model in measuring service quality of a hotel, Saleh and Ryan's (1991) results did not confirm the five dimensions of the SERVQUAL model. Instead, the model suggested that service quality of a hotel could be measured in five dimensions named conviviality, tangibles, reassurance, avoid sarcasm and empathy. Akan (1995) identified seven dimensions, instead of five, for measuring service quality of hotels in an international environment setting. Ekinci, Riley, and Fife-Schaw (1998) found only two dimensions, named as tangibles and intangible, for measuring service quality of hotel resorts. Mei, Dean, and White (1999) found only three dimensions of service quality, namely employee, tangibles, and reliability. These three dimensions are collectively referred to as

HOLSERV. Recently, Wilkins, Merrilees, and Herington (2007) used the SERVQUAL instrument to measure service quality of the luxury and first class hotels. They found that travelers evaluate service quality on three dimensions including physical product, service experience, and quality of food and beverage.

In addition to the criticisms above, the SERVQUAL model, which is based on a disconfirmation paradigm, has been criticized for failing to draw on established economic, statistical, and psychological theory (Buttle, 1996). Moreover, Brady and Cronin (2001) stated that the major concern of the SERVQUAL model is “the question as to what should be reliable, responsive, empathic, assured and tangible if service excellence is to be ensured” (p. 36). Because of these criticisms, several researchers have attempted to develop alternative models for measuring service quality as perceived by customers. Cronin and Taylor (1992) developed and tested a performance-based measure of service quality called SERVPERF. This model explained more of the variance in service quality than SERVQUAL. Brady and Cronin (2001) proposed the hierarchical model of service quality. They developed the model based on Rust and Oliver’s (1994) three component model of service quality and Dabholkar, Thorpe and Rentz’s (1996) multilevel model. The three-component model suggested that customers evaluate service quality of a given service provider based on three dimensions of the service encounter as follows: the customer-employee interaction, the service environment, and the outcomes of service. The multilevel model suggested that when evaluating service quality, customers tend to break dimensions of service quality into various subdimensions. In sum, Brady and Cronin’s (2001) hierarchical model suggested that customers perceived service quality on three primary dimensions including interactions with service

employees, physical environment, and outcomes of services. Each of these dimensions has three subdimensions, as showed in Figure 1. That is, customers evaluate service quality on each subdimension first. These evaluations then form the primary dimensions, which ultimately are aggregated to an overall perception of service quality.

Figure 1. Brady and Cronin's (2001) Hierarchical Model.



Although the majority of previous works in the hospitality literature used the SERVQUAL model for measuring hotel service quality, this study will adapt Brady and Cronin's (2001) hierarchical model to measure service quality of hotels as perceived by customers. This model is appropriate to the study because: (1) the SERVQUAL model has been substantially criticized and debated, in particular it focuses more on the process of service delivery than the outcomes of service encounters; (2) the hierarchical model represents a unifying approach that conceives of service quality by integrating all dimensions of the unique characteristics of services (Volckner, Sattler, Hennig Thureau, & Ringle, 2010); and (3) the hierarchical model is well recognized and has been adapted to measure service quality in a variety of settings (e.g., Dagger, Sweeney, & Johnson, 2007; Ko & Pastore, 2005; Martínez Caro & Martínez García, 2008; Volckner et al., 2010).

Brand Reputation

A growing number of studies have shown that brand reputation or a company's reputation links to greater market share and profits for the company (Chaudhuri, 2002). Brands with a good reputation are more likely to attract customers than those with a negative one (Milewicz, Herbig, & Barbara, 1994). As a result, managerial decisions are often affected by consideration of the brand or company's reputation (Weiss, Anderson, & MacInnis, 1999).

In the marketing literature, definitions of reputation have been proposed from various perspectives, as shown in Table 3. These authors typically conceptualized a reputation as an overall evaluation reflecting the aggregate perception of stakeholders on the company or brand. As reputation reflects perceptions of an entity, it has been used

interchangeably with the term “brand image” (e.g., Kwun, 2010; Martínez et al., 2009; Wilde, Kelly, & Scott, 2004). Although these two constructs are conceptually similar (Weiss et al., 1999), this study views brand reputation as different from brand image. Specifically, brand image is more concerned with the strength, favorability, and uniqueness of various brand associations held in the memory of customers (Keller, 1993), while brand reputation is an aggregate composite of all previous transactions over the life of the entity (Herbig & Milewicz, 1997). In particular, here, brand reputation is conceptualized as an aggregate perception of all previous activities or transactions associated with a brand over time since the brand is formed (Milewicz et al., 1994).

Table 3

Definitions of Reputation

| Authors | Definitions |
|---|---|
| Herbig and Milewicz (1993) | “Reputation is an aggregate composite of all previous transactions over the life of the entity, a historical notion, and requires consistency of an entity’s actions over a prolonged time” (p.18) |
| Weiss, Anderson, and MacInnis (1999) | “Reputation reflects how well it has done in the eyes of the marketplace” (p.75) |
| Fombrun, Gardberg, and Sever (2000) | “A reputation is therefore a collective assessment of a company’s ability to provide valued outcomes to a representative group of stakeholders” (p. 243) |
| Bromley (2001) | “Reputation can be defined as a distribution of opinions (the overt expression of a collective image) about a person or other entity, in a stakeholder or internal group” (p. 317) |
| Schultz, Mouritsen, and Gabrielsen (2001) | “Reputation combines everything that is knowable about a firm. As an empirical representation, it is a judgment of the firm made by a set of audiences on the basis of perceptions and assessments” (p. 24) |
| Gotsi and Wilson (2001) | “A corporate reputation is a stakeholder’s overall evaluation of a company over time. This evaluation is based on the stakeholder’s direct experience with the company, any other form of communication and symbolism that provides information about the firm’s action and/or a comparison with the actions of other leading rivals” (p. 29) |

The literature (Chaudhuri, 2002) has showed that reputation of a brand does not depend on how long a brand has been presented in the market. Instead, reputation of a brand can be established by providing unique value and/or service to customers. In addition to creating uniqueness of the brand, reputation can be developed through advertising. As discussed in Fomburn and Shanley (1990), and Herbig and Milewicz (1993, 1997), reputation is established by the flow of information from one user to another. It can be developed from market signals or available information about company activities originating from the companies themselves, from the media, or from other channels. Customers construct brand reputation based on their perceptions of a brand or company's willingness and ability to perform or fulfill market signals. As a result, if a company or brand repeatedly fails to fulfill its promises, its reputation will be damaged.

Brand reputation is often used as an indicator of its actions in the future. Customers use the reputation of a brand as a means of inferring quality of the products or services (Herbig & Milewicz, 1997). That is, under the same umbrella brand name, a customer may view quality of products or services provided by a brand today to be similar to the quality of products or services in an earlier period or the quality of new products or services to be similar to the quality of products or services established (Milewicz et al., 1994).

According to Sullivan (1990), the reputation of a brand is composed of two components including a product-specific component and a brand component. The product-specific component represents unique attributes of each product or service. The brand component represents all aspects of quality that customers cannot apportion to individual products or services. The product-specific component does not depend on the

brand component. Under the umbrella brand, all products or services share the brand component. Both components of brand reputation can be derived from customer experiences with a product or service, company advertising, and word-of-mouth. To understand this notion, Marriott International is used as an example. Marriott, the umbrella brand or core brand, have been extended to several hotels such as AC hotels by Marriott (targeting the design conscious, younger traveler looking for a cosmopolitan hotel stay in a great city location) and Residence Inn by Marriott (targeting travelers who want to stay away from home but feel like home). Marriott's reputation can be derived from the Marriott component (as a brand component), the AC hotels component (as a product-specific component), and the Residence Inn component (as a product-specific component). The AC hotels and Residence Inn share Marriott's reputation in terms of the high service quality with all other Marriott extended hotels. The AC hotel's reputation connects to the design of hotels—stylish and urban hotels. The Residence Inn's reputation connects to features of the hotel—spacious suites with full kitchens combine home-like comforts with functionality.

Measuring Brand Reputation

Brand reputation has been recognized as a multi-dimensional construct. Unfortunately, there is no consensus regarding the conceptualization and measurement scale of brand reputation available in the literature. Table 4 shows measurement items and scale had been used in measuring brand reputation in previous empirical studies.

Table 4

Measurement Items and Scale for Brand Reputation

| Measurement Items | Measurement Scale | Authors |
|--|--|--|
| <ul style="list-style-type: none"> • What reputation has XX among your colleagues/friends and family? • How do you rate XX's reputation compared to their competitors? | A six-point Likert type scale ranging from "Very negative" to "Very positive" | Selnes (1993) |
| <ul style="list-style-type: none"> • This brand has status. • This brand has a good reputation. • This is a well- known brand. • This is a popular brand. • This brand has high esteem. | A seven-point Likert type scale ranging from "Very strongly disagree" to "Very strongly agree" | Chaudhuri (2002) |
| <ul style="list-style-type: none"> • All together, I am very positive to brand xyz. • All together, I am very satisfied with brand xyz. • All together, I associate positive things with brand xyz. | A seven-point Likert type scale ranging from "Strongly disagree" to "Strongly agree." | Hem et al.(2003); Abideen and Latif (2011) |
| <ul style="list-style-type: none"> • This brand is trustworthy. • This brand is reputable. • This brand makes honest claims. | A five-point Likert type scale ranging from "Strongly disagree" to "Strongly agree." | Veloutsou and Moutinho (2009) |

Customer Attitudes toward Brand Extension

Attitude is one of the most important notions that have a rich history in the marketing literature. Generally, it is believed that attitude is relatively stable and an enduring predisposition to have, so that it can be used to predict customer behavior toward a product or service (A. A. Mitchell & Olson, 1981). In general, if a person has a positive attitude toward a product, service, or brand, the person is more likely to buy that product, service, or brand (Churchill & Brown, 2007).

Attitude is typically referred to as an individual's internal evaluation of an object (A. A. Mitchell & Olson, 1981). Thus, brand attitude or customer attitude toward a subsequent hotel brand extension, here, is conceptualized as a customer's overall evaluation of that subsequent extension. According to Keller (1993), brand attitude is a function of the salient beliefs a customer has about the product or service, and the evaluative judgment of those beliefs. The salient beliefs about the brand can be associated to product-related attributes, non-product-related attributes, and benefits from the brand. Product-related attributes are the ingredients necessary for performing the product or service. Non-product-related attributes are external aspects of the product or service that relate to its purchase or consumption such as price information and packaging information. Benefits are the personal value customers attach to the product or service attributes.

Given the impact of attitudes on customer behaviors in terms of intentions, choice and repeat purchasing, it is not surprising that numerous studies on brand equity extensions have focused on understanding how customer attitudes toward brand equity extensions are formed. According to Czellar (2003), to date, a study of brand equity extension attitude formation has been conducted based on two attitude paradigms, including the affect transfer and information processing. The affect transfer perspective posits that if customers perceive the fit or similarity between the parent brand and the extension, customers will evaluate the extension based on their attitudes toward the parent brand. That is, positive beliefs and favorable attitudes toward the brand that customers hold in their memory will facilitate the formation of positive beliefs and favorable attitudes toward the brand extension. The information processing from

economic perspectives views an existing brand name in a new product category as a signal of quality and a means to reduce consumer-perceived risk regarding the new product. Consequently, customers will have favorable evaluations toward the extensions.

As discussed in the beginning of the chapter, the rich literature on brand equity extensions yields two main aspects contributed to the formation of attitudes toward brand extensions. The first aspect includes the characteristics of the parent brand such as quality, image, and reputation (Aaker & Keller, 1990; Kwun & Oh, 2007). The second aspect involves the relationship between the parent brand and the extension such as fit or similarity between the parent brand and the extension (Sobodh Bhat & Reddy, 2001; Buil, Chernatony, & Hem, 2009). Specifically, prior works have found that perceived quality of the parent brand has a positive effect on customer attitudes toward a brand extension (Aaker & Keller, 1990; Buil et al., 2009; van Riel et al., 2001). That is, if the parent brand is associated with high quality, the brand extension evaluations will be positive. On the other hand, if the parent brand is associated with low quality, attitudes toward the extension will be negative. The transfer of the perceived quality of a brand will be enhanced when the parent brand and the extension are perceived as a fit or similar in either category fit or brand concept fit.

Unlike previous studies, the focus of this study is not on examining how the strength of the parent brand impacts customer attitudes toward brand extensions, the interest of this study is given to investigating the spillover effects of perceived service quality of a previous brand extension on the attitude formation of a subsequent hotel brand extension. Based on the literature, it is expected that attitude toward the new extension depends on perceived service quality of any previous extension, expected

service quality of the new extension, core brand reputation, perceived risk associated with the extension, and perceived similarity of the previous and the new extensions.

Measuring Brand Attitudes

Research in the areas of product line extensions, advertising affects, and brand attitude had been typically measured as the dependent variable. Given the multidimensional nature of brand attitude, the majority of previous studies measured brand attitude with at least three measurement items (Low & Lamb, 2000). Table 5 presents measurement items and scales have been used in brand attitude.

Table 5

Measurement Items and Scale for Brand Attitudes

| Measurement Items | Measurement Scale | Authors |
|--|--|---|
| <ul style="list-style-type: none"> • Overall, I am very positive to extension XYZ. • What is your attitude to extension XYZ. • Overall evaluation of the extension XYZ relative to existing brands in the extension category. | Ranging, 1 = Totally disagree to 6 = Totally agree Ranging, 1 = Dislike to 6 = Like Ranging, 1 = One of the worst to 6 = One of the best | Hem and Iversen (2002) |
| <ul style="list-style-type: none"> • How “good” (or “bad”) an idea was the extension. • How “likable” was the extension. • How “pleased” would the extension make you feel. | Ranging, 1= very bad to 7=very good Ranging, 1 = very unlikable to 7 = very likable Ranging, 1 = very unpleased to 7 = very pleased | Park, Milberg, and Lawson (1991); Wu (2007) |
| <ul style="list-style-type: none"> • Favorability of the extension • Perceived quality of the extension • Likelihood of trying the extension | A seven-point Likert scale, ranging from 1 = very low, 7 = very high | Martinez, Montaner, and Pina (2009); Martinez and Pina (2009) |
| <ul style="list-style-type: none"> • My attitude towards XYZ is very positive. • I am very favorably disposed towards XYZ. • According to me XYZ are great. • I admire XYZ a lot. • I feel good about XYZ. | A seven-point Likert scale, ranging from strongly disagree (1) to strongly agree (7) | Dwivedi, Merriless and Sweeney (2010) |

Brand Loyalty

Loyalty has been acknowledged as an important concept for marketing practitioners. This is because loyal customers are typically less price sensitive, likely to spread positive word-of-mouth, and required a minimum amount of marketing cost (Rundle Thiele, 2001; Tepeci, 1999). Brand loyalty generally is defined as “a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior” (Oliver, 1999, p. 34).

Brand loyalty is considered as the core asset contributing to brand equity (Aaker, 1991). There are many factors creating brand loyalty such as customer experience, satisfaction, perceived value, and reputation (Brunner & Opwis, 2008; Selnes, 1993). Brand loyalty is also influenced by the other major dimensions of brand equity, including awareness, association, and perceived quality (Kayaman & Arasli, 2007; Oh, 2000).

In the context of hotel brand extension, Jiang et al. (2002) suggested that a brand extension strategy could be used to increase customer loyalty. With extension, hotel companies can reach distinguishable groups of customers with diverse needs. As a result, brand awareness and recognition are increased. Customers familiar with a brand are more likely to patronize an extension of that brand rather than take risk with an unfamiliar brand.

Measuring Brand Loyalty

As discussed in the literature (Back & Parks, 2003; Bowen & Chen, 2001), loyalty construct can be measured by three approaches including behavioral, attitudinal, and composite measurements. Behavioral brand loyalty is referred to as “a customer’s overt behavior toward a specific brand in terms of repeat purchasing patterns” (Back & Parks, 2003, p. 420). It is typically measured using data from either the actual purchasing or switching behaviors of the consumer (such as scanner panel data) or the customer’s self-reported purchasing or switching behaviors. Because the behavioral loyalty approach relies on the actual data (past behavior), it has been criticized that it neglects the importance of understanding customer decision-making processes underlying their purchase behaviors. Attitudinal brand loyalty is measured using attitudinal data to reflect the emotional and psychological attachment inherent in loyalty. It is typically measured with repurchase intention, resistance against better alternatives, and willingness to recommend the product or service. Composite brand loyalty combines both behavioral and attitudinal aspects. It is typically measured by brand preference, propensity of brand switching, frequency of purchase, and total amount of purchase. For the purposes of this study, core brand loyalty will be measured based on the attitudinal approach. Table 6 presents measuring items and scales have been used in the literature.

Table 6

Measurement Items and Scale for Brand Loyalty

| Measurement Items | Measurement Scale | Authors |
|--|--|---|
| <ul style="list-style-type: none"> • How likely is it that you will buy product/services from XYZ in the future? • If another person asked your advice, how likely is it that you would recommend XYZ? | A 6-point scale went from 0 to 100 percent | Selnes (1993) |
| <ul style="list-style-type: none"> • I will buy this brand the next time I buy []. • I intend to keep purchasing this brand. • I am committed to this brand. • I would be willing to pay a higher price for this brand over other brands | A 7-point ratings of agreement (1 = very strongly disagree, 7 = very strongly agree) | Chaudhuri and Holbrook (2001) |
| <ul style="list-style-type: none"> • I seldom consider switching to another website. • As long as the present service continues, I doubt that I would switch websites. • I try to use the website whenever I need to make a purchase. • When I need to make a purchase, this website is my first choice. • I like using this website. • To me this website is the best retail website to do business with. • I believe that this is my favorite retail website. | A 7-point ratings of agreement (1 = very strongly disagree, 7 = very strongly agree) | Srinivasan, Anderson, and Ponnnavolu (2002) |
| <ul style="list-style-type: none"> • Say positive things about XYZ to other people. • Recommend XYZ to someone who seeks your advice. • Encourage friends and relatives to do business with XYZ. • Consider XYZ your first choice to buy services. • Do more business with XYZ in the next few years. • Do less business with XYZ in the next few years. | A 7-point likelihood scale (1 = not at all likely and 7 = extremely likely). | Zeithaml, Berry, and Parasuraman (1996) |
| <ul style="list-style-type: none"> • The next time I need to stay at a hotel, I will stay at the _ hotel” • I will recommend the ____ hotel to my friends. | A 7-point scale (1 = strongly disagree, 7 = strongly agree) | Taylor and Baker (1994); Maxham and Netemeyer (2002); Han and Back (2008) |

Perceived Risk

Perceived risk has been recognized as a powerful factor in explanation of consumer behavior because consumers are more often motivated to avoid mistakes than to maximize utility in purchasing (V. W. Mitchell, 1999). In the literature, perceived risk has been defined as the consumer's perceptions of uncertainty and consequences of purchasing a product or service (Dowling & Staelin, 1994). These perceptions are highly dependent on individual psychological and situational characteristics, including self-efficacy and wealth position (Cho & Lee, 2006). The literature has also shown that the degree of perceived risk is associated with the degree of intangibility. That is, greater intangibility increases perceived risk (e.g., Laroche, McDougall, Bergeron, & Yang, 2004). Therefore, purchase of services, which are typically more intangible, are perceived to have higher risk involved than purchase of products (V. W. Mitchell, 1999).

Perceived risk has been found to play an important role in a variety of aspects of consumer behavior. For example, Sweeney, Soutar, and Johnson (1999) studied the effects of perceived risk on the relationship between perceived product/service quality and perceived value for money in a retail setting. Using a sample of consumers actively looking for an electrical appliance, their empirical study revealed that customer perceptions of product quality had negative direct effects on customer perceptions of risk in relation to purchasing a new product, which consequently will affect their willingness to purchase the product/service. In context of the information management, Im, Kim, and Han (2008) studied the moderating role of perceived risk in the effects of perceived usefulness and perceived ease of use on user acceptance of technologies. Their results showed that when perceived risk associated with trying a new technology is high, the

effects of perceived usefulness and perceived ease of use on intention to use new technologies were attenuated. In the context of brand equity extension, Volckner and Sattler (2006) found that customers evaluate brand equity extension more favorably if they perceive less social and financial risk regarding the extension. Lei et al. (2008) examined customer evaluations of hotel extensions and the feedback effects of these extensions on the parent brand. They found that customers perceive higher risks in step-up extensions than in step-down extensions. Moreover, customer perceptions of risk have a negative effect on their attitude toward the extension.

Measuring Perceived Risk

Previous researchers have attempted to develop measurement models to capture all dimensions of a perceived risk construct. Most of the items have primarily been related to the dimensions of risk and uncertainty (including financial, product performance, social, psychological, physical, and time/convenience risk) and negative consequences associated with them (Stone & Grønhaug, 1993). Table 7 presents the measurements used to capture perceived risk in the service context.

Table 7

Measurement Items and Scale for Perceived Risk

| Measurement Items | Measurement Scale | Authors |
|--|--|--|
| <ul style="list-style-type: none"> • Overall, the thought of buying XYZ within the next 12 months cause me to be concerned with experiencing some kind of loss if I went ahead with the purchase. • All things considered, I think I would make a mistake if I bought XYZ within the next 12 months for my use at home. • When all is said and done, I really feel that the purchase of XYZ within the next 12 months poses problems for me that I just don't need. | Likert-type five item scales with 1 = strongly disagree, 5 = strongly agree. | Stone and Gronhaug (1993); Veloutsou and Xuemei (2008) |
| <ul style="list-style-type: none"> • Globally, I am sure I will make a mistake if I make this purchase. • After all, I have the feeling that this purchase will really cause me lots of trouble. • Generally, I am sure that I will incur some risk if I buy a item in the next 12 month | A nine-point Likert-type five item scales anchored by "totally disagree" through to "totally agree". | Laroche, Bergeron and Goutaland (2003) |
| <ul style="list-style-type: none"> • Considering the possible problems with the hotel's performance, how much risk would be involved with choosing to stay at this hotel? • How sure are you about the hotel's ability to perform? • In your opinion, how certain are you that this hotel would perform as well as similar hotels that you could go to? • How confident are you of the hotel's ability to perform as expected? | A seven-point Likert-type scale | Lei et al., (2008) |
| <ul style="list-style-type: none"> • How confident are you that the XYX will perform as described? • How certain are you that the XYZ will work satisfactorily? • Do you feel that the XYZ will perform the functions that were described in the advertisement? | A seven-point scale 1 = very confident-not confident at all, 7=certain-uncertain 1=do feel sure, 7=do not feel sure | Grewal, Gotlieb, and Marmorstein (1994) |

Perceived Similarity

Perception of similarity or fit between the extension and the parent brand is another important aspect in the brand extension literature. Empirical evidence has shown that perceived similarity plays two significant roles in brand extension evaluation. First, it has a significant direct impact on customer evaluations of brand extensions (Aaker & Keller, 1990; DelVecchio, 2000; Dens & De Pelsmacker, 2010; Hansen & Hem, 2004). That is, customers are more likely to evaluate the extension favorably when they perceive the extension to be similar to the parent brand. Second, perceived similarity has been found to moderate the effect of perceived quality of a core brand on attitude toward the extension (Aaker & Keller, 1990; Volckner & Sattler, 2006). That is, the more similar between the parent brand and extension in terms of complement, substitute, and manufacturing (Aaker, 1990) the more likely are customers to transfer the parent brand's characteristics and association to the extension.

Perceived fit or similarity is referred to as the degree to which customers view the extension product or service as being similar to the existing products affiliated with the brand (Aaker & Keller, 1990). As discussed in the literature (Sobodh Bhat & Reddy, 2001; Lau & Phau, 2007), perceived fit construct can be conceptualized into two dimensions, including product feature similarity and brand concept consistency (or called brand image fit). Product category fit is defined as “consumers’ perceptions of the similarity of the product categories of the extension and the parent brand” (Sobodh Bhat & Reddy, 2001, p. 114). That is, category fit is performed by identifying the similarities of attributes between the extension brand and the parent brand. Brand image fit is referred to as “consumers’ perceptions of the similarity of the extension’s initial image

with that of the parent brand” (Sobodh Bhat & Reddy, 2001). With the product category fit, customers generally believe that expertise and skills in making the parent brand products will transfer to the extension. This results in the transfer of positive evaluation from the parent brand to the extensions. With the brand image fit, customers generally believe that they are able to enjoy experiential benefits from the extension similar to those from the parent brand.

Measuring Perceived Brand Image Similarity

Unlike category extension, in vertical line extension such as hotel brand extensions, extended products or services are in the same category as the parent brand. As a result, product category fit or similarity between the parent brand and the extensions, or among the extensions themselves are considered high (Lei et al., 2008). Therefore, perceived fit is viewed in this study as having one dimension, brand image fit, and is referred to as customer perceptions of brand image similarity between the previous hotel extension and the new (or subsequent) hotel extension. Table 8 presents measurement items and scales used to capture customer perceptions of brand image similarity between two extended products/services.

Table 8

Measurement Items and Scale for Perceived Brand Image Similarity

| Measurement Items | Measurement Scale | Authors |
|---|---|--|
| <ul style="list-style-type: none"> • The extension and parent brand had similar images • The extension conveyed the same impressions as the parent brand | A seven-point scale, with 1 as “Strongly Disagree” and 7 as “Strongly Agree” | Bhat and Reddy (2001);Jung and Lee (2006) |
| <ul style="list-style-type: none"> • The product extension fits with the brand image • Launching the extension is logical for the company • Launching the extension is appropriate for the company | A five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5) | Taylor and Bearden (2003); Martínez et al., (2009) |
| <p>Overall, how similar do you believe the XYZ is to ABC Company in terms of:</p> <ul style="list-style-type: none"> • Product quality • Service quality • Brand image | A five-point Likert scale, ranging from very dissimilar to very similar | Kwun and Oh (2007) |

Research Hypotheses

Use of established brand named to enter new product categories or new market segments are widely used in the service industry as well as in the lodging industry.

Several major hotel companies have taken advantage of their brand reputation to enhance the success of new hotels by using a brand as a signal of quality of new hotels. With the fact that several major hotel companies have already extended their brand to at least one hotel, the purpose of this study was to investigate the spillover effects of previous hotel brand extensions on customer attitudes toward a subsequent hotel brand extension and core brand loyalty.

Spillover Effects of Previous Extensions on Attitude toward a Subsequent Extension

The proposed conceptual model, as shown in Figure 2, was developed based on a signaling theory of umbrella branding, the study of Volckner et al. (2010), and the literature review. The model hypothesized that under the same umbrella brand, perceived service quality of any extended hotels has positive impacts on attitudes toward a subsequent brand extension through perceived service quality of the subsequent brand extension, and core brand reputation.

Mediating Role of Perceived Overall Service Quality of a Subsequent Brand Extension

Wernerfelt's (1988) model of umbrella branding suggested that the expected quality of one product could be drawn from experience with another product sold under the same brand. That is, an umbrella brand carries information from one product to another. Recent empirical works in the marketing literature show strong support for the premises of the signaling theory of umbrella branding. Erdem (1998) developed a model to explain how consumers' perceptions of quality in one product can be affected by their experience with another product sold under an umbrella brand. Her model is estimated on panel data for two oral hygiene products, toothpaste and toothbrushes, which some of the two products share the same brand name across the two product categories. The results revealed that customer perceptions of product quality under the same umbrella brand are highly correlated across product categories. In other words, perceived quality of products sharing the same brand name in two categories is affected by customer experiences in either of the categories. Hakenes and Peitz (2008) also developed a model for the study of

umbrella branding. In their model, two products are sold under an umbrella brand over two periods. In the first period, customers make their purchasing decisions. In the second period, customers again decide which products they want to buy, after detecting low quality of the product. This model showed that umbrella branding allows consumers to pool their experiences across the products. That is, after customers observed low quality of a product, they concluded that a product sold under the same umbrella brand as another product that turns out to be of low quality must be of low quality as well.

Consistent with the literature discussed above, Volckner et al. (2010), found that under the uncertainty, each service quality dimension of the parent brand acts as a signal of quality and risk reduction to customers regarding the extensions. Volckner et al. (2010)'s model of the drivers of perceived service quality of the extension, demonstrated that perception of each service quality dimension of the service extension is developed based on customer perceptions of each service quality dimension of the parent brand. That is, a customer's overall serviced quality of the service extension is formed based on his/her expectation of each service quality dimension of the extension that derived from his/her perception of the parent brand's service quality dimensions.

In summary, a signaling theory of umbrella branding and previous studies have suggested that perceived quality of a new brand extension can be influenced by perceived quality of any previous brand extensions. With this notion as background, this study posits that under the same umbrella, brand customers will use their experiences with any hotel to judge or predict service quality of another hotel, which consequently will affect their overall evaluations or attitudes toward a subsequent hotel brand extension. Specifically, this study expects the positive relationship between perceived service

quality of previous hotel brand extensions and perceived service quality of a subsequent hotel brand extension. As mentioned in the previous section, in this context, perceived service quality of a hotel is conceptualized based on Brady and Cronin's (2001) hierarchical approach in which service quality is composed of three dimensions: physical environment, interaction, and outcome service quality. Consequently, the following hypotheses were postulated:

- H1: Perceived physical environment quality of previous brand extensions positively influences perceived overall service quality of a subsequent brand extension.
- H2: Perceived interaction quality of previous brand extensions positively influences perceived overall service quality of a subsequent brand extension.
- H3: Perceived outcome quality of previous brand extensions positively influences perceived overall service quality of a subsequent brand extension.

Based on the findings of brand extension research, Kwun and Oh (2007) proposed a conceptual framework to describe consumer evaluations of hotel brand extension. Using a survey approach with four hotel brands from two lodging portfolios (Marriott International and Hilton Hotels Corporation) as sample products, the results showed that customer attitude toward a hotel extension was partially affected by perceived quality (measured by product and service quality) of that extended hotel. Hence, the following hypothesis was proposed.

- H4: Perceived overall service quality of a subsequent brand extension positively influences attitude toward the subsequent brand extension.

Mediating Role of Core brand Reputation

A review of the marketing literature has suggested that perceived quality of a product or service is associated with brand reputation (Selnes, 1993; Thamaraiselvan & Raja, 2008; Zeithaml, 1988). As mentioned in the Sullivan (1990) study, brand reputation serves as a mechanism used by companies to insure their product or service quality to customers. Brand reputation consists of two components: a product-specific component and a brand component. Under the umbrella brand, all products or services share the brand component. Both components of brand reputation derive from information acquired by customers such as their experiences with products or services, company advertising and word-of-mouth communication. According to Selnes (1993), a direct experience gives customers an opportunity to inspect intrinsic qualities of the product or service. Thus, the perceived quality of a product or service is either reinforced or disconfirmed. This effect will, in turn, affect customer perceptions of global quality of the brand or brand reputation. Specifically, superior product or service quality will strengthen brand reputation, while inferior quality will distort the reputation of the brand. This notion is supported by Selnes' (1993) empirical study in which a theoretical model was developed to describe the relationship among product quality, brand reputation, customer satisfaction, and loyalty. This model was tested in four different industries, covering both business-to-business markets and private customer markets. The results confirmed the positive association between perceived quality and brand reputation. Similarly, Thamaraiselvan and Raja (2008), in their study of customer evaluation of brand extension for FMCG (Fast Moving Consumer Goods) and service product categories in Indian market conditions, found that perceived quality of the parent brand has a positive impact

on brand reputation. Based on these findings, this study expects the positive relationship between perceived service quality of previous hotel brand extensions and core brand reputation, and thus, the following hypotheses were proposed:

- H5: Perceived physical environment quality of previous brand extensions positively influences the core brand reputation.
- H6: Perceived interaction quality of previous brand extensions positively influences the core brand reputation.
- H7: Perceived outcome quality of previous brand extensions positively influences the core brand reputation.

A basic premise underlying the use of brand extensions is that all products or services sold under the same brand name contribute to the overall brand's reputation, which is used by customers to evaluate a product or service under the umbrella brand (Sullivan, 1990). According to Hem et al. (2003), when a new product or service is launched, customers have neither experience, nor concrete attributes (especially for services), to evaluate the quality of the new extended product or service. As a result, customers rely heavily on intrinsic cues such as brand reputation to distinguish a high quality product or service from a low quality product or service. That is, brand reputation reduces risk associated with a purchase decision regarding a subsequent extended brand.

Previous studies (Kwun, 2010; Loureiro & Kastenholz, 2011) have found that reputation is one of the primary contributors to expected quality. This is because reputation is a historical notion based on the sum of the past behaviors of the entity. Such that customers' perceptions of a newly developed product are influenced by their

perceptions of the company reputation, which are derived from customer experiences with the company's established products (M. John & Paul, 1994).

In a study of the effects of customer attitudes toward extended hotel brands on attitudes toward the lodging portfolio, Kwun (2010) found that perceived service quality of the extension is influenced by brand reputation. Similarly, Loureiro and Kastenholz (Loureiro & Kastenholz, 2011) revealed that reputation of a tourism destination has a positive effect on tourists' perceived quality of the destination. This is because reputation molds the expectations that tourists form before the visit, which will then compare with the actual experience. Consequently, the following hypothesis was offered.

H8: Core brand reputation positively influences perceived overall service quality of a subsequent brand extension.

Hem, Chernatony, and Iversen (2003) posited that brands with higher perceived reputation encourage more positive evaluations than brands of lower reputation. Testing this notion with brands in the FMCG, durable goods, and services sectors, Hem et al. (2003) revealed that the greater the brand reputation the higher the possibility of favorable brand extensions compared to the less reputed brands. Recent empirical work by Thamaraiselvan and Raja (2008) provided evidence that customer perceptions of core brand reputation positively associate with overall brand extension evaluation, particularly umbrella brands in the FMCG and the service sectors.

Consistent with prior works, this study posits that customer attitudes toward the new extension are affected by their perceptions of core brand reputation, which are

derived from their experience with a previously extended hotel under the same umbrella brand. Hence, the following was hypothesized:

H9: Core brand reputation positively influences attitude toward a subsequent brand extension

Spillover Effect of Previous Brand Extensions on Core Brand Loyalty

Apart from its spillover effect on attitude toward a subsequent brand extension, there is evidence to suggest that previous extensions also have an effect on the core brand. The literature has shown that brand extensions, whether successful or unsuccessful, contribute to core brand equity. For example, a study conducted by Swaminathan et al. (2001) showed that successful extensions have positive effects on parent brand choice, particularly among prior non-users of the parent brand. This is because a brand extension strategy enhances brand awareness among existing customers of the brand. Similarly, Martínez and Chernatory (2004) found that favorable customer attitudes toward brand extension enhance brand image of the parent brand. Although brand extensions may affect several aspects of core brand equity, this study concentrates on the effects of service quality of a previous hotel brand extension on the core brand loyalty. It is expected that customers' perceived service quality of a previously extended hotel affect core brand loyalty through customer perceptions of core brand reputation and attitudes toward the subsequent brand extension.

Previous studies (Herbig & Milewicz, 1993; Milewicz et al., 1994) has suggested that customer experience with the product or service creates a means of building reputation, since it provides customers with the opportunity to test the signaling claims

made by the brand. A brand will lose its reputation if it repeatedly fails to fulfill its stated intentions or market signals. Generally, brands with good reputations are more likely to attract customer than those with negative reputations. According to Bartikowski, Walsh, and Beatty (2011), the effect of brand reputation on brand loyalty involves cognitive learning and recall processes. That is, positive or negative reputation traits are stored in customer memories. The more the brand associates with positive traits, the more likely customers are to purchase products or service, or give recommendations to others.

Selness (1993) confirmed that perceived performance quality of a product or service has a positive impact on brand loyalty through brand reputation. In his study, brand loyalty represented a customer's intended behavior related to the product or service. This behavioral intention includes the likelihood of future purchases or renewal of service contracts, and intentions to recommend the brand to others. Loureiro and Kastenholtz (2011) also supported the positive relationship between brand reputation and brand loyalty. They found that in the rural tourism context, a lodging unit's reputation was the most important factor determining customer loyalty toward the rural accommodation. Similarly, Helm (2007) found that corporate reputation, as perceived by investors, has positive impacts on individual investors' affective loyalty, which in turn influences their behavioral loyalty. Consistent with the foregoing discussion, this study hypothesized the following:

H10: Core brand reputation positively influences core brand loyalty.

Research has shown that brand attitudes have positive relationships with brand loyalty (Chaudhuri, 1999; Suh & Yi, 2006; S. A. Taylor & Hunter, 2003). Using two separated studies, Chaudhuri (1999) revealed that brand loyalty mediate the relationship between brand attitudes and market share. In other words, brand attitudes have positive impact on brand loyalty, which consequently affect a company's market share. In the context of eService, Taylor and Hunter (2003) also found the positive association between brand attitude and brand loyalty. Similarly, using structural equation modeling, Suh and Yi (2006) concluded that the customer satisfaction-loyalty relation is mediated by brand attitude. That is, brand attitude have a direct effect on brand loyalty. In the context of brand extension, Swaminathan et al. (2001) found that positive evaluations of brand extensions have positive effects on parent brand choice. Based on these results, it is reasonable to expect the positive relationship between attitudes toward brand extension and the core-brand loyalty. Thus, the following hypothesis is proposed:

H11: Attitudes toward a subsequent brand extension positively influence core brand loyalty.

Moderator Role of Perceived Similarity

Although the signaling theory of umbrella branding and previous studies have suggested that under the same umbrella brand perceived service quality of one hotel can affect customer perceptions or expectations of service quality of another hotel, the author believes that this effect would be weaker if customers perceive less similarity between the two hotels. The foundation of this argument is built based on empirical evidence from the brand extension literature.

Prior research (e.g., Aaker & Keller, 1990; Bottomley & Doyle, 1996; Chowdhury, 2007; Volckner & Sattler, 2006) has demonstrated that perceived fit or similarity moderates the degree to which brand association transfer from a well-established core brand to a new extension product or service. For example, Volckner and Sattler (2006) developed a comprehensive model of brand extension success by unifying findings from published research and beliefs of managers. They found that perceived fit plays an important role in determining extension success. Specifically, the degree to which perceived quality of the parent brand is transferred to the extension depends on the level of perceived fit between the brand and the extension product. That is, the positive effect of the quality of the parent brand on extension success (conceptualized as perceived extension quality) increases as the level of perceived fit increases. Volckner et al. (2010) found a statistically significant moderating effect of perceived fit on the relationship between perceived interaction quality of the parent brand and expected service quality of the extension. Consistent with the foregoing argument, this study hypothesized that:

H12: Perceived image similarity between previous brand extensions and a subsequent brand extension moderates the relationship between perceived physical environment quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.

H13: Perceived image similarity between previous brand extensions and a subsequent brand extension moderates the relationship between perceived interaction quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.

H14: Perceived image similarity between previous brand extensions and a subsequent brand extension moderates the relationship between perceived outcome quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.

Moderator Role of Perceived Risk

Generally, when customers face an uncertain situation or feel that negative outcomes are likely, their perceptions of risk increase. As a result, they will engage in different types of risk-reduction activities, such as careful evaluation of choices, and product trials (Dowling & Staelin, 1994). For example, in consumer brand choice research, Erdem (1998) showed that when consumers perceived the risk of purchasing a new product to be high, they were more likely to choose a known brand than a new brand. In evaluations of products or services, Cambell and Goodstein (2001) posited that when the perception of risk is high, consumers became more conservative, but when perceived risk is relatively low, consumers enjoyed the positive stimulation provided by novel products and evaluated them more positively. In their study of the moderating effect of perceived risk on the relationship between congruity (manipulated by the product packaging) and evaluations of a product, they found that under high-risk conditions, consumers were likely to prefer an alternative that is consistent with schema expectations to one that was moderately incongruent. In brand equity extension research, Delvecchio and Smith (2005) posited that brand extension price premiums are built up in part due to the ability of an established well-known brand to reduce customers' perceived risk associated with the new products/services. Specifically, they found that brand-extension price premiums are positively related to the perceived category fit between the

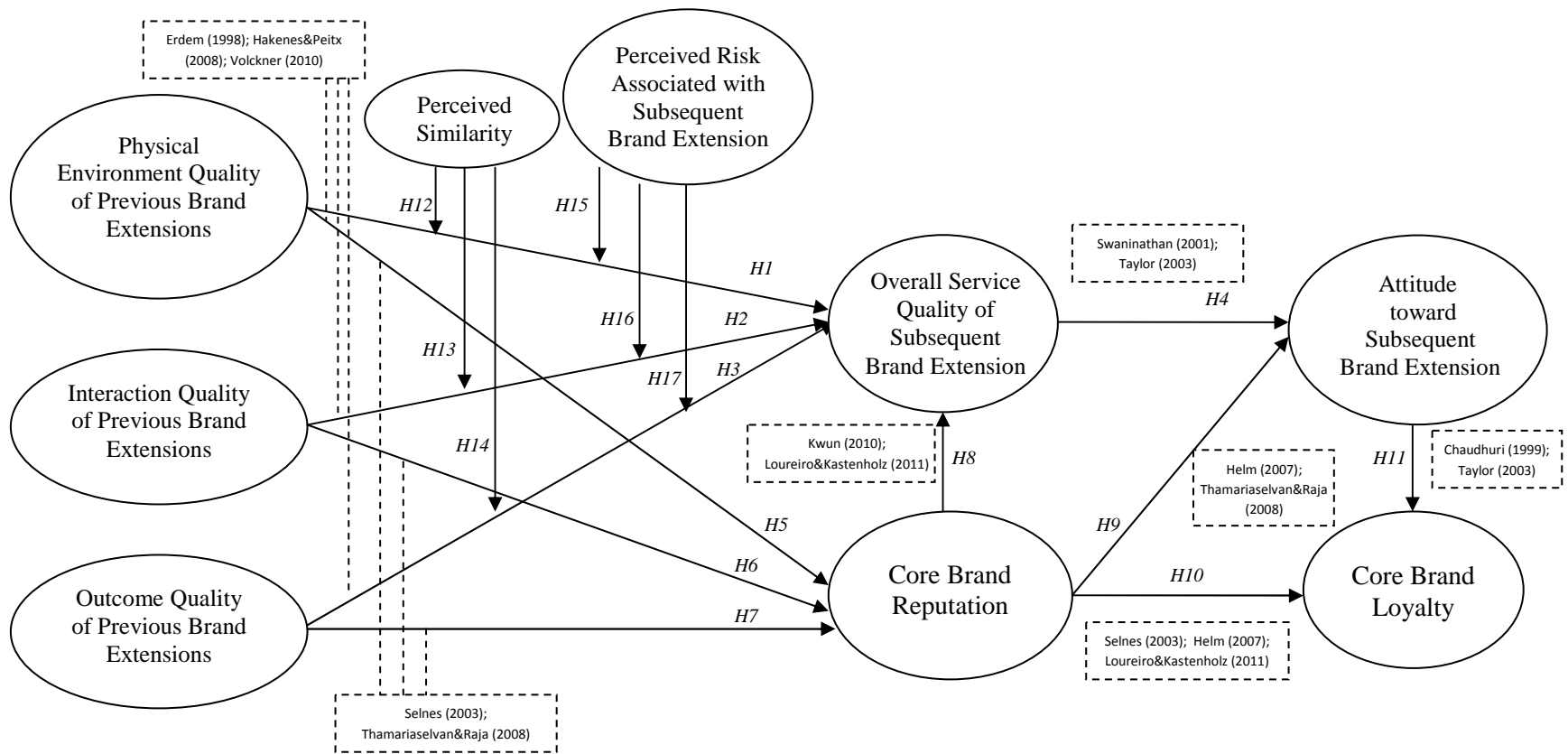
brand and the extension. However, this relationship is moderated by the levels of financial and social risk associated with the extension. In a study of the drivers of perceived service quality of the extension, Volckner et al. (2010) argued that the transferability of perceived service quality of the parent brand to perceived extension service quality might be moderated by the level of perceived risk, which varies across customers. Specifically, they posited that positive effect of the parent brand service quality perception on the extension service quality perception likely increase as the level of risk that consumers perceive increases. However, their empirical results revealed that the incremental variance explained by the moderating effects of perceived risk is very small.

Based on the empirical research discussed above, it seems reasonable to expect that the transfer of brand beliefs regarding service quality of the previously extended hotel to a subsequent extended hotel vary considerably depending on the level of risk associated with the subsequent brand extension customers perceive. Consequently, the following hypotheses were proposed:

- H15: Perceived risk associated with the subsequent brand extension moderates the relationship between perceived physical environment quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.
- H16: Perceived risk associated with the subsequent brand extension moderates the relationship between perceived interaction quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.

H17: Perceived risk associated with subsequent brand extension moderates the relationship between perceived outcome quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.

Figure 2. Proposed Conceptual Model.



CHAPTER III

METHODS

This chapter describes the research design, which was used as a guide in collecting and analyzing data of this study. In particular, the first section presents an overview of the research design. The second section describes the instrument used in the study. This is followed by a discussion of data sampling and collection procedure. The chapter ends with a discussion of the statistical methods used for the data analysis.

Overview of Research Design

This was a quantitative research study. Specifically, this study was descriptive and causal research aimed at predicting the effect of perceived service quality of previous hotel brand extensions on customer evaluations of a new hotel brand extension and core brand loyalty. To accomplish the objectives of the study, a cross-sectional analysis or sample survey with a self-administrated questionnaire was used to collect data.

The questionnaire survey was preferable to other methods (e.g., personal and telephone interviews) because it allowed for wider geographic coverage and larger samples, which were a requirement of this study. The self-administrated questionnaires were distributed through electronic mail (email). An email survey was chosen over the traditional paper-based survey because it can be delivered instantly to respondents, irrespective of their geographical location (Ilieva, Baron, & Healey, 2002). As a result, it can reach wide subjects and get responses back in a short period at a very low financial cost (Duffy, Smith, Terhanian, & Bremer, 2005; Ilieva et al., 2002).

Survey Instrument

Core brand selection

Given the hypotheses to be tested, the core brand and previous hotel brand extensions were the actual lodging brands, while the subsequent brand extension was a fictitious hotel brand extension. Marriott, Hyatt, Hilton, and Holiday Inn were chosen as the core brands as they are well-known brands and were extended to several hotel brands, as shown in Table 1 (“Top 50 Hotel Companies,” 2002).

Survey Questionnaire

A self-administrated questionnaire with closed-ended questions was developed by reviewing relevant literature. The questionnaire was comprised of five sections. Table 9 presents measurement items and scales used in section two, three, and four.

Table 9

Summary of Measurement Items

| Construct | Item | Adapted from |
|--|---|--|
| Perceived physical environment quality of previous hotel brand extensions | <ul style="list-style-type: none"> • I would say that this hotel's physical environment is one of the best in its industry. • I would rate this hotel's physical environment highly. • Overall, I would say that I have a very good impression of this hotel's physical environment. | Brady and Cronin (2001); Volckner et al., (2010) |
| Perceived interaction quality of previous hotel brand extensions | <ul style="list-style-type: none"> • Overall, I'd say the quality of my interaction with this hotel's employees is excellent. • I would say that the quality of my interaction with this hotel's employees is high. • It is fun to interact with this hotel's employees. | Brady and Cronin (2001); Volckner et al., (2010) |
| Perceived outcome quality of previous hotel brand extensions | <ul style="list-style-type: none"> • I have had an excellent experience when I visit this hotel. • I feel good about what this hotel provides to its customers. • So far, I always rated this hotel's service highly. | Brady and Cronin (2001); Volckner et al., (2010) |
| Perceived overall perceived service quality of the new hotel brand extension | <ul style="list-style-type: none"> • I believe this new hotel will provide superior service. • I believe this new hotel will offer excellent service. • I believe that overall service quality of this hotel will be excellent. | Brady and Cronin (2001); Volckner et al., (2010) |
| Core brand reputation | <ul style="list-style-type: none"> • All together, I am very positive to Marriott. • Overall, Marriott makes honest claims. • Overall, Marriott is trustworthy. • Overall, Marriott has a good reputation. | Chaudhuri (2002); Hem, Chernatony, and Iversen (2003); Veloutsou and Moutinho (2009); Abideen and Latif (2011) |

Table 9 (continued)

Summary of Measurement Items

| Construct | Item | Adapted from |
|---|--|---|
| Attitude toward the extension | <ul style="list-style-type: none"> • My attitude towards this hotel is very positive • I am very favorably disposed towards this hotel • I feel good about this hotel. • I think this hotel is great. | Dwivedi, Merriless and Sweeney (2010) |
| Core brand loyalty | <ul style="list-style-type: none"> • I will consider Marriott my first choice if I travel in the future. • I believe that Marriott is my favorite hotel brand. • To me Marriott is the best hotel chain in the industry. • I will recommend Marriott to others who seek my advise. | Taylor and Baker (1994); Zeithaml, Berry, and Parasuraman (1996); Maxham and Netemeyer (2002); Srinivasan, Anderson, and Ponnnavolu (2002); Han and Back (2008) |
| Perceived image similarity between the previous and new extension | <ul style="list-style-type: none"> • The Marriott's new hotel and your most recent Marriott hotel stay had similar images. • The Marriott's new hotel conveyed the same impressions as your most recent Marriott hotel stay. | Bhat and Reddy (2001); Jung and Lee (2006) |
| Perceived risk associated with the new extension | <ul style="list-style-type: none"> • All things considered, I think I would making a mistake if I book a room with this hotel for my future travel. • Generally, I am sure that I will incur some risk if I choose to stay at this hotel in the future. | Stone and Gronhaug (1993); Laroche, Bergeron, and Goutaland (2003); Veloutsou and Xuemei (2008) |

The first section was comprised of screening questions in which prospective respondents were asked whether they had stayed at Marriott, Hyatt, Hilton, and Holiday Inn hotels before. For respondents who have had experience with one of those hotel brands, they were asked to choose a hotel in which they have stayed recently and to continue the survey. For respondents who did not have experiences with any of these hotel brands were asked to stop the survey.

In the second section, respondents were asked to report their perceptions of service quality of the hotel that they had chosen in the first section. This section consisted of nine questions (items) designed to capture three dimensions of perceived service quality: perceived physical environment quality measured (three items), perceived interaction quality (three items), and perceived outcome quality (three items). All of these items were measured using a seven-point Likert-type scale (1 = totally disagree; 7 = totally agree)

The third section was designed to capture respondent perceptions of core brand reputation, and core brand loyalty. This section was comprised of eight items; four items were used to measure core brand reputation, and the rest were used to measure core brand loyalty. All items in this sections were measured using a seven-point Likert-type scale (1 = totally disagree; 7 = totally agree).

The fourth section was designed to capture respondent opinions about the new hotel brand extension. In this section, respondents were presented with a page of description about the new hotel brand with respect to amenities, facilities, and services as follow:

“This new hotel is an upper moderate tier lifestyle hotel brand, targeting the design conscious, traveler looking for a cosmopolitan hotel stay in a great city location. With stylish and urban design, the hotel appeals to both the business and leisure traveler who seeks to experience the culture of the city. The hotel offers not only great design and true innovation, but also great personal, friendly, and modern service to make stays unforgettable and to fulfill the needs of the 21st century traveler. The average price range of this new hotel brand is \$125 - \$250.”

After reading the description, respondents were asked to report their perceptions of overall service quality of this new hotel brand, perception of risk associated with this new hotel brand, attitude toward this hotel brand, and perceptions of image similarity between this hotel brand and the hotel brand being chosen in the first section. This section consisted of eleven items measured using a seven-point Likert-type scale (1 = totally disagree; 7 = totally agree). They were designed to measure four constructs, including perceived overall service quality of the new hotel (three items), perceived risk (two items), attitudes (four items), and perceived similarity (two items).

In the last section, respondents were asked to provide information about themselves regarding gender, marital status, year of birth, education, and annual household income.

Pilot Test

Although using fixed-alternative questions, or closed-ended questions have several advantages such as simple to administer, easy for data coding, and providing reliability, or consistency of responses (Churchill & Brown, 2007), they also have some disadvantages. One of them is that if the standardized survey questionnaire does not represent constructs of interest, data obtained will be misinterpreted (Churchill & Brown, 2007). To cope with this disadvantage, a pilot test was conducted to ensure the validity and reliability of the instrument.

The pretest survey questionnaire was conveniently circulated to graduate students in the School of Hotel and Restaurant Administration at Oklahoma State University. The goal of this survey was to identify the appropriateness and wording of the questions, sequence, and layout of the questionnaire, as well as analysis procedure. A total of 31 responses were analyzed for crosschecking the reliability of the measures. Generally, when multiple items are used to measure a hypothetical construct, reliability of such a measure is often assessed based on the internal consistency of the measure with Cronbach's alpha (Churchill & Brown, 2007; Hair, Black, Babin, & Anderson, 2010). As shown in Table 10, Cronbach's alpha of nine constructs ranged from .90 for the perceived interaction quality construct to .97 for the core-brand reputation construct and perceived risk construct. These values were all higher than the lower limit of .70 suggested by Hair et al. (2010). This means that the instrument had internal consistency or reliability.

Table 10

Reliability of the Measures

| Construct | Number of items | Cronbach's Alpha |
|--|-----------------|------------------|
| PQ: Perceived physical environment quality of previous brand extensions | 3 | .959 |
| IQ: Perceived interaction quality of previous brand extensions | 3 | .901 |
| OQ: Perceived outcome quality of previous brand extensions | 3 | .964 |
| OSQ: Perceived overall service quality of the new brand extension | 3 | .967 |
| REP: Core-brand reputation | 4 | .971 |
| ATT: Attitude toward the new brand extension | 4 | .944 |
| LOY: Core-brand loyalty | 4 | .955 |
| SIM: Perceived similarity between the previous and new brand extensions | 2 | .927 |
| RSK: Perceived risk associated with the new brand extension | 2 | .971 |

Sampling and Data Collection**Sampling Plan**

The population of the study was customers who have had experience with a hotel brand extension in the United States before the survey was conducted. The target population of the study was travelers in the U.S. whose email addresses are in a public available email database purchased by the Center for Hospitality and Tourism Research at Oklahoma State University and those whose email addresses are in the Oklahoma State University email address system. A non-probability sample with convenience sampling was used to draw samples. Convenience sampling is considered appropriate for a study

that aims to provide understanding of complex phenomena and for answering why and how questions (Marshall, 1996). As such, drawing a sample with a convenience approach was suitable for this study as the main purpose was to develop a theoretical model explaining a multiple hotel brand extension.

Sample Size

This study employed structural equation modeling (SEM) for analyzing data. As for all multivariate techniques, to employ SEM, a researcher needs to determine the required sample size for the results to be reasonably stable (Kline, 2005). However, it is very difficult to determine the size of a sample needed to provide trustworthy results because there are several factors affecting sample size requirement, such as model complexity, missing data, and the estimation technique (Hair et al., 2010; Kline, 2005). A complex model typically requires larger samples than a parsimonious model. Although there are no absolute standards in the literature regarding the relation between sample size and path model complexity, several recommendations are offered in determining the sample size. Stevens (2002) suggested the ratio of the number of cases to the number of free parameters be 15:1. Kline (2005) recommended the sample size to free parameter ratio at 10:1, while Benlter and Chou (1987) suggested that the ratio “may be able to go as low as 5:1 under normal and elliptical theory, especially when there are many indicators of latent variables and the associated factor loadings are large” (p.91). However, Kline (2005) suggested that the ratio should not be less than 5:1 because the statistical precision of the results may be doubtful. Further, he suggested that for the structural model to be identified, “the number of observations (samples), which equals

$v(v+1)/2$, where v is the number of observed variables (items), must equal or exceed the number of free parameters, and each latent variable must have a scale” (p. 212). Hair, Black, Babin, Anderson (2010) recommended a minimum sample size based on the model complexity and measurement model characteristics as follow:

| Number of Constructs | Number of Measurement Items in Each Construct | Minimum Sample Size |
|----------------------|---|---------------------|
| ≤ 5 | > 3 | 100 |
| ≤ 7 | ≥ 3 (No under-identified constructs) | 150 |
| ≤ 7 | Some constructs have fewer than three items | 300 |
| > 7 | Some constructs have fewer than three items | 500 |

The structural model of this study consisted of seven constructs (PQ, IQ, OQ, OSQ, REP, ATT, and LOY) measured by twenty-four items. The model had three exogenous variables (PQ, IQ, and OQ) and four endogenous variables (OSQ, REP, ATT, and LOY) with eleven direct paths. Thus, the model has fifty-nine parameters, which include thirty-one variances of exogenous variables (three exogenous factors, twenty-four measurement errors, and four disturbances), and twenty-eight direct effects on endogenous variables (seventeen factor loading, and eleven paths). The following is the minimum sample size based on recommended criteria discussed in the previous section.

| Author | Criterion | Minimum Sample Size |
|-------------------------------------|---|---------------------|
| Kline (2005) | Observation = $v(v+1)/2 = 24(24+1)/2$ | 300 |
| Benlter and Chou | Sample/ parameter ratio at 5:1 | 295 |
| Hair, Black, Babin, Anderson (2010) | Seven constructs and all constructs have at least three measurement items | 300 |

Based on the criteria above, the minimum sample size was 300.

Data Collection Procedure

An online self-administrated survey was employed to collect data. The survey questionnaires were distributed through electronic mail (e-mail). With the online survey, all questionnaires were administrated through the Qualtrics Survey Program (a secure online survey software) provided by the College of Human Sciences at Oklahoma State University. Using the online survey site allows the author to export data directly into computer programs used for statistical analysis such as SPSS, and Microsoft Excel. This minimized errors in coding data.

After obtaining the permission from Oklahoma State University Institutional Review Board in conducting Human Subjects Research, email invitations with a direct link to Qualtrics were sent out to all selected subjects. The invitation message included the purposes of the study, survey procedures, benefits, confidentiality, and participant rights. Subjects who desired to participate in the study were asked to click on a hyperlink located at the end of the invitation message. After respondents finished the questionnaire, they were asked to submit their answers by clicking the submit button. The answers were sent directly to the online survey site, where the researcher had access to retrieve the data.

Data Collection and Response Rate

The online survey was conducted from February 15, 2012 through March 16, 2012. A total of 654,907 email invitations were sent out, the delivery of 374,606 messages failed, indicating an undeliverable rate of 57.2%. Among 280,301 invitations successfully delivered, 673 participants responded to the survey. Of these, only the respondents who have stayed at one of these hotel brands, Marriott, Hyatt, Hilton, and Holiday Inn were kept in the analysis. After removing the cases with excessive levels of missing data, 511 responses remained in the analysis, accounting for a response rate of 0.18%, as shown in Table 11.

Table 11

Survey Response Rate

| | Number | Percent (%) |
|--|------------|-------------|
| Total target population | 654,907 | 100 |
| Undelivered emails | 374,606 | 57.2 |
| Total survey population | 280,301 | 100 |
| Total responses | 673 | 0.24 |
| Incompleted responses | 64 | 0.02 |
| Unusable samples (failed to meet the criteria for being in the sample) | 75 | 0.03 |
| Total coded samples | 534 | 100 |
| Missing value | 71 | 13.29 |
| Kept in the analysis | 48 | 8.99 |
| Removed from the analysis | 23 | 4.31 |
| Total usable samples | 511 | 0.18 |

Data Analysis

The data were analyzed using SPSS and Mplus software, version 6. Statistical techniques employed in this study include a descriptive analysis, confirmatory factor analysis (CFA), structural equation modeling (SEM), and multiple-group analysis. The data analysis procedure can be divided to four major stages as follows:

The first stage involved a descriptive analysis, such as frequencies, means and standard deviations, which were used to identify distributions of the variables and profile the demographics of respondents. Respondent demographic information included:

1. Gender: male or female
2. Year of birth: 1945 and before, 1946–1964, 1965–1976, or 1977 and after
3. Marital status: single or married
4. Education: less than high school degree, high school degree, diploma, college graduate, or graduate degree
5. Annual household income: under \$20,000, \$20,000 to \$39,999, \$40,000 to \$59,999, \$60,000 to \$79,999, \$80,000 to \$99,999, and \$100,000 or greater

In the second stage, the hypotheses and conceptual model proposed in the study were tested using a two-step modeling approach for SEM (Anderson & Gerbing, 1988). Based on the two-step approach, the reliability and validity of constructs, as well as the fit of the proposed measurement model, were first evaluated by CFA. Once, a good-fitting measurement model was established, the validity of the hypothesized theoretical model was tested by SEM.

In the third stage, the hypothesized theoretical model was compared with alternative models to ensure that the proposed model performs better than other models. Lastly, the moderating effects of perceived similarity and perceived risk were tested using the multiple-group analysis.

Testing the Hypothesized Theoretical Model using SEM and CFA

Structural Equation Modeling (SEM)

The proposed conceptual model and its corresponding hypothesized theoretical relationships were tested using structural equation modeling. SEM is a multivariate technique that has been used extensively in the social sciences, as it can be used to specify and estimate models of linear relationships among multiple latent variables or hypothetical constructs—variables of interest that cannot be directly observed but can be inferred or measured indirectly through observed variables (Kline, 2005; MacCallum & Austin, 2000). SEM was chosen to test the hypothesized theoretical model of this study over other multivariate methods because SEM has ability to “(1) estimate multiple and interrelated dependence relationships; (2) represent unobserved concepts in these relationships and account for measurement error in the estimation process; and (3) define a model to explain the entire set of relationships” (Hair et al., 2010, p. 617).

SEM typically has two basic components: the measurement model and the structural model (Hair et al., 2010). As such, it has been suggested that structural equation modeling under a two-step modeling approach should be employed for theory testing and development (Anderson & Gerbing, 1988). As suggested by Anderson and Gerbing (1988), the first step of the two-step approach is to test the validity of the

constructs and a good fit of the measurement model. Once a satisfactory measurement model is established, the second step is to test the validity of the structural model and its corresponding hypothesized theoretical relationships. According to Anderson and Gerbing (1988, p. 422), a number of advantages of a two-step approach over a one-step approach are as follows: (1) it has ability to test the significance of all pattern coefficient, (2) it has ability to assess whether any structural model would give acceptable fit, and (3) it has ability to compare the substantive or theoretical model of interest with next most likely theoretical alternatives. In sum, a two-step approach is essential for assessing the structural model because valid structural theory tests cannot be conducted with poor measures (Hair et al., 2010).

As background to the two-step approach, confirmatory factor analysis (CFA) is discussed in the following section. This is followed by discussions of the procedures in assessing the validity of the measurement model and structural model.

Confirmatory Factor Analysis (CFA)

CFA is a statistical technique used to analyze an a priori measurement model in which both the number of factors or latent constructs (that is not measured directly) and their correspondence to the indicators (or measured variables) are explicitly specified (Kline, 2005). In this study, the measurement model consisted of seven hypothetical constructs namely perceived physical environment quality, perceived interaction quality, perceived outcome quality, expected overall service quality, core brand reputation, attitude toward extension, and core brand loyalty. The observable variables (measurement items) of each construct were presented in Table 9.

Assessing Measurement Model Validity

According to Hair, Black, Babin and Anderson (2010), construct validity is concerned with whether a set of measured items actually reflects the theoretical latent construct those items are designed to measure. The validity of measurement model depends on “(1) establishing acceptable levels of goodness-of-fit for measurement model and (2) finding specific evidence of construct validity” (p. 646).

To assess the goodness-of-fit of the measurement model, chi-square (χ^2) test will be employed to test the model fit. With the χ^2 statistic tests, the null hypothesis states that the observed sample and estimated covariance matrices are equal, meaning that the model fits perfectly (Hair et al., 2010; Kline, 2005). Thus, the failure to reject the null hypothesis indicates that the measurement model fits the population perfectly. According to Kline (2005), although the χ^2 test provides a test of statistical significance, relying solely on the χ^2 test as a fit index might penalize investigators. This is because the χ^2 test is highly sensitive to sample size. As a result, alternative goodness-of-fit indices, such as the normed chi-square (χ^2/df), root mean square error of approximation (RMSEA), standardized root mean square (SRMR), comparative fit index (CFI), Tucker-Lewis index (TLI), and normed fit index (NFI), should be considered. Following these suggestions, in addition to the χ^2 test, normed χ^2 , RMSEA, SRMR, CFI, TLI, and NFI were employed in assessing the fit of measurement model (see Table 12).

Table 12

Goodness-of-fit Indices and Cut-off Values

| Fit Indexes | Cut-off Values | Interpretations |
|---|--|--|
| The χ^2 test (Ho: the observed and estimated covariance matrices are equal) | $p > 0.05$ | Fail to reject Ho. There is no statistically significant difference between the observed and estimated covariance matrices, meaning that the model fits perfectly. |
| Normed χ^2 (χ^2/df) | ≤ 3 < 5 | Good fit (Hair et al., 2010; Kline, 2005) Reasonable fit (Bollen, 1989) |
| RMSEA | $\leq .05$ $\leq .06$ $> .05$ but $< .08$ $> .08$ but $< .1$ $\geq .1$ | Good fit (Kline, 2005) Reasonable fit (Hu & Bentler, 1999) Fair fit (MacCallum, Browne, & Sugawara, 1996) Mediocre fit (MacCallum et al., 1996) Poor fit (Kline, 2005) |
| SRMR | $< .08$ $< .1$ | Reasonable fit (Hu & Bentler, 1999) Reasonable fit (Hair et al., 2010; Kline, 2005) |
| CFI and TLI | $\geq .95$ $\geq .90$ | Good fit (Hu & Bentler, 1999) Reasonable fit (Hair et al., 2010; Kline, 2005) |
| NFI | closer to 1 | Good fit (Hair et al., 2010; Kline, 2005) |

Reliability of Constructs

Construct reliability is concerned with the degree of consistency between multiple measurements of a construct (Hair et al., 2010). Similar to the literature, construct reliability in this study was assessed by Cronbach's alpha and construct reliability (CR). As discussed in Hair et al. (2010), the value of Cronbach's alpha ranges from 0 to 1, with values of .6 to .7 deemed the lower limit of acceptability. CR is computed from the squared sum of factor loadings for each construct and the sum of the error variance terms for a construct. As such, a high magnitude of CR indicates good reliability. A CR of .7 or higher supports validity of the construct. CR values can be calculated as follows:

$$CR = (\sum_{i=1}^n L_i)^2 / [(\sum_{i=1}^n L_i)^2 + (\sum_{i=1}^n e_i)]$$

The L_i^2 represents the standardized factor loading; e is the error variance of a construct, and n is the number of items.

Validity of Constructs

Convergent and discriminant validity were measured to assess construct validity. Convergent validity indicates the degree to which indicators of a specific construct converge or share a high proportion of variance in common (Hair et al., 2010). As such, a set of indicators or observed variables presumed to measure the same latent construct show convergent validity when their intercorrelations are high (Kline, 2005). Hair et al. (2010) suggested three ways, including factor loadings, average variance extracted (AVE), and construct reliability (CR), to examine convergence of the constructs. In terms of factor loading, high loadings on a factor are considered as they converge on some common point. Thus, standardized loading estimates should be .5 or above to support the

convergence of the construct. In addition, all factor loadings should be statistically significant. AVE is a summary indicator of convergence. When AVE is less than .5, it means the variance due to measurement error is larger than the variance captured by the construct. As such, an AVE of .5 or higher is preferred for adequate convergence. AVE can be calculated as follows:

$$AVE = (\sum_{i=1}^n L_i^2)/n$$

The L_i^2 represents the standardized factor loading, and n is the number of items.

Discriminant validity indicates the degree to which a construct is distinct from other constructs (Hair et al., 2010). As such, a set of indicators or observed variables presumed to measure different latent constructs show discriminant validity when their intercorrelations are low (Kline, 2005). For any two constructs, discriminant validity can be tested by comparing the AVE of the two constructs with the square of the correlation estimate between these two constructs. The discriminant validity is exhibited only if AVE is greater than the squared correlation between the two constructs.

Assessing Validity of the Structural Model

Based on the two-step approach, once construct validity and goodness-of-fit of the measurement model are established, the validity of the proposed conceptual model and its corresponding hypothesized theoretical relationships (H1 to H11) were tested. The overall fit of the structural model was examined using the goodness-of-fit indexes shown in Table 12. The results of the analysis are presented in Chapter IV.

Assessing Nested Models

As discussed in Hair et al. (2010) and Kline (2005), a nested model approach is a common approach used to ensure that the proposed model not only has acceptable model fit, but that it performs better than other models do. With this approach, the proposed model is compared to some alternative model (nested models). A nested model is the model that contains the same number of variables and can be formed from the baseline model (the proposed model) by altering some path relationships, either adding or deleting paths. Generally, the chi-square difference statistic, $\Delta\chi^2$, is used to test the statistical significance of the decrement in overall fit as paths are deleted (trimming) or the improvement in fit as paths are added (building). The $\Delta\chi^2$ is the difference between the χ^2_{df} values of the baseline model (B) and an alternative nested model (A). Its degree of freedom, Δdf , equal the difference of the degrees of freedom of the two models.

$$\Delta\chi^2_{\Delta df} = \chi^2_{df(B)} - \chi^2_{df(A)}$$

$$\Delta df = df(B) - df(A)$$

The null hypothesis of the $\Delta\chi^2$ statistic test is that there is no difference between the baseline model and an alternative model. That is, both models have identical fit in the population. In the model trimming, rejection of the null hypothesis suggests that the overall fit of the baseline model is statistically better than that of the model trimming; the same result in the model building, however, supports that the overall fit of the model building is statistically better than that of the baseline model.

Testing Moderating Effects

Two basic techniques have been identified to estimate moderator (interaction) effects in SEM: multiple-group, and product indicant (or continuous variable techniques) (Kline, 2005; Schumacker, 2002). The multiple-group approach involves analyzing a structural model across multiple samples. That is, data are sorted based on a moderating variable; then, the differences in parameter estimates (unstandardized estimates) of the effects of interest in the model across the samples are analyzed. The product indicant approach involves analyzing a model in a single sample with product terms specified by the researcher. That is, a latent interaction variable is created by multiplying pairs of observed variables and then includes the new latent interaction variable in the structural model to test the parameter estimate. This technique is considered the most difficult technique because it requires the specification of nonlinear constraints in the various matrices (Schumacker, 2002).

This study used the multiple-group analysis to test the moderating effects of perceived similarity and perceived risk. As suggested by Kline (2005), to be able to compare parameters across groups, the variables must be measured in a common metric for all groups. Measurement invariance with CFA typically involves the comparison of the relative fit with the chi-square difference ($\Delta\chi^2$) statistic of the two-factor models, one with cross-group equality constraints imposed on some of its parameters and the other without constraints. Thus, the evaluation of the measurement invariance across groups was performed as followed:

1. The configural invariance model (the unconstrained model), where the same factor structure was imposed on all groups, but all parameters were free to estimate, was run across groups. The goodness-of-fit statistics were used to assess the fit of the model. This model is considered as a baseline model.
2. The full measurement invariance model was run across groups. This model assumed invariance of all parameters. That is, cross-group equality constraints were imposed on the estimates of variance (factors and measurement errors), factor covariance, and factor loadings. This specification reflects measurement invariance in the strictest sense. Then, the $\Delta\chi^2$ test was used to test the relative fit between the baseline model and the full invariance model. In case the fit of the constrained model is considerably worse, some parameters can be relaxed to create the partial measurement invariance.
3. For the partial invariance, the invariance constraints in the full invariance model were relaxed step-by-step on the basis of modification indexes. Each step, the fit of the model was compared to the baseline model with the $\Delta\chi^2$ test until the model was supported. This model was retained as the final measurement model.

The next step of the multiple-group analysis was to compare unstandardized estimates of the effects of interest in the model across the samples. There are two general ways to do so. The first is to compare the full model in which all parameters are free to estimate with the restricted model in which the path of interest is constrained to be equal across groups. The second is to compare the constrained model in which all parameter estimates are constrained to be equal across the group with the unrestricted model in

which the parameter estimate of the effect of interest is free to estimate. The second technique was used in this study. The significant effect of the moderator is to assess by comparing the fit of the constrained model to the unrestricted model with the chi-square difference, $\Delta\chi^2$, statistic. The significant $\Delta\chi^2$ test indicates the significant effect of the moderator.

CHAPTER IV

RESULTS

This chapter presents the results of the testing of the hypotheses presented in chapter III, and comprises five sections. The first section reveals preliminary data analysis. The second section presents the demographic characteristics of participants. The third section reports the measurement model tested by the confirmatory factor analysis. The fourth section presents the results of the structural equation modeling that was undertaken to test the hypotheses and the theoretical model of the study. The last section shows the findings from the multiple groups analysis for testing the moderating effects.

Preliminary Data Analysis

Prior to analysis, preliminary statistics were run to determine if the data met the assumptions of both a confirmatory factor analysis (CFA) and structural equation modeling (SEM). As discussed in Hair et.al (2010), a basic assumption of CFA is that some underlying structure does exist in the set of observed variables. To meet this assumption, the researcher needs to ensure that the observed patterns are conceptually valid and appropriate to study with CFA because the presence of correlated variables and significant statistics do not guarantee relevance. In this study, a thorough literature review

was conducted, as discussed in chapter II, to support the expected relationships among constructs as well as underlying structure of each construct.

One assumption of SEM is that there are no missing data. As is typical of many studies conducted by email surveys, the data of this study had some missing values. Of the 534 useable responses, 71 responses have missing data; 23 cases have more than 50% missing data, and 48 responses have less than 10% missing data. To deal with this missing data, two methods were used. First, responses with excessive missing values (more than 50%) were eliminated from the analysis. Second, for responses with small numbers of missing values (less than 10%), the missing data were replaced with the variable mean (Hair et al., 2010). That is, 23 cases were eliminated from the analysis, and 48 cases missing values were replaced with means, leaving 511 responses for the final analysis.

To employ the multivariate technique, as discussed in Hair et al. (2010) and Kline (2005), it is important to understand how the distribution of data depart from normality. Even though non-normality does not affect parameter estimate, it might result in underestimated standard errors and an overestimated chi-square statistic, especially with small sample sizes. However, for large sample sizes of 200 or more, these effects may be negligible because sample size has the effect of increasing statistical power by reducing sampling error.

Generally, the normality of variables can be tested by Kolmogorov-Smirnov (Hair et al., 2010). The non-significance test indicates normal distribution. However, this test is quite sensitive in large samples. Thus, the study used the normal probability plots, and the values of skewness and kurtosis along with the Kolmogorov-Smirnov test to examine

the distribution of data. Skewness involves the symmetry of the distribution. Kurtosis involves the peakedness of the distribution. The absolute values of skewness and kurtosis less than 3 and 10, respectively, indicate normal distribution of data (Kline, 2005). In this study, values for all values of skewness and kurtosis across variables met these criteria.

Respondent Demographic Profiles

Table 13 shows the demographic characteristics of the respondents. The sample of 511 comprised nearly equal numbers of males (50.1%) and females (49.9%). The majority of respondents were married (59.1%). About 50.9% of the respondents were generation X (born 1965–1976) and generation Y (born 1977 and after); 41.5% of respondents were the baby boomer generation (born 1946–1976), the rest of respondents were the silent generation.

Over 90% of the participants reported completed high school, with 39.9% having college degrees and 32.5% having postgraduate degrees. In terms of annual household income, 40.5% of participants reported annual income between \$80,000 and \$100,000 or larger, 32.3% of samples had annual income between \$40,000 and \$79,999, and 27.2% of respondents reported annual income below \$40,000.

According to the American Hotel and Lodging Association (2012), the typical lodging customers in 2008–2010 age 35 and above (74%), specifically 37% of customers age 35-54. An average household income for leisure and business travelers was 87,000 and 100,000 respectively. This information reveals that the demographic characteristics of this study have a similar pattern to that of typical lodging customers.

Table 13

Respondent Demographic Characteristics (N=511)

| Characteristics | n | % |
|------------------------------|-----|------|
| Gender: | | |
| Male | 256 | 50.1 |
| Female | 255 | 49.9 |
| Year of birth: | | |
| 1945 and before | 39 | 7.6 |
| 1946 -1964 | 212 | 41.5 |
| 1965 – 1976 | 104 | 20.4 |
| 1977 and after | 156 | 30.5 |
| Marital status: | | |
| Single | 209 | 40.9 |
| Marred | 302 | 59.1 |
| Education: | | |
| Less than high school degree | 5 | 1.0 |
| High school degree | 81 | 15.8 |
| Diploma | 55 | 10.8 |
| College graduate | 204 | 39.9 |
| Graduate degree | 166 | 32.5 |
| Annual household income: | | |
| Under \$20,000 | 70 | 13.6 |
| \$20,000 - \$39,999 | 69 | 13.5 |
| \$40,000 - \$59,999 | 80 | 15.7 |
| \$60,000 - \$79,999 | 85 | 16.6 |
| \$80,000 - \$99,999 | 63 | 12.3 |
| \$100,000 or greater | 144 | 28.2 |

Testing the Hypothesized Model

The main purposes of this study were to develop and empirically test a theoretical model of the spillover effects of previous hotel brand extensions on customer attitudes toward a subsequent hotel brand extension, core brand reputation, and core brand loyalty. The hypothesized model was tested by structural equation modeling with a two-step approach recommended by Anderson and Gerbing (1988). With this approach, a confirmatory factor analysis (CFA) was first performed to establish the acceptable levels of goodness-of-fit with the measurement model, then structural equation modeling (SEM) was performed to test the proposed theoretical model. The following are the hypotheses being tested in this study.

- H1: Perceived physical environment quality of previous brand extensions positively influences perceived overall service quality of a subsequent brand extension.
- H2: Perceived interaction quality of previous brand extensions positively influences perceived overall service quality of a subsequent brand extension.
- H3: Perceived outcome quality of previous brand extensions positively influences perceived overall service quality of a subsequent brand extension.
- H4: Perceived overall service quality of a subsequent brand extension positively influences attitude toward the subsequent brand extension.
- H5: Perceived physical environment quality of previous brand extensions positively influences the core brand reputation.
- H6: Perceived interaction quality of previous brand extensions positively influences the core brand reputation.

- H7: Perceived outcome quality of previous brand extensions positively influences the core brand reputation.
- H8: Core brand reputation positively influences perceived overall service quality of a subsequent brand extension.
- H9: Core brand reputation positively influences attitude toward a subsequent brand extension
- H10: Core brand reputation positively influences core brand loyalty.
- H11: Attitudes toward a subsequent brand extension positively influence core brand loyalty.
- H12: Perceived image similarity between previous brand extensions and a subsequent brand extension moderates the relationship between perceived physical environment quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.
- H13: Perceived image similarity between previous brand extensions and a subsequent brand extension moderates the relationship between perceived interaction quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.
- H14: Perceived image similarity between previous brand extensions and a subsequent brand extension moderates the relationship between perceived outcome quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.
- H15: Perceived risk associated with the subsequent brand extension moderates the relationship between perceived physical environment quality of the previous

brand extensions and perceived overall service quality of the subsequent brand extension.

H16: Perceived risk associated with the subsequent brand extension moderates the relationship between perceived interaction quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.

H17: Perceived risk associated with subsequent brand extension moderates the relationship between perceived outcome quality of the previous brand extensions and perceived overall service quality of the subsequent brand extension.

Assessing the Overall Measurement Model

Undertaking CFA, a total of twenty-four measured variables were constrained into seven hypothetical constructs as follows: perceived physical environment quality of previous extension: PQ (three items), perceived interaction quality of previous extension: IQ (three items), perceived outcome quality of previous extension: OQ (three items), perceived overall service quality of new extension: OSQ (three items), core brand reputation: REP (four items), attitude toward new extension: ATT (four items), and core brand loyalty: LOY (four items). All of these latent variables met minimum requirements of specifying a measurement model (Hair et al., 2010). Table 14 presents the correlations among constructs.

Table 14

Correlation Matrix of the Measurement Model

| Constructs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|------|------|------|------|------|------|------|
| 1. Perceived physical environment quality | 1.00 | | | | | | |
| 2. Perceived interaction quality | 0.70 | 1.00 | | | | | |
| 3. Perceived outcome quality | 0.77 | 0.81 | 1.00 | | | | |
| 4. Perceived overall service quality | 0.64 | 0.67 | 0.70 | 1.00 | | | |
| 5. Attitude toward extension | 0.53 | 0.56 | 0.57 | 0.81 | 1.00 | | |
| 6. Core brand reputation | 0.71 | 0.73 | 0.79 | 0.71 | 0.62 | 1.00 | |
| 7. Core brand loyalty | 0.59 | 0.59 | 0.60 | 0.58 | 0.59 | 0.76 | 1.00 |

Note. All correlation coefficients were significant at the .01 level.

Overall Model Fit

Using the maximum likelihood method estimation, the confirmatory factor analysis (CFA) yielded the following fit statistics: $\chi^2_{(231)} = 766.812$ ($p < .001$), χ^2/df ratio = 3.32, RMSEA=.067 [90% CI for RMSEA = .062, .073], CFI=.960, TLI=.952, SRMR=.039, NFI=.944. The significant χ^2 did not indicate a perfect match between the estimated covariance matrix within the sampling variance. However, given the problems associated with using this test alone, Hair et al. (2010) suggested that for the large sample size, at least one absolute fit index, and one incremental fit index should be used to assess the overall measurement model, in addition to the χ^2 test. The value for other goodness-of-fit statistics (RMSEA, normed chi-square, CFI, TLI, and SRMR) fell within the acceptable ranges, signifying that the overall measurement model provided an adequate fit to the data.

Reliability and Validity of Construct

As shown in Table 15, all of the constructs had Cronbach's alpha higher than the lower limit of .70 (Hair et al., 2010). In addition, CR values ranging from .88 for IQ to .95 for OSQ and LOY, were all greater than Hair et al. (2010) recommended level of .70, indicating that internal consistency exists. This means that the measures in the study all consistently represented the construct. Further, the CFA results revealed that all standardized loadings, which determine the relative importance of the observed variables as indicators of the constructs, were greater than .7 and were statistically significant at the .01 level. The AVE values of the constructs ranged from .72 for IQ to .86 for OSQ, exceeding the .50 cutoff (Fornell & Larcker, 1981; Hair et al., 2010). Taken together, these results supported the convergent validity of the measurement model.

Table 15

Results of the Measurement Model

| Construct and Indicators | Std. loading | AVE | CR |
|---|----------------------|------|------|
| PQ: Perceived physical environment quality of previous extension ($\alpha = .93$) I would say that this hotel's physical environment is one of the best in its industry. (PQ1) I would rate this hotel's physical environment highly. (PQ2) Overall, I would say that I have a very good impression of this hotel's physical environment.(PQ3) | 0.84 0.92 0.93 | 0.80 | 0.92 |
| IQ: Perceived interaction quality of previous extension ($\alpha = .88$) Overall, I'd say the quality of my interaction with this hotel's employees is excellent. (IQ1) I would say that the quality of my interaction with this hotel's employees is high.(IQ2) It is fun to interact with this hotel's employees. (IQ3) | 0.84 0.79 0.91 | 0.72 | 0.88 |
| OQ: Perceived outcome quality of previous extension ($\alpha = .93$) I have had an excellent experience when I visit this hotel. (OQ1) I feel good about what this hotel provides to its customers. (OQ2) So far, I always rated this hotel's service highly. (OQ3) | 0.90 0.92 0.89 | 0.82 | 0.93 |
| OSQ: Overall perceived service quality of new extension ($\alpha = .95$) I believe this new hotel will provide superior service. (OSQ1) I believe this new hotel will offer excellent service. (OSQ2) I believe that overall service quality of this hotel will be excellent. (OSQ3) | 0.89 0.96 0.94 | 0.86 | 0.95 |

Table 15 (continued)

Results of the Measurement Model

| Construct and Indicators | Std. loading | AVE | CR |
|--|-----------------|------|------|
| ATT: Attitude toward the Extension ($\alpha = .94$) | | 0.80 | 0.94 |
| My attitude towards this hotel is very positive. (ATT1) | 0.90 | | |
| I am very favorably disposed towards this hotel. (ATT2) | 0.91 | | |
| I feel good about this hotel. (ATT3) | 0.85 | | |
| I think this hotel is great.(ATT4) | 0.92 | | |
| REP: Core brand Reputation ($\alpha = .93$) | | 0.77 | 0.93 |
| All together, I am very positive to Marriott. (REP1) | 0.89 | | |
| Overall, Marriott makes honest claims. (REP2) | 0.92 | | |
| Overall, Marriott is trustworthy. (REP3) | 0.89 | | |
| Overall, Marriott has a good reputation. (REP4) | 0.82 | | |
| LOY: Core brand Loyalty ($\alpha = .94$) | | 0.81 | 0.95 |
| I will consider Marriott my first choice if I travel in the future. (LOY1) | 0.91 | | |
| I believe that Marriott is my favorite hotel brand. (LOY2) | 0.95 | | |
| To me Marriott is the best hotel chain in the industry. (LOY3) | 0.91 | | |
| I will recommend Marriott to others who seek my advice. (LOY4) | 0.83 | | |

To assess discriminant validity, the AVE value for each construct was compared with the squared interconstruct correlations associated with that construct. The test revealed that all AVE estimates were greater than the corresponding interconstruct squared correlation, as shown in Table 16, supporting discriminant validity of the measurement model.

Table 16

Average Variance Extracted and Squared Correlation Matrix

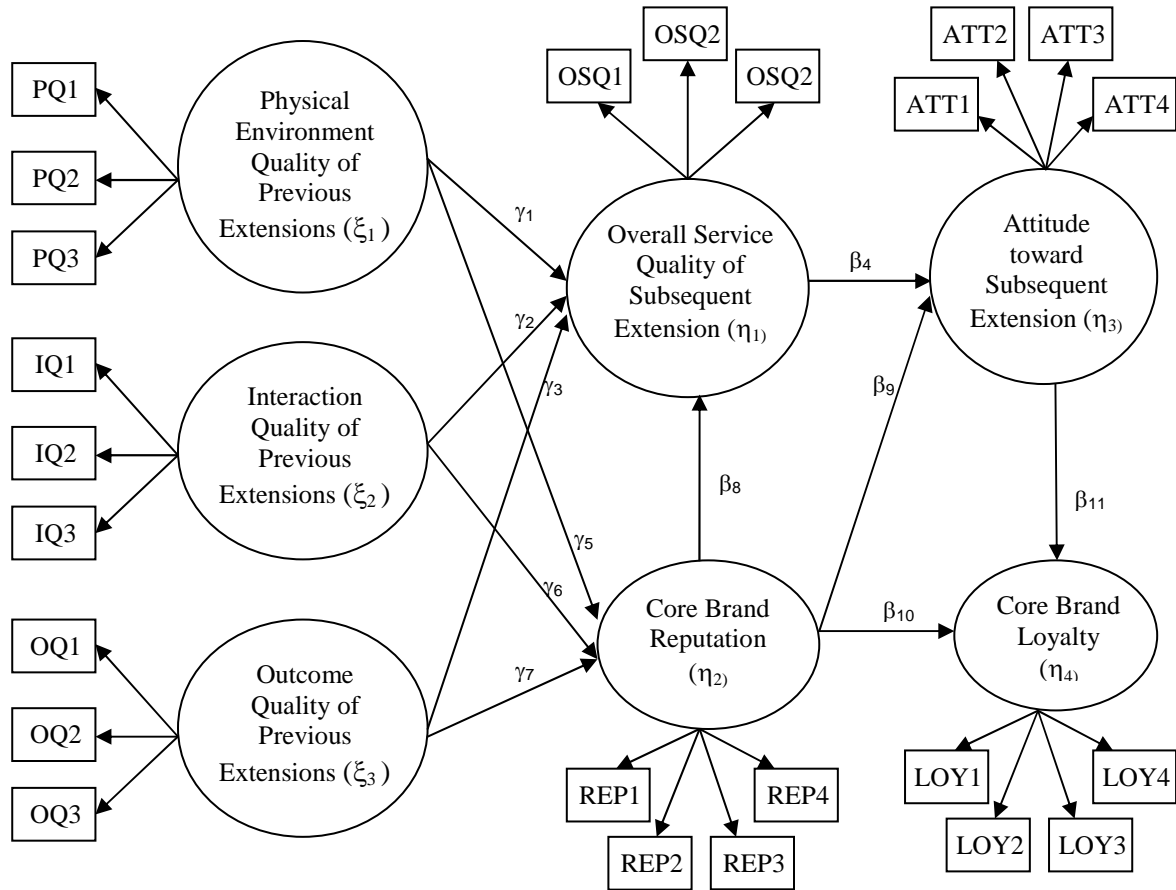
| Constructs | AVE | Squared Correlation | | | | | | |
|---|------|---------------------|------|------|------|------|------|------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Perceived physical environment quality | 0.80 | 1.00 | | | | | | |
| 2. Perceived interaction quality | 0.72 | 0.49 | 1.00 | | | | | |
| 3. Perceived outcome quality | 0.82 | 0.59 | 0.66 | 1.00 | | | | |
| 4. Perceived overall service quality | 0.86 | 0.41 | 0.44 | 0.49 | 1.00 | | | |
| 5. Attitude toward extension | 0.80 | 0.28 | 0.31 | 0.32 | 0.65 | 1.00 | | |
| 6. Core brand reputation | 0.77 | 0.50 | 0.53 | 0.62 | 0.51 | 0.39 | 1.00 | |
| 7. Core brand loyalty | 0.81 | 0.35 | 0.35 | 0.36 | 0.34 | 0.35 | 0.57 | 1.00 |

Assessing the Structural Model

Overall Model Fit

After the overall measurement model was tested by CFA and shown to have adequate fit, as well as construct validity, SEM was followed to test the hypothesized structural relationships among constructs presented in Figure 3. Review of goodness-of-fit statistics showed that the chi-square test ($\chi^2_{(238)} = 777.82$, $p < .001$) did not support the perfect fit of the structural model to the data. However, this test is very sensitive to sample size. For this reason, it has been suggested that the χ^2 test should not be used as the sole goodness-of-fit measure (Hair et al., 2010; Kline, 2005). Because the sample size of this study was 511, the normed chi-square along with other goodness-of-fit statistics were used to assess the validity of the structural model. These fit statistics, χ^2/df ratio = 3.26, RMSEA=.067 [90 percent CI for RMSEA = .061, .072], CFI=.960, TLI=.953, SRMR=.04, NFI=.943, indicated that the proposed structural model had an acceptable fit to the data.

Figure 3. Hypothesized Structural Model.



Evaluation of the Hypothesized Paths

Next, the size, direction, and significance of structural parameter estimates were examined to validate the hypotheses. The result of SEM revealed that all eleven structural path estimates were statistically significant in the expected direction. Specifically, seven paths were significant at $p < 0.001$, and four path were significant at $p < 0.05$. Table 17 presents the results of hypothesis testing as well as estimated standardized path coefficients, t-values, standard errors, and goodness-of-fit statistics.

Table 17

Structural Path Estimates

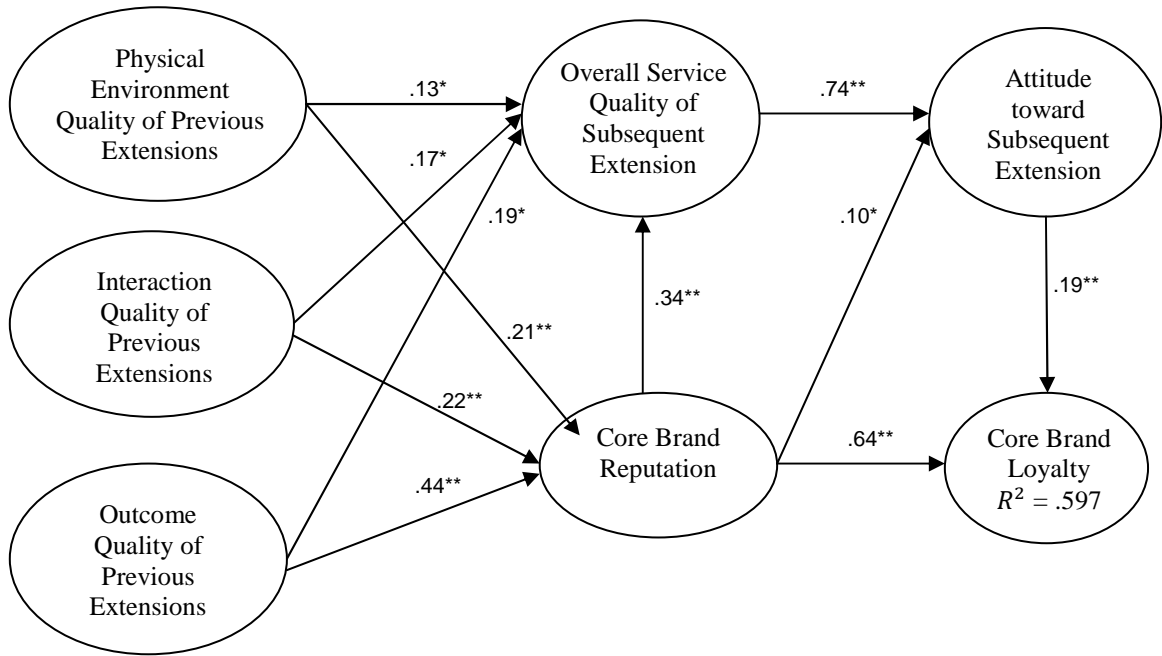
| Path | Standardized Estimate | | Standard Error | t-value |
|--|-----------------------|------|----------------|----------|
| H1:Physical environment quality → Overall service quality | γ_1 | .126 | .057 | 2.208* |
| H2:Interaction quality → Overall service quality | γ_2 | .168 | .067 | 2.498* |
| H3:Outcome quality → Overall service quality | γ_3 | .195 | .078 | 2.475* |
| H4:Overall service quality → Attitude toward new extension | β_4 | .739 | .039 | 19.201** |
| H5:Physical environment quality → Core brand reputation | γ_5 | .212 | .052 | 4.062** |
| H6:Interaction quality → Core brand reputation | γ_6 | .221 | .052 | 3.596** |
| H7:Outcome quality → Core brand reputation | γ_7 | .445 | .067 | 6.609** |
| H8: Core brand reputation → Overall service quality | β_8 | .344 | .059 | 5.835** |
| H9:Core brand reputation → Attitude toward new extension | β_9 | .097 | .045 | 2.166* |
| H10:Core brand reputation → Core-brand loyalty | β_{10} | .637 | .037 | 17.139** |
| H11: Attitude toward new extension → Core-brand loyalty | β_{11} | .194 | .041 | 4.677** |
| Goodness-of-fit statistics: Chi-square (χ^2) = 777.82 , $p < .001$, Degree of freedom (df) = 238 Normed Chi-square (χ^2/df) = 3.268 Root Mean Square Error of Approximation (RMSEA) = .067 90 percent confidence interval for RMSEA = .061 .072 Standardized Root Mean Square (SRMR) = .040 Comparative Fit Index (CFI) = .960 Tucker-Lewis Index (TLI) = .953 Normed Fit Index (NFI) = .943 | | | | |

Note: * $p < .05$, ** $p < .001$

The positive direct effects of perceived service quality of a previous hotel brand extension in terms of physical environment quality ($\gamma_1 = .13, p < .05$), interaction quality ($\gamma_2 = .17, p < .05$), and outcome quality ($\gamma_3 = .19, p < .05$) on perceived overall service quality of new extension were statistically significant, supporting Hypotheses 1, 2 and 3 respectively. Further, the model showed that perceived overall service quality had significant positive impact on attitude toward new extension ($\beta_4 = .74, p < .001$), supporting Hypotheses 4.

As hypothesized, core brand reputation was influenced by perceived physical environment quality ($\gamma_5 = .21, p < .001$), interaction quality ($\gamma_6 = .22, p < .001$), and outcome quality ($\gamma_7 = .44, p < .001$) of the previous brand extension, supporting Hypotheses 5, 6 and 7 respectively. Further, the model indicated that core brand reputation had positive impacts on perceived overall service quality ($\beta_8 = .34, p < .001$), attitude toward new extension ($\beta_9 = .10, p < .05$), and core brand loyalty ($\beta_{10} = .64, p < .001$), supporting Hypotheses 8, 9 and 10 respectively. Attitude toward new extension was also found to have positive impact on core brand loyalty ($\beta_{11} = .19, p < .001$), supporting Hypotheses 11. Figure 4 represents the estimated standardized path coefficients of the structural model.

Figure 4. Hypothesized Model with Path Estimates.



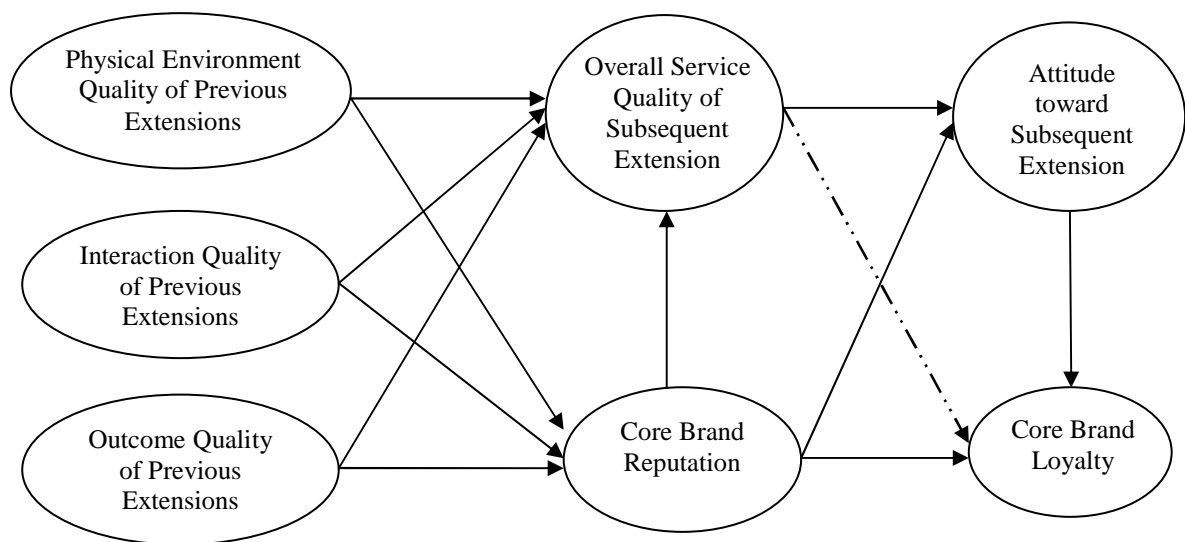
Note: * $p < .05$, ** $p < .001$

Completing Models

The next step of the analysis was to compare the hypothesized model to nested models (competing models) in order to ensure that the proposed model not only fit the data reasonably well, but also was parsimonious and performed better than competing models. The proposed model of the study was compared to two completing models. The chi-square difference statistic test, $\Delta\chi^2$, was performed to test the null hypothesis of identical fit of the proposed model and the completing model.

In the first completing model, as presented in Figure 5, the path from perceived overall service quality of previous brand extension (OSQ) to core brand loyalty (LOY) was added to the proposed model. In the literature, customer perceived service quality has found to have a positive impact on brand loyalty (Cronin et al., 2000; S. A. Taylor & Baker, 1994). Thus, one can expect the positive relationship between OSQ and LOY. Consequently, adding this path in the proposed model deemed to be reasonable.

Figure 5. Completing Model 1: Adding Path.



Note: —→ represents the original path
 - - - → represents the added path

In the second completing model, as shown in Figure 6, the path from core brand reputation (REP) to attitude toward the subsequent extension (ATT) was deleted from the proposed model. The path estimates of the proposed model indicated that REP had significant direct and indirect effects on ATT. The direct effect, however, was very weak ($\beta_9 = .10$) compared to the indirect effect through OQS (REP \rightarrow OQS \rightarrow ATT). Thus, it was deemed to be reasonable to delete the path REP \rightarrow ATT to improve the fit of the proposed model. Table 18 presents the comparison of the goodness-of-fit statistics of the proposed model and the completing models.

Figure 6. Completing Model 2: Deleting Path.

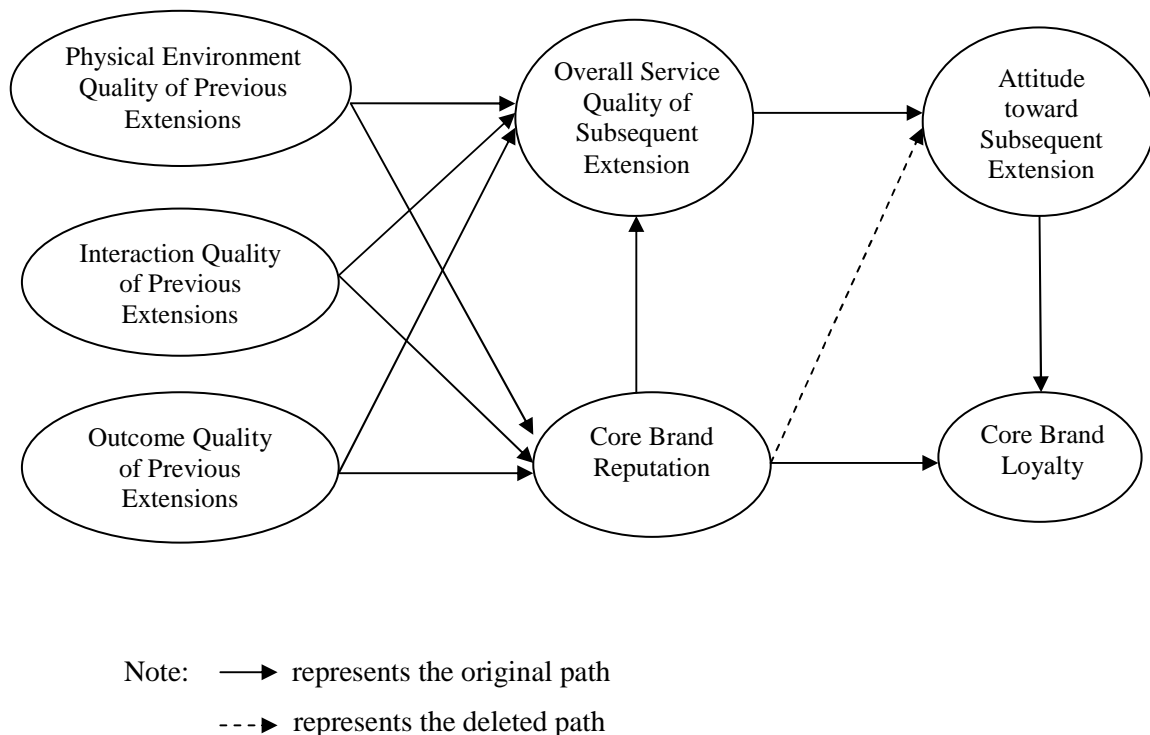


Table 18

Comparison of Fit Indices between the Proposed Model and the Completing Models

| Goodness-of-Fit Statistics | Proposed Model | Completing Model 1 | Completing Model 2 |
|---|----------------|--------------------|--------------------|
| Chi-square (χ^2) | 777.82 | 775.24 | 782.462 |
| Degree of freedom (df) | 238 | 237 | 239 |
| P-Value | p<.001 | p<.001 | p<.001 |
| Normed Chi-square (χ^2/df) | 3.268 | 3.271 | 3.274 |
| Root Mean Square Error of Approximation (RMSEA) | .067 | .067 | .067 |
| 90 percent confidence interval for RMSEA | .061 .072 | .061 .072 | .062 .072 |
| Standardized Root Mean Square (SRMR) | .040 | .040 | .041 |
| Comparative Fit Index (CFI) | .960 | .960 | .960 |
| Tucker-Lewis Index (TLI) | .953 | .953 | .953 |
| Normed Fit Index (NFI) | .943 | .943 | .942 |

As shown in Table 18, both of the completing models fit the data reasonably well.

As such, they can be compared to the proposed model. For completing model 1, the $\Delta\chi^2_{\Delta df}$ was 2.58 (777.82 - 775.24), and Δdf was 1 (238 - 237). The critical value of χ^2 with $df=1$ at the .05 level is 3.84. A comparison of the $\Delta\chi^2_{\Delta df}$, 2.58 with $\chi^2_{critical}$ indicated that the $\Delta\chi^2_{\Delta df}$ value was not significant, meaning that the additional path did not provide a better fit to the model. In other words, the proposed model was more parsimonious and better than completing model 1.

For completing model 2, the $\Delta\chi^2_{\Delta df}$ was 4.64 (782.46 - 777.82), and Δdf was 1 (239 - 238). The critical value of χ^2 with $df=1$ at the .05 level is 3.84. A comparison of the $\Delta\chi^2_{\Delta df}$, 2.58 with $\chi^2_{critical}$ revealed that the $\Delta\chi^2_{\Delta df}$ value was significant, indicating that completing model 2 was oversimplified. That is, the proposed model was preferable.

Testing Moderating Effects of Perceived Image Similarity

To test whether the effects of perceived service quality of previous brand extension in terms of physical environment quality (PQ), outcome quality (OQ), and interaction quality (IQ) on perceived overall service quality of new brand extension (OSQ) differ according to perceived image similarity of the previous and the new brand extension, the multiple-group analysis was performed. All 511 samples were sorted into two groups based on the mean of perceived image similarity. With the mean of 4.74, the sample was divided into two groups, low and high similarity. The low similarity group consisted of 225 members, while the high similarity group had 286 samples.

To perform the multiple-group analysis, the measurement invariance tested whether a set of indicators assesses the same constructs across the low and high similarity groups. As discussed in chapter III, this step involved the tests of three invariances, including configural invariance, full measurement invariance, and partial measurement variance. The relative fit of the two factor models was assessed by the chi-square difference ($\Delta\chi^2$) statistic, in which the null hypothesis posits that the fit of the two models are equal. The results of the evaluation of measurement invariance are presented in Table 19.

Table 19

Testing Measurement Invariance

| Goodness-of-Fit Statistics | Configural Invariance | Full Invariance | Partial Invariance |
|-----------------------------------|----------------------------------|----------------------------|-------------------------------|
| Chi-square (χ^2) | 1079.547 | 1363.686 | 1105.619 |
| Degree of freedom (<i>df</i>) | 462 | 531 | 479 |
| P-Value | p<.001 | p<.001 | p<.001 |
| Normed Chi-square (χ^2/df) | 2.337 | 2.568 | 2.308 |
| RMSEA | .072 | .078 | .072 |
| 90 percent CI for RMSEA | .067 .078 | .073 .083 | .066 .077 |
| CFI | .949 | .932 | .949 |
| TLI | .939 | .929 | .940 |
| SRMR | .051 | .172 | .055 |

When testing for configural invariance (invariance of factor pattern), the goodness-of-fit statistics (χ^2/df ratio = 2.337, RMSEA=.072, CFI=.949, TLI=.939, SRMR=.051) indicated a fair fit of the model. This means that the factor structure of the model was invariant across the low and high similarity groups. As a results, this model was used as a baseline model.

When testing for the full measurement invariance (cross-group equality constraints), the estimates of 31 variance (7 factors and 24 measurement errors), 21 factor covariance, and 17 factor loadings were constrained to be equal across two groups. Based on the significance $\Delta\chi^2$ test between the full invariance model and the baseline model ($\Delta\chi^2_{69} = 284.139, p < .001$), the full invariance model that assumed equal estimates for all model parameters across low and high similarity groups was not supported. As a

result, the factor variances and covariance in the full invariance model were freely estimated in each group. This partial invariance model was compared to the baseline model. The insignificance $\Delta\chi^2$ test ($\Delta\chi^2_{17} = 26.072, p = .073$) supported the partial invariance measurement model with equality constrained on all factor loading. In addition, the goodness-of-fit statistics suggested that this measurement model had a fair level of fit to data: χ^2/df ratio = 2.308, RMSEA=.072, CFI=.949, TLI=.940, SRMR=.055. Thus, the partial invariance measurement model was retained as the final measurement model.

Once the invariance measurement was developed, the next step of the multiple-group analysis was to develop the structural model with the partial invariance model suggested previously. As suggested by Bollen (1989) and Kline (2005) unstandardized instead of standardized estimates were used to compare the difference across groups.

Table 20 presents the results of the maximum likelihood parameter estimates for the constrained path model. To test the moderating effects of perceived similarity on the paths PQ→OSQ, IQ→OSQ, and OQ→OSQ, the constrained model, where all unstandardized path coefficient were constrained to be equal across the low and high similarity groups, was compared to the unrestricted model in which the parameter estimate of the effect of interest was free to estimate.

Table 20

Maximum Likelihood Parameter Estimates for Equality-Constrained Model across Low and High Similarity

| Parameter | Low Similarity (n=225) | | | High Similarity (n=286) | | |
|---|------------------------|-------|--------------|-------------------------|-------|--------------|
| | Unstandardized | SE | Standardized | Unstandardized | SE | Standardized |
| <u>Direct Effects</u> | | | | | | |
| PQ → OSQ | 0.142* | 0.051 | 0.141 | 0.142* | 0.051 | 0.16 |
| IQ → OSQ | 0.122 | 0.065 | 0.123 | 0.122 | 0.065 | 0.129 |
| OQ → OSQ | 0.185* | 0.068 | 0.184 | 0.185* | 0.068 | 0.220 |
| REP → OSQ | 0.358* | 0.062 | 0.331 | 0.358* | 0.062 | 0.361 |
| PQ → REP | 0.191* | 0.048 | 0.205 | 0.191* | 0.048 | 0.213 |
| IQ → REP | 0.228* | 0.059 | 0.249 | 0.228* | 0.059 | 0.238 |
| OQ → REP | 0.359* | 0.061 | 0.387 | 0.359* | 0.061 | 0.424 |
| REP → ATT | 0.106 | 0.055 | 0.090 | 0.106 | 0.055 | 0.080 |
| OSQ → ATT | 0.854* | 0.058 | 0.788 | 0.854* | 0.058 | 0.641 |
| ATT → LOY | 0.234* | 0.048 | 0.195 | 0.234* | 0.048 | 0.217 |
| REP → LOY | 0.847* | 0.066 | 0.600 | 0.847* | 0.066 | 0.593 |
| Goodness-of-fit statistics: $\chi^2_{504} = 1150.458, p < .001$ $\chi^2/df = 2.283$ RMSEA = .071 [90 percent CI for RMSEA = .065 .076] CFI = .947 TLI = .942 SRMR = .073 | | | | | | |

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

Moderating Effect of Perceived Similarity on the Path PQ→OSQ

To investigate the group difference, the constrained model was reanalyzed without equality constraints on the path PQ→OSQ. The significance $\Delta\chi^2$ test ($\Delta\chi^2_1 = 7.539, p < .01$) indicated that the effect of PQ on OSQ differ across the high and low similarity group (see Table 21), supporting H12. In the high similarity group, the unstandardized coefficient for the direct effect of PQ on OSQ was 0.24 ($p < .01$). In the low similarity group, however, the unstandardized coefficient for the same direct effect was only 0.027 ($p > .05$). This can be interpreted as the effect of perceived physical service quality of previous brand extensions on perceived overall service quality of the new extension was larger for customers who perceived high similarity between the brands than those with perceptions of low similarity.

Table 21

Results of Moderating Effects of Perceived Similarity

| Path | Unstandardized Estimate (t-value) | | Chi-square Difference Test | Hypothesis |
|----------|--------------------------------------|-------------------------------|---|--------------------------|
| | Low similarity (n=225) | High similarity (n=286) | | |
| PQ → OSQ | .027 (0.417) | .204 (3.626)** | $\Delta\chi^2_1 = 7.539,$ $p < .01$ | H12 was supported |
| IQ → OSQ | .082 (1.128) | .164 (2.233)* | $\Delta\chi^2_1 = 1.497,$ $p = .221$ | H13 was not supported |
| OQ → OSQ | .109 (1.301) | .203 (2.924)** | $\Delta\chi^2_1 = 2.14,$ $p = .143$ | H14 was not supported |

* $p < .05$ ** $p < .01$

Moderating Effect of Perceived Similarity on the Path IQ→OSQ

To investigate the group difference, the constrained model was reanalyzed without equality constrain on the path IQ→OSQ. The insignificance $\Delta\chi^2$ test ($\Delta\chi^2_1 = 1.497, p=.221$) indicated that there was no statistically significant difference in the effect of IQ on OSQ across the high and low similarity groups (see Table 21). Based on these results, H13 was not supported. That is, the impact of perceived interaction quality of the previous extension on perceived overall service quality of the new extension did not depend on how customers perceived image similarity between the two brands.

Moderating Effect of Perceived Similarity on the Path OQ→OSQ

To investigate the group difference, the constrained model was reanalyzed without equality constrain on the path OQ→OSQ. The insignificance $\Delta\chi^2$ test ($\Delta\chi^2_1 = 2.14, p=.143$) indicated that there was no statistically significant difference in the effect of OQ on OSQ across the high and low similarity groups (see Table 21). Based on these results, H14 was not supported. That is, the impact of perceived outcome quality of the previous extension on perceived overall service quality of the new extension did not depend on how customers perceived image similarity between the two brands.

Testing Moderating Effects of Perceived Risk

To test whether the effects of perceived service quality of previous brand extension in terms of physical environment quality (PQ), outcome quality (OQ), and interaction quality (IQ) on perceived overall service quality of a new brand extension (OSQ) differ according to perceived risk associated with the new extension, the multiple-group analysis was performed. All 511 samples were sorted into two groups based on the mean of the perceived risk. With the mean of 2.92, the sample was divided into two groups, low and high risk in which the low risk group consisted of 284 members, while the high similarity group had 227 samples.

Similar to testing the moderating effect of perceived similarity, the measurement invariance was tested to ensure that a set of indicators assesses the same constructs across the low and high-risk groups. This step involved the tests of three invariances, including configural invariance, full measurement invariance, and partial measurement variance. The relative fit of the two factor models was assessed by the chi-square difference ($\Delta\chi^2$) statistic, in which the null hypothesis posits that the fit of the two models are equal. Table 22 reports the results of evaluation of measurement invariance.

Table 22

Measurement Invariance for Low and High Perceived Risk Groups

| Goodness-of-Fit Statistics | Configural Invariance | Full Invariance | Partial Invariance |
|-----------------------------------|----------------------------------|----------------------------|-------------------------------|
| Chi-square (χ^2) | 1086.026 | 1265.834 | 1100.546 |
| Degree of freedom (<i>df</i>) | 462 | 531 | 479 |
| P-Value | $p < .001$ | $p < .001$ | $p < .001$ |
| Normed Chi-square (χ^2/df) | 2.351 | 2.384 | 2.298 |
| RMSEA | .074 | .074 | .071 |
| 90 percent CI for RMSEA | .067 .078 | .068 .079 | .066 .077 |
| CFI | .951 | .942 | .951 |
| TLI | .942 | .940 | .944 |
| SRMR | .045 | .143 | .049 |

When testing for configural invariance (invariance of factor pattern), the goodness-of-fit statistics (χ^2/df ratio = 2.351, RMSEA=.073, CFI=.951, TLI=.942, SRMR=.045) indicated a fair fit of the model. This means that the factor structure of the model was invariant across the low and high-risk groups. As a result, this model was used as a baseline model.

When testing for the full measurement invariance (cross-group equality constraints), the estimates of 31 variance (7 factors and 24 measurement errors), 21 factor covariance, and 17 factor loadings were constrained to be equal across the two groups. Based on the significant $\Delta\chi^2$ test between a full invariance model and the baseline model ($\Delta\chi^2_{69} = 179.808, p < .001$), the full invariance model that assumed equal estimates for all model parameters across low and high similarity groups was not supported. As a result, the factor variances and covariance in the full invariance model were freely

estimated in each group. This partial invariance model was compared to the baseline model. The insignificance $\Delta\chi^2$ test ($\Delta\chi^2_{17} = 14.52, p = .63$) supported the partial invariance measurement model with equality-constrained on all factor loading. Further, the goodness-of-fit statistics suggested a fair level of fit to data: χ^2/df ratio = 2.298, RMSEA=.071, CFI=.951, TLI=.442, SRMR=.049. Thus, this measurement model was retained as the final measurement model.

Once the invariance measurement was developed, the next step of the multiple-group analysis was to develop the structural model with the partial invariance model. As suggested by Bollen (1989) and Kline (2005), unstandardized instead of standardized estimated were used to compare the difference across groups.

To test the moderating effects of perceived risk on the paths PQ→OSQ, IQ→OSQ, and OQ→OSQ, the constrained model, where all unstandardized path coefficients were constrained to be equal across the low and high-risk groups, was compared to the unrestricted model in which the parameter estimate of the effect of interest was free to estimate. Table 23 presents the results of the maximum likelihood parameter estimates for the constrained path model.

Table 23

Maximum Likelihood Parameter Estimates for Equality-Constrained Model across Low and High Risk

| Parameter | Low Risk (n=284) | | | High Similarity (n=227) | | |
|--|------------------|-------|--------------|-------------------------|-------|--------------|
| | Unstandardized | SE | Standardized | Unstandardized | SE | Standardized |
| <u>Direct</u> | | | | | | |
| <u>Effects</u> | | | | | | |
| PQ → OSQ | 0.077 | 0.047 | 0.097 | 0.077 | 0.047 | 0.083 |
| IQ → OSQ | 0.188** | 0.065 | 0.210 | 0.188** | 0.065 | 0.188 |
| OQ → OSQ | 0.219** | 0.073 | 0.243 | 0.219** | 0.073 | 0.233 |
| REP → OSQ | 0.302** | 0.064 | 0.297 | 0.302** | 0.064 | 0.286 |
| PQ → REP | 0.192** | 0.042 | 0.243 | 0.192** | 0.042 | 0.217 |
| IQ → REP | 0.202** | 0.057 | 0.229 | 0.202** | 0.057 | 0.213 |
| OQ → REP | 0.377** | 0.062 | 0.424 | 0.377** | 0.062 | 0.423 |
| REP → ATT | 0.128* | 0.056 | 0.103 | 0.128* | 0.056 | 0.107 |
| OSQ → ATT | 0.828** | 0.06 | 0.678 | 0.828** | 0.06 | 0.726 |
| ATT → LOY | 0.249** | 0.051 | 0.194 | 0.249** | 0.051 | 0.211 |
| REP → LOY | 0.940** | 0.067 | 0.592 | 0.940** | 0.067 | 0.661 |
| Goodness-of-fit statistics: | | | | | | |
| $\chi^2_{504} = 1133.955, p < .001$ | | | | | | |
| $\chi^2/df = 2.25$ | | | | | | |
| RMSEA = .070 [90 percent CI for RMSEA = .065 .075] | | | | | | |
| CFI = .951 | | | | | | |
| TLI = .946 | | | | | | |
| SRMR = .056 | | | | | | |

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

Moderating Effect of Perceived Risk on the Path PQ→OSQ

To investigate the group difference, the constrained model was reanalyzed without equality constraints on the path PQ→OSQ. The insignificance $\Delta\chi^2$ test ($\Delta\chi^2_1 = 2.705, p=.098$) indicated that there was no statistically significant difference in the effect of PQ on OSQ across the high and low risk groups (see Table 24). Based on these results, H15 was not supported. That is, the impact of perceived physical environment quality of the previous extension on perceived overall service quality of the new extension did not depend on how customers perceived risk associated with the new brand extension

Table 24

Results of Moderating Effects of Perceived Risk

| Path | Unstandardized Estimate (t-value) | | Chi-square Difference Test | Hypothesis |
|----------|--------------------------------------|----------------------|---------------------------------------|-----------------------|
| | Low Risk (n=225) | High Risk (n=286) | | |
| PQ → OSQ | 0.052 (1.063) | 0.150 (2.339)* | $\Delta\chi^2_1 = 2.705,$ $p=.098$ | H15 was not supported |
| IQ → OSQ | 0.196 (2.86)** | 0.171 (2.209)* | $\Delta\chi^2_1 = 0.151,$ $p=.697$ | H16 was not supported |
| OQ → OSQ | 0.223 (2.865)** | 0.214(2.683)** | $\Delta\chi^2_1 = .020,$ $p=.887$ | H17 was not supported |

* $p < .05$ ** $p < .01$

Moderating Effect of Perceived Risk on the Path IQ→OSQ

To investigate the group difference, the constrained model was reanalyzed without equality constrain on the path IQ→OSQ. The insignificance $\Delta\chi^2$ test ($\Delta\chi^2_1 = 0.151, p=.697$) indicated that there was no statistically significant difference in the effect of IQ on OSQ across the high and low risk groups (see Table 24). Based on these results, H16 was not supported. That is, the impact of perceived interaction quality of the previous extension on perceived overall service quality of the new extension did not depend on how customers perceived risk associated with the new brand extension.

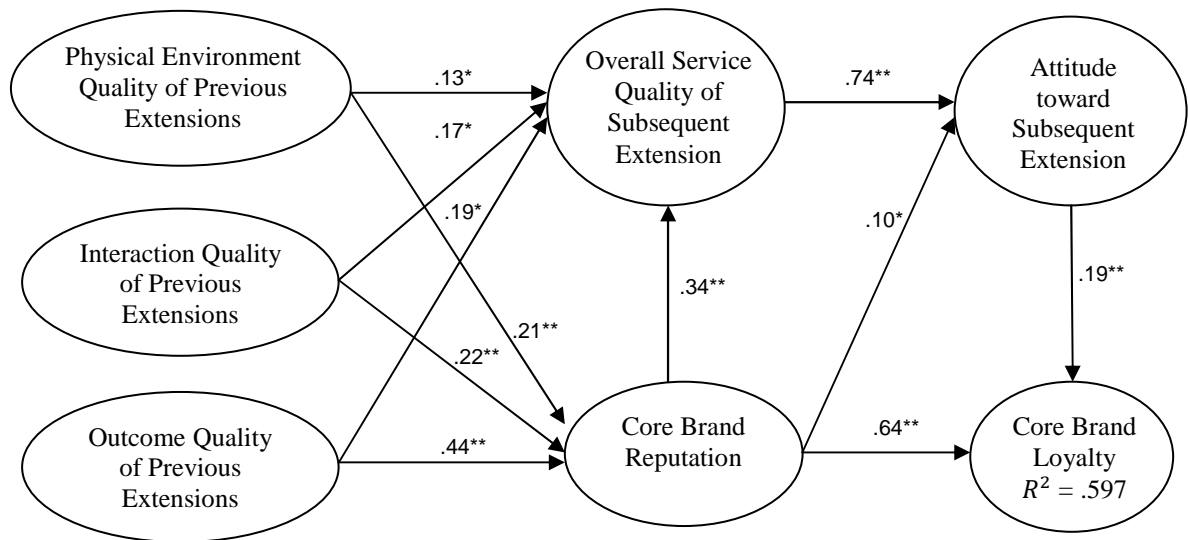
Moderating Effect of Perceived Risk on the Path OQ→OSQ

To investigate the group difference, the constrained model was reanalyzed without equality constrain on the path OQ→OSQ. The insignificance $\Delta\chi^2$ test ($\Delta\chi^2_1 = .020, p=.887$) indicated that there was no statistically significant difference in the effect of OQ on OSQ across the high and low risk groups (see Table 24). Based on these results, H14 was not supported. That is, the impact of perceived outcome quality of the previous extension on perceived overall service quality of the new extension did not depend on how customers perceived risk associated with the new brand extension.

Summary of Results

The results of structural equation modeling revealed that the proposed theoretical model of spillover effects of previous hotel brand extensions on customer perceptions of service quality and attitudes toward subsequent hotel brand extensions, core brand reputation, and core brand loyalty was supported. Fit statistics, χ^2/df ratio = 3.26, RMSEA=.067, CFI=.960, TLI=.953, SRMR=.04, indicated that this model fits data reasonably well. Figure 7 displays the final model and Table 25 summarizes the results of hypotheses testing.

Figure 7. Final Model with Path Estimates.



Note: * $p < .05$, ** $p < .001$

Table 25

Results of Hypotheses Testing

| Hypothesis | Path Relationship | Result |
|---------------------------|-------------------|---------------|
| Direct Effects | | |
| H1 | PQ → OSQ | Supported* |
| H2 | IQ → OSQ | Supported* |
| H3 | OQ → OSQ | Supported* |
| H4 | OSQ → ATT | Supported** |
| H5 | PQ → REP | Supported** |
| H6 | IQ → REP | Supported** |
| H7 | OQ → REP | Supported* |
| H8 | REP → OSQ | Supported** |
| H9 | REP → ATT | Supported* |
| H10 | REP → LOY | Supported** |
| H11 | ATT → LOY | Supported** |
| Moderating Effects | | |
| H12 | SIM on PQ → OSQ | Supported** |
| H13 | SIM on IQ → OSQ | Not supported |
| H14 | SIM on OQ → OSQ | Not supported |
| H15 | RSK on PQ → OSQ | Not supported |
| H16 | RSK on IQ → OSQ | Not supported |
| H17 | RSK on OQ → OSQ | Not supported |

* $p < .05$ ** $p < .01$ **PQ** = Perceived physical environment quality of previous extensions**IQ** = Perceived interaction quality of previous extensions**OQ** = Perceived outcome quality of previous extensions**OSQ** = Overall perceived service quality of new extensions**ATT** = Attitude toward the extension**REP** = Core brand reputation**LOY** = Core brand loyalty**SIM** = Perceived image similarity between previous and new brand extensions**RSK** = Perceived risk associated with new extensions

CHAPTER V

CONCLUSION AND IMPLICATIONS

This chapter begins with a discussion of the findings emerging from this study, compared to the results of previous research. The implications of the research findings are discussed next. The chapter finishes with the limitation of the study and suggestions of possible directions of future research.

Discussion of Findings

The main purpose of this study was to propose and test a theoretical model that explores the spillover effects of previous hotel brand extensions on customer attitudes toward the subsequent hotel brand extension, and customer perceptions of core brand loyalty. As discussed more extensively in Chapter II, the signaling theory of umbrella branding and related empirical research on brand extension provided a conceptual basis to develop the theoretical model of spillover effects of brand extensions. The results of structural equation modeling revealed that perceived service quality of previous hotel brand extensions have significant positive impacts on customer attitudes toward subsequent brand extensions, and customer perceptions of core brand loyalty.

Spillover Effect on Attitude toward Subsequent Brand Extension

Mediating Role of Perceived Overall Service Quality

Similar to other empirical studies in the marketing literature (Erdem, 1998; Hakenes & Peitz, 2008), the results of this study showed support for the premise of the signaling theory of umbrella branding—experiences with any of the products/services that share the same brand name affect quality perceptions for others. Specifically, in the context of hotel brand extension, this study found that the perceived service quality of previous hotel brand extension, which consists of physical environment quality, interaction quality, and outcome quality, had positive impacts on customer perceptions of overall service quality of a subsequent hotel brand extension. Among all three dimensions of service quality, outcome quality had the strongest effect on perceived overall service quality of the new brand extension. These results are similar to a study by Volckner et al. (2010), as they revealed that all three dimension of parent brand quality—physical environment quality, interaction quality, and outcome quality—have positive impacts on overall service quality of the extension, with outcome quality is the dominant driver of brand extension success.

Further, the results of this study indicated that customers are more likely to have a positive attitude toward a subsequent hotel brand extension if they perceived that the overall service quality of the hotel brand extension is high. This result is consistent with previous studies (e.g., Kwun & Oh, 2007) in that customer evaluations or attitudes toward a hotel brand extension are directly influenced by how they perceived the quality of the hotel brand.

Mediating Role of Core Brand Reputation

Consistent with the marketing literature (Selnes, 1993; Thamaraiselvan & Raja, 2008; Zeithaml, 1988), the results of this study suggest that perceived service quality is positively associated with brand reputation. Specifically, the spillover effect model indicated that core brand reputation was significantly influenced by all three dimensions of hotel service quality—physical environment, interaction, and outcome quality. Of these, outcome quality was found to be the most important factor contributing to the core-brand reputation. These findings support the notion that a direct experience gives customers an opportunity to test the signaling claims made by the brand, which consequently either reinforce or disconfirm their perceptions of global quality of brand or brand reputation (Herbig & Milewicz, 1993; Milewicz et al., 1994; Selnes, 1993; Thamaraiselvan & Raja, 2008). That is, superior service quality will strengthen brand reputation, while inferior service quality will distort the reputation of the brand.

As expected, the model further indicated that core brand reputation had positive impacts, both directly and indirectly through perceived overall service quality, on customer attitudes toward the subsequent hotel brand extension. That is, the findings suggested that brands with higher perceived reputation encourage more positive evaluations than that of lower reputation, supporting previous empirical findings (e.g., Hem et al., 2003; Thamaraiselvan & Raja, 2008).

Spillover Effect on Core Brand Loyalty

Apart from the spillover effect on customer attitude toward a subsequent brand extension, this study provided evidence that perceived quality of previous brand extensions had significant impact on core brand loyalty, similar to a study by Swaminathan et al. (2001) as they found that experience with the previous brand extensions influences customers' repeat purchase decisions of the parent brand. Specifically, the spillover effect model indicated that perceived service quality of previous hotel brand extensions in all three dimensions—physical environment, interaction, and outcome quality—had positive indirect effects on core brand loyalty through customer attitude toward the subsequent hotel brand extension, and core brand reputation. These results are supported by the empirical findings from previous studies (Helm, 2007; Selnes, 1993) in that customers are more likely to purchase or recommend the brand with a strong reputation than one with a weak reputation, or the brand when they have a positive attitude toward the brand extension.

Moderating Effect of Perceived Image Similarity

This study examined whether the effects of perceived service quality of previous hotel brand extensions—physical environment, interaction, and outcome quality—on perceived overall service quality of the subsequent hotel brand extension are different when customers perceived a different level of image similarity between the previous and the subsequent brand extension. The results of this study partially supported the empirical findings from previous research (Aaker & Keller, 1990; Volckner & Sattler, 2006) in that the degree to which brand association (perceived brand quality) is transferred to the

extension depends on the level of perceived similarity between the two brands. That is, the effect of perceived previous brand extension quality is stronger when perceived similarity is high than when it is low. However, this study found that only the path relationship between perceived physical environment quality of previous brand extension and perceived overall service quality on the subsequent brand extension was significantly moderated by perceived image similarity of the two extensions.

Moderating Effect of Perceived Risk

Previous studies (Campbell & Goodstein, 2001; Dowling & Staelin, 1994; Erdem & Swait, 1998) suggested that when customers face uncertain situations or feel that negative outcomes are likely, their perception of risk increases. As a result, they will engage in different types of risk reduction activities, such as careful evaluation of choices, and product trials. For this study, perceived risk associated with the brand extension was tested as the moderating effect of perceived service quality of previous hotel brand extensions—physical environment, interaction, and outcome quality—on perceived overall service quality of the subsequent hotel brand extension. Surprisingly, this study did not find statistically significant moderating effects of perceived risk on all three path relationships. That is, the positive effects of perceived service quality of previous hotel brand extension on perceived overall service quality of the subsequent brand extension does not depend on the level of risk associated with the extension. This result differed from a study conducted by Volckner et al. (2010) as they revealed that the positive effect of perceived interaction quality of the parent brand on the extension likely increases as the level of risk that customers perceive increases. However, the incremental

variance explained by this moderating effect was very small. As a result, they concluded that the moderating effect of perceived risk associated with the extension plays a relatively minor role.

Implications and Recommendations

Theoretical Implications

This study provided a comprehensive theoretical model that enhances knowledge on hotel brand extension in the context of a multiple brand extension, a strategy that had been widely used in the industry, but is largely lacking in the hospitality literature. Although, previous researchers (e.g., Kwun, 2010; Kwun & Oh, 2007; Lei et al., 2008) have conducted studies to explain the brand extension phenomenon in the hotel industry, they only focused on a single brand extension. Specifically, the findings from previous studies revealed that customers evaluate a new hotel brand extension based on their perceptions of service quality of that extended hotel brand, their attitude toward the parent brand, and their knowledge about the brand extension. However, these results did not explain whether customer evaluations of a hotel brand extension could be influenced by the performance of previous hotel brand extensions. The present study addressed this question by empirically testing a series of structural relationships among service quality, brand reputation, attitude toward brand, and brand loyalty in context of a hotel brand extension. By doing so, the theoretical model of this study provides the fundamental first step in developing a theory of brand extensions in the hospitality industry.

Moreover, this study provided additional evidence that a signaling theory of umbrella branding, which has been widely used in economics and marketing literature in the context of goods, can be applied in the context of services and the hospitality industry. Furthermore, by measuring a service quality construct on the basis of the hierarchical model developed by Brady and Cronin (2001), this study revealed the relative important of each service dimensions as well as overcame some of the weakness of traditional SERVQUAL.

Finally, little is known about the boundaries and conditions of the effects of previous brand extensions and subsequent brand extensions, especially in the context of hotel brand extension. By testing the moderating effect of image similarity in the proposed relationship, this study provided a more detailed picture of the spillover effect model and enriched the existing literature on hotel brand extension.

Managerial Implications

As mentioned in Chapter I, a brand equity extension strategy provides benefits to hotel companies in several ways, such as minimizing the costs of introduction of a new hotel as well as the risk of product failure. However, to apply this strategy in a way that strengthens hotel brand equity rather than weakens it, hotel management needs to understand how customers form their attitudes toward the new hotel brand extension, as well as the potential effects of using such a strategy on the core brand. The results of this study offer several implications for hotel management.

Aspects Needing Attention before Implementing a Multiple Hotel Brand

Extension Strategy

The results of this study imply that to obtain the success of a multiple brand extension, it is critical for hotel management to understand that favorable evaluations of a subsequent hotel brand extension are not only coherence with customer perceptions of service quality of the extended hotel brand itself, but also the reputation of the core brand. Hotel management should note that core brand reputation, although, has a relatively small direct effect on attitude toward brand extension, it has a moderate positive direct effect on how customers perceive service quality of the subsequent brand extension. As a result, core brand reputation should correspondingly be recognized as one of important key factors in multiple hotel brand extensions.

Accordingly, the question arises regarding how to enhance the reputation of the core brand as well as perceptions of service quality of an extended hotel brand to increase the favorable attitude toward such an extension. This study uncovered that physical environment quality, interaction quality, and outcome quality of previously extended hotel brands are important for multiple brand extensions as they not only enhance positive perceptions of overall service quality of the new hotel brand extension itself, but also improve core brand reputation. As such, if hotel companies are planning to engage in multiple brand extensions, hotel management should ensure that service quality in all three dimensions of previously extended hotel brands are favorably perceived by customers. Previous research (Brady & Cronin, 2001; Grönroos, 1984; Rust & Oliver, 1994) suggested that outcome quality perceptions could be enhanced by minimizing waiting time. Perceived physical environment quality is influenced by facility design

(such as layout of the hotel, and visually appealing facilities), and ambient conditions (such as temperature, scent, and music), while perceived interaction quality of the hotel or employee-customer interface is directly affected by employee attitudes, behaviors and expertise.

In addition, the significant moderating effect of perceived image similarity on the relationship between perceived physical environment quality of previous extensions and perceived overall service quality of the new extension suggested that hotel management might consider extending a hotel brand that has image similarity with the existing hotel brands that have high perceptions of physical environment quality. This is because the more similarity between the two brands in terms of image, the more likely are customers to transfer the physical quality perceptions of the existing hotel brands to the new hotel brand extension.

Relative Important of Service Quality Dimensions

From a managerial perspective, it is important to know the relative important of the three service quality dimensions as the determinants of overall service quality and core brand reputation in order to be able to allocate resources properly. Although, a review of the literature suggests that service quality plays a critical role in brand extensions, it provides little knowledge about the relative importance of each service quality dimension, especially in the context of multiple hotel brand extension. Thus, hotel management might intuitively assume that all dimensions of service quality have equally important weight for improving core brand reputation and perceived service quality of extended hotel brands. However, the results of this study revealed that the three

dimensions of service quality had a different magnitude of effects. Specifically, this study revealed that the relative important of the three service quality dimensions from high importance to low importance were outcome quality, interaction quality, and physical environment quality. As a result, hotel management can use this knowledge to set their priorities for the development of hotel service quality, according to their resources.

Consequences of Multiple Hotel Brand Extensions

Hotel management needs to consider potential negative effects that brand extensions may have on the core brand when considering engaging in a multiple brand extension strategy. The results of this study help hotel management to understand that core brand equity, or core brand loyalty of their hotel can be enhanced or diminished by multiple brand extensions. The spillover effect model implies that for hotel companies that have previous successful brand extension, launching a subsequent hotel brand extension can increase core brand loyalty. In contrast, core brand loyalty of hotel companies may be at risk by launching a new brand extension when their previous brand extensions were not successful.

In summary, the spillover effect model developed from this study suggests that for a hotel brand that has been extended more than one extension, the performance of any previous hotel brand extensions, measured by customer perceptions of service quality in three dimensions have impacts on not only customer attitudes toward a subsequent hotel brand extension, but also on core brand reputation as well as core brand loyalty. As such, before implementing the multiple brand equity extension strategy, hotel management needs to ensure that service quality of each hotel under the umbrella brand meets

customer expectations. This is because low perceptions of service quality of one hotel has repercussions for all hotels of an umbrella brand, weakens reputation of the core brand, and lowers perceptions of service quality of newly extended hotel brands, which consequently decrease loyalty of the core brand.

Recommendations

Over the past five years, the number of new hotel brands has increased (American Hotel and Lodging Association, 2011). Existing hotel companies have launched their new hotel brands in attempting to serve customer needs and preferences in all generations. According to Jin-zhao and Jings (2009), the extensive use of a brand extension strategy as well as market segmentation have accelerated competition in the industry as supplies increase while demand decreases. With rapid expansions of new hotel brands, some hotel companies have struggled to complete and differentiate themselves from their existing brands and competitors. Because of that, some hotels have chosen to enter into pricing competition. A suggestion for this ongoing issue is that rather than cutting price to capture customers, lodging managers may focus on building customer loyalty. This is because loyal customers are less sensitive to pricing tactics, and are more likely to spread positive word of mouth regarding their favorite brands. Moreover, customer loyalty to the brand does not benefit only one particular hotel brand, but the entire family brand. Results from this study indicated that brand reputation has a strong positive impact on brand loyalty. In addition, brand reputation is directly established from customer perceptions of hotel service quality, especially outcome service quality. This means that to be able to compete with other hotel brands, and still profit in the long run, lodging

managers should focus on improving hotel service quality rather than jumping into the cutting price strategy.

Limitations and Directions for Future Research

As expected in all research, four main limitations that restrict the generalizability of the findings were found. First, samples were drawn based on convenience sampling. Although, the demographic characteristics of the samples has a similar pattern to those of typical lodging customers, this does not guarantee that the samples are representative of the larger target population, as it may not accurately reflect other aspects of the population (Churchill & Brown, 2007).

Second, the response rate of 0.18% is low compared to the average online survey response rate of 3.2% (Sheehan, 2001). This may be because (1) the increase in unsolicited e-mail (or junk mail) to Internet users discourages them from reading unsolicited e-mail, and (2) the growth in the amount of online survey research increases the number of requests to Internet users to complete the survey research, which may cause them to be oversurveyed (Sheehan, 2001). The low response rate is directly related to nonresponse error. As a result, this may raise a question of whether respondents in this study are different from non-respondents.

Third, the results of this study were limited to a few well-known core brands (Marriott, Hyatt, Hilton, and Holiday Inn). The spillover effect model may work differently for a less well-known brand.

Finally, in this study, the subsequent hotel brand extension was a fictitious brand. As such, the respondents were provided with a short description of the new hotel brand

with respect to amenities, facilities, and services. However, in a real-world setting, customers would have access to more information about the new hotel brands. In this case, prior research (Dacin & Smith, 1994) criticized that by using only a single piece of information, the magnitude of the effects may be greater than those that exist in the marketplace.

Some ideas for further research are suggested by the limitations of the study. First, replication of the study with different core brands, especially ones with less well-known brands, as well as using more complex multi-attribute descriptions such as including a picture of the hotel to describe a fictitious brand extension would help in generalizing the results of this study. Second, a mixed method design (qualitative and quantitative) should be used to measure latent constructs such as perceived similarity between existing hotel brands and a subsequent hotel brand. In this study, this construct was measured using two self-report items, which may not capture all imperative aspects of the construct. By using in-depth interviews or focus groups, future research can establish quantitative items that matter to customers. Third, according to the United States Census Bureau (2010) about 20% of the population has a household income of \$100,000 and over, specifically, 12% of the population has \$100,000-\$149,000 income, 4% of the population has \$150,000-\$199,000 income, and 4% of the population has income \$200,000 and over. In this study, the upper household income was reported as only one range, \$100,000 and over. Thus, it would be useful for future research to extend income scales that cover all ranges of upper income.

Another direction for future research is related to types of the extension, either step-up or step-down extensions, which were not taken into consideration in this study.

Prior research (e.g., Lei et al., 2008) has suggested that for vertical line extension, types of the extension moderate the effects of the extensions on the core brand, as well as customer evaluations of the extensions. As such, it would be useful to examine whether introducing sequential brand extensions in step-up and step-down extensions provide similar results.

In addition, research in the future might contribute to the literature by incorporating service quality subdimensions suggested by Brady and Cronin (2001) in the spillover effect model. This would provide a more complicated and accurate tool for assessing the relative importance of hotel service quality in all dimensions. Furthermore, previous research in brand extension (Volckner & Sattler, 2006) has suggested that marketing support from the parent brand, such as advertising, is considered key to the success of brand extension. However, this aspect was not included in this study. Thus, in future work, it would be useful to examine the role of marketing support in multiple hotel brand extensions.

Finally, the spillover effect model in this study focused on cognitive perspective rather than affective perspective. However, previous research (Barone, Miniard, & Romeo, 2000; Volckner & Sattler, 2006) has suggested that emotional constructs, such as brand conviction, and mood, play important roles in customer evaluations of brand extension. Thus, both emotional and cognitive perspectives should be investigated simultaneously for more complete understanding of a multiple hotel brand extension phenomenon.

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APPENDIX A.

SURVEY QUESTIONNAIRE

Section I. Screening Questions

1. **Please choose one of the following hotel brands that YOU STAY MOST RECENTLY.**

- ☐ Marriott (If Marriott is selected, the survey will be continue to question 2-6)
- ☐ Hyatt (If Hyatt is selected, the survey will skip to question 7-11)
- ☐ Hilton (If Hilton is selected, the survey will skip to question 12-16)
- ☐ Holiday Inn (If Holiday Inn is selected, the survey will skip to question 17-21)
- ☐ None of above (If this response is selected, the survey will skip to the end of the survey)

2. Please choose a Marriott hotel brand that you MOST RECENTLY STAYED. (Choose one only)

- | | |
|--|---|
| <input type="checkbox"/> Marriott Hotels & Resorts | <input type="checkbox"/> JW Marriott Hotels & Resorts |
| <input type="checkbox"/> Courtyard by Marriott | <input type="checkbox"/> Grand Residence by Marriott |
| <input type="checkbox"/> Residence Inn by Marriott | <input type="checkbox"/> Fairfield Inn & Suites by Marriott |
| <input type="checkbox"/> Marriott Conference Centers | <input type="checkbox"/> TownePlace Suites by Marriott |
| <input type="checkbox"/> SpringHill Suites by Marriott | <input type="checkbox"/> Marriott Vacation Club |
| <input type="checkbox"/> AC Hotels by Marriott | <input type="checkbox"/> Marriott Executive Apartments |

Section II. Your opinion about the Marriott hotel

3. The following statements describe your opinion about **your most recent Marriott hotel stay (one that you have chosen in the previous section)**. Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Service Quality | Totally <u>Disagree</u> | | | | | Totally <u>Agree</u> | | |
|---|----------------------------|---|---|---|---|-------------------------|---|--|
| I have had an excellent experience when I visit this hotel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I feel good about what this hotel provides to its customers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| So far, I have always rated this hotel's service highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that this hotel's physical environment is one of the best in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would rate this hotel's physical environment highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I would say that I have a very good impression of this hotel's physical environment. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that the quality of my interaction with this hotel's employees was high. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| It was fun to interact with this hotel's employees. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I'd say the quality of my interaction with this hotel's employees was excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Section III. Your opinion about the “Marriott Brand”

4. The following statements describe your opinion about “Marriott Brand” Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Core-Brand Reputation | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| All together, I am very positive about Marriott. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Marriott makes honest claims. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Marriott is trustworthy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Marriott has a good reputation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Core-Brand Loyalty | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| I will consider Marriott my first choice if I travel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I believe that Marriott is my favorite hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| To me, Marriott is the best hotel chain in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I will recommend Marriott to others who seek my advise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Section IV. Your opinion about Marriott’s new hotel brand

Marriott International, Inc. had decided to launch a new hotel brand under the Marriott brand. The followings are detail information about the new hotel brand.

This new hotel is an upper moderate tier lifestyle hotel brand, targeting the design conscious, traveler looking for a cosmopolitan hotel stay in a great city location. With stylish and urban design, the hotel appeals to both the business and leisure traveler who seeks to experience the culture of the city. The hotel offers not only great design and true innovation, but also great personal, friendly, and modern service to make stays unforgettable and to fulfill the needs of the 21st century traveler. The average price range of this new hotel brand is \$125 - \$250.

5. Based on the information provided about the Marriott's new hotel brand, please indicate the extent to which you agree or disagree with each of following statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Overall Perceived Service Quality | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| I perceive that this new hotel brand will provide superior service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that this new hotel brand will offer excellent service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that overall service quality of this new hotel brand will be excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Perceived Risk Associated with the Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| All things considered, I think I would be making a mistake if I book a room with this hotel for my future travel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am sure that I will incur some risk if I choose to stay at this hotel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall Attitudes Toward the New Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| I think this new hotel brand is great. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| My attitude towards this hotel brand is very positive. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am very favorably disposed towards this new hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I feel good about this new hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

6. **How similar do you believe the Marriott's new hotel brand is to your most recent Marriott hotel stay** (one that you have chosen at the beginning of the survey)?

Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Similarity | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| The Marriott's new hotel brand and your most recent Marriott hotel stay had similar images. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The Marriott's new hotel brand conveyed the same impressions as your most recent Marriott hotel stay. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

(Once the respondents complete the question 6, the survey will skip to **section V**: Please tell us about yourself.)

7. Please choose a Hyatt hotel brand that you MOST RECENTLY STAYED. (Choose one only)

☐ Hyatt Regency

☐ Grand Hyatt

☐ Park Hyatt

☐ Hyatt Place

☐ Hyatt Summerfield Suites

☐ Hyatt Resorts

☐ Hyatt Vacation Club

Section II. Your opinion about the Hyatt hotel

8. The following statements describe your opinion about **your most recent Hyatt hotel stay (one that you have chosen in the previous section)**. Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Service Quality | Totally Disagree | | | | | | Totally Agree | |
|---|---------------------|---|---|---|---|---|------------------|--|
| I have had an excellent experience when I visit this hotel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I feel good about what this hotel provides to its customers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| So far, I have always rated this hotel's service highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that this hotel's physical environment is one of the best in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would rate this hotel's physical environment highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I would say that I have a very good impression of this hotel's physical environment. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I'd say the quality of my interaction with this hotel's employees was excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that the quality of my interaction with this hotel's employees was high. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| It was fun to interact with this hotel's employees. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Section III. Your opinion about the “Hyatt Brand”

9. The following statements describe your opinion about “Hyatt Brand” Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Core-Brand Reputation | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|--|----------------------------|---|---|---|---|---|-------------------------|
| All together, I am very positive about Hyatt. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Hyatt makes honest claims. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Hyatt is trustworthy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Hyatt has a good reputation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Core-Brand Loyalty | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| I will consider Hyatt my first choice if I travel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I believe that Hyatt is my favorite hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| To me, Hyatt is the best hotel chain in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I will recommend Hyatt to others who seek my advise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Section IV. Your opinion about Hyatt’s new hotel brand

Hyatt Hotels Corporation had decided to launch a new hotel brand under the Hyatt brand. The followings are detail information about the new hotel brand.

This new hotel is an upper moderate tier lifestyle hotel brand, targeting the design conscious, traveler looking for a cosmopolitan hotel stay in a great city location. With stylish and urban design, the hotel appeals to both the business and leisure traveler who seeks to experience the culture of the city. The hotel offers not only great design and true innovation, but also great personal, friendly, and modern service to make stays unforgettable and to fulfill the needs of the 21st century traveler. The average price range of this new hotel brand is \$125 - \$250.

10. Based on the information provided about the Hyatt's new hotel brand, please indicate the extent to which you agree or disagree with each of following statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Overall Perceived Service Quality | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| I perceive that this new hotel brand will provide superior service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that this new hotel brand will offer excellent service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that overall service quality of this new hotel brand will be excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Perceived Risk Associated with the Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| All things considered, I think I would be making a mistake if I book a room with this hotel for my future travel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am sure that I will incur some risk if I choose to stay at this hotel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall Attitudes Toward the New Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| My attitude towards this hotel brand is very positive | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am very favorably disposed towards this new hotel brand | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I feel good about this new hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I think this new hotel brand is great. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

11. How similar do you believe the Hyatt's new hotel brand is to your most recent Hyatt hotel stay (one that you have chosen at the beginning of the survey)?

Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Similarity | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| The Hyatt's new hotel brand and your most recent Hyatt hotel stay had similar images. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The Hyatt's new hotel brand conveyed the same impressions as your most recent Hyatt hotel stay. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

(Once the respondents complete the question 11, the survey will skip to **section V**: Please tell us about yourself.)

12. Please choose Hilton hotel brand that you MOST RECENTLY STAYED. (Choose one only)

- | | |
|--|---|
| <input type="checkbox"/> Hilton Hotels & Resorts | <input type="checkbox"/> Hilton Grand Vacations |
| <input type="checkbox"/> Double Tree by Hilton | <input type="checkbox"/> Hilton Garden Inn |
| <input type="checkbox"/> Homewood Suites by Hilton | <input type="checkbox"/> Home2 Suites by Hilton |

Section II. Your opinion about the Hilton hotel

13. The following statements describe your opinion about **your most recent Hilton hotel stay (one that you have chosen in the previous section)**. Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Service Quality | Totally Disagree | | | | | | Totally Agree | |
|---|---------------------|---|---|---|---|---|------------------|--|
| I have had an excellent experience when I visit this hotel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I feel good about what this hotel provides to its customers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| So far, I have always rated this hotel's service highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that this hotel's physical environment is one of the best in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would rate this hotel's physical environment highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I would say that I have a very good impression of this hotel's physical environment. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I'd say the quality of my interaction with this hotel's employees was excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that the quality of my interaction with this hotel's employees was high. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| It was fun to interact with this hotel's employees. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Section III. Your opinion about the “Hilton Brand”

14. The following statements describe your opinion about “Hilton Brand” Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Core-Brand Reputation | Totally Disagree | | | | | | Totally Agree |
|---|-------------------------|---|---|---|---|---|----------------------|
| All together, I am very positive about Hilton. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Hilton makes honest claims. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Hilton is trustworthy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Hilton has a good reputation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Core-Brand Loyalty | Totally Disagree | | | | | | Totally Agree |
| I will consider Hilton my first choice if I travel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I believe that Hilton is my favorite hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| To me, Hilton is the best hotel chain in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I will recommend Hilton to others who seek my advise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Section IV. Your opinion about Hilton’s new hotel brand

Hilton Hotels Corporation Group had decided to launch a new hotel brand under the Hilton brand. The followings are detail information about the new hotel brand.

This new hotel is an upper moderate tier lifestyle hotel brand, targeting the design conscious, traveler looking for a cosmopolitan hotel stay in a great city location. With stylish and urban design, the hotel appeals to both the business and leisure traveler who seeks to experience the culture of the city. The hotel offers not only great design and true innovation, but also great personal, friendly, and modern service to make stays unforgettable and to fulfill the needs of the 21st century traveler. The average price range of this new hotel brand is \$125 - \$250.

15. Based on the information provided about the Hilton’s new hotel brand, please indicate the extent to which you agree or disagree with each of following statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Overall Perceived Service Quality | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| I perceive that this new hotel brand will provide superior service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that this new hotel brand will offer excellent service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that overall service quality of this new hotel brand will be excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Perceived Risk Associated with the Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| All things considered, I think I would be making a mistake if I book a room with this hotel for my future travel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am sure that I will incur some risk if I choose to stay at this hotel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall Attitudes Toward the New Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| My attitude towards this hotel brand is very positive | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am very favorably disposed towards this new hotel brand | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I feel good about this new hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I think this new hotel brand is great. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

16. How similar do you believe the Hilton's new hotel brand is to your most recent Hilton hotel stay (one that you have chosen at the beginning of the survey)?

Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Similarity | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| The Hilton's new hotel brand and your most recent Hilton hotel stay had similar images. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The Hilton's new hotel brand conveyed the same impressions as your most recent Hilton hotel stay. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

(Once the respondents complete the question 16, the survey will skip to **section V**: Please tell us about yourself.)

17. Please choose a Holiday Inn hotel brand that you MOST RECENTLY STAYED. (Choose one only)

☐ Holiday Inn Hotels

☐ Holiday Inn Express

☐ Holiday Inn Resort

☐ Holiday Inn Club Vacations

Section II. Your opinion about the Holiday Inn hotel

18. The following statements describe your opinion about **your most recent Holiday Inn hotel stay (one that you have chosen in the previous section)**. Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Service Quality | Totally Disagree | | | | | | Totally Agree | |
|---|---------------------|---|---|---|---|---|------------------|--|
| I have had an excellent experience when I visit this hotel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I feel good about what this hotel provides to its customers. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| So far, I have always rated this hotel's service highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that this hotel's physical environment is one of the best in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would rate this hotel's physical environment highly. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I would say that I have a very good impression of this hotel's physical environment. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Overall, I'd say the quality of my interaction with this hotel's employees was excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| I would say that the quality of my interaction with this hotel's employees was high. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| It was fun to interact with this hotel's employees. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Section III. Your opinion about the “Holiday Inn Brand”

19. The following statements describe your opinion about “**Holiday Inn Brand**” Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Core-Brand Reputation | <u>Totally Disagree</u> | | | | | | <u>Totally Agree</u> |
|--|-------------------------|---|---|---|---|---|----------------------|
| All together, I am very positive about Holiday Inn. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Holiday Inn makes honest claims. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Holiday Inn is trustworthy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall, Holiday Inn has a good reputation. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Core-Brand Loyalty | <u>Totally Disagree</u> | | | | | | <u>Totally Agree</u> |
| I will consider Holiday Inn my first choice if I travel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I believe that Holiday Inn is my favorite hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| To me, Holiday Inn is the best hotel chain in the hotel industry. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I will recommend Holiday Inn to others who seek my advise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Section IV. Your opinion about **Holiday Inn’s new hotel brand**

InterContinental Hotels Group had decided to launch a new hotel brand under the Holiday Inn brand. The followings are detail information about the new hotel brand.

This new hotel is an upper moderate tier lifestyle hotel brand, targeting the design conscious, traveler looking for a cosmopolitan hotel stay in a great city location. With stylish and urban design, the hotel appeals to both the business and leisure traveler who seeks to experience the culture of the city. The hotel offers not only great design and true innovation, but also great personal, friendly, and modern service to make stays unforgettable and to fulfill the needs of the 21st century traveler. The average price range of this new hotel brand is \$125 - \$250.

20. Based on the information provided about the Holiday Inn’s new hotel brand, please indicate the extent to which you agree or disagree with each of following statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Overall Perceived Service Quality | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| I perceive that this new hotel brand will provide superior service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that this new hotel brand will offer excellent service. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I perceive that overall service quality of this new hotel brand will be excellent. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Perceived Risk Associated with the Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| All things considered, I think I would be making a mistake if I book a room with this hotel for my future travel. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am sure that I will incur some risk if I choose to stay at this hotel in the future. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Overall Attitudes Toward the New Extension | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
| My attitude towards this hotel brand is very positive | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I am very favorably disposed towards this new hotel brand | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I feel good about this new hotel brand. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I think this new hotel brand is great. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

21. How similar do you believe the Holiday Inn's new hotel brand is to your most recent Holiday Inn hotel stay (one that you have chosen at the beginning of the survey)?

Please indicate the extent to which you agree or disagree with each of the statements.

1 = Totally disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = somewhat agree, 6 = Agree, 7 = Totally agree

| Perceived Similarity | Totally <u>Disagree</u> | | | | | | Totally <u>Agree</u> |
|---|----------------------------|---|---|---|---|---|-------------------------|
| The Holiday Inn's new hotel brand and your most recent Holiday Inn hotel stay had similar images. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The Holiday Inn's new hotel brand conveyed the same impressions as your most recent Holiday Inn hotel stay. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

(Once the respondents complete the question 21, the survey will continue to **section V**: Please tell us about yourself.)

Section V. Please tell us about yourself.

Please answer the following questions to provide information about yourself. This information will be used for research purposes only.

- | | | |
|----------------------------|---|---|
| 1. Gender | <input type="checkbox"/> Male | <input type="checkbox"/> Female |
| 2. Year of birth | <input type="checkbox"/> 1945 and before <input type="checkbox"/> 1965 - 1976 | <input type="checkbox"/> 1946 - 1964 <input type="checkbox"/> 1977 and after |
| 3. Marital status | <input type="checkbox"/> Single | <input type="checkbox"/> Married |
| 4. Education | <input type="checkbox"/> Less than high school degree <input type="checkbox"/> Diploma <input type="checkbox"/> Graduate degree | <input type="checkbox"/> High school degree <input type="checkbox"/> College graduate |
| 5. Annual household income | <input type="checkbox"/> Under \$20,000 <input type="checkbox"/> \$40,000 to \$59,999 <input type="checkbox"/> \$80,000 to \$99,999 | <input type="checkbox"/> \$20,000 to \$39,999 <input type="checkbox"/> \$60,000 to \$79,999 <input type="checkbox"/> \$100,000 or greater |

Thank you for your time and participation in this research study!

If you would like to enter into a lottery to win one of three \$50 Visa gift card, please email your name and e-mail address to mahasuw@okstate.edu with "Lottery" as subject line. Three winners will be randomly selected from the pool of entries. The visa gift cards will be sent to each winner by mail. Your survey responses **will remain anonymous** as your name entry to the lottery will not be able to be connected to your survey results.

APPENDIX B

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

Oklahoma State University Institutional Review Board

Date: Thursday, February 09, 2012
IRB Application No: HE126
Proposal Title: A Study of Spillover Effects of Multiple Hotel Brand Extension

Reviewed and Exempt
Processed as:

Status Recommended by Reviewer(s): Approved Protocol Expires: 2/8/2013

Principal
Investigator(s):

| | |
|-----------------------------|----------------------|
| Patcharaporn Mahasuweerach | Hailin Qu |
| 245 N. Univ. Place Apt. 309 | 148 HES |
| Stillwater, OK 74075 | Stillwater, OK 74078 |

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Shelia Kennison, Chair
Institutional Review Board



Greetings,

My name is Patcharaporn Mahasuweerachai, a doctoral candidate in Hospitality Administration at Oklahoma State University. I would greatly appreciate your help with my Ph.D. dissertation, title: A Study of Spillover Effects of Multiple Hotel Brand Extensions.

You will be asked a few questions about your hotel stay experience. It will take approximately 10 minutes to complete the online survey. By participating, you will be given the opportunity to enter into a drawing to win one of three **\$50 visa gift cards**. Your participation is completely voluntary. There are no known risks associated with this research study that are greater than those you would find in daily life. Your response will remain confidential, and no individual's answers can be identified.

Your responses will be collected using the Qualtrics Survey Program provided by Oklahoma State University. Only the principal investigator (PI) will be able to access the data which will be stored in PI's personal computer for five years after the research study has been completed.

By clicking on the link, you agree that you understand and are giving your consent to participate.

<https://okstateches.qualtrics.com>

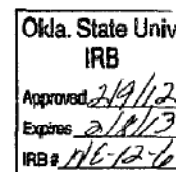
Please follow the instructions at the end of the research survey to enter the drawing.

Your email address was obtained from a publically available database purchased by Oklahoma State University's Department of Hotel and Restaurant Administration. If you wish to be removed from the list, please send an email to "Remove" as the subject line or fax your email address to Attn: UNSUBSCRIBE-Center"405-744-6299.

If you have any questions regarding the research survey, please contact the principal investigator, **Patcharaporn Mahasuweerachai** (email: mahasuw@okstate.edu , phone: 405-612-1493) or **Dr. Hailin Qu** (email: h.qu@okstate.edu, phone: 405-744-6711). If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu. Thank you for your valuable time and assistance.

Sincerely,

Patcharaporn Mahasuweerachai
Ph.D. Candidate
School of Hotel and Restaurant Administration
Oklahoma State University
Phone: 405-612-1493
Email: mahasuw@okstate.edu



Oklahoma State University Institutional Review Board

Date: Friday, February 24, 2012 Protocol Expires: 2/8/2013
IRB Application No: HE126
Proposal Title: A Study of Spillover Effects of Multiple Hotel Brand Extension

Reviewed and Exempt
Processed as: Modification

Status Recommended by Reviewer(s) **Approved**

Principal
Investigator(s):

| | |
|-----------------------------|----------------------|
| Pacharaporn Mahasuweerach | Hailin Qu |
| 245 N. Univ. Place Apt. 309 | 148 HES |
| Stillwater, OK 74075 | Stillwater, OK 74078 |

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

The reviewer(s) had these comments:

The modification request to expand the sampling population to include OSU undergraduate and graduate students is approved.

Signature :



Shelia Kennison, Chair, Institutional Review Board

Friday, February 24, 2012
Date



Greetings,

My name is Patcharaporn Mahasuweerachai, a doctoral candidate in Hospitality Administration at Oklahoma State University. I would greatly appreciate your help with my Ph.D. dissertation, title: A Study of Spillover Effects of Multiple Hotel Brand Extensions.

You will be asked a few questions about your hotel stay experience. It will take approximately 10 minutes to complete the online survey. By participating, you will be given the opportunity to enter into a drawing to win one of three \$50 visa gift cards. Your participation is completely voluntary. There are no known risks associated with this research study that are greater than those you would find in daily life. Your response will remain confidential, and no individual's answers can be identified.

Your responses will be collected using the Qualtrics Survey Program provided by Oklahoma State University. Only the principal investigator (PI) will be able to access the data which will be stored in PI's personal computer for five years after the research study has been completed.

Please click the link below to start the research survey. By clicking on the link, you agree that you understand and are giving your consent to participate.

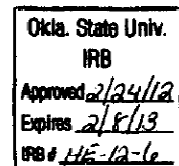
<https://okstateches.qualtrics.com>

Please follow the instructions at the end of the research survey to enter the drawing.

If you have any questions regarding the research survey, please contact the principal investigator, **Patcharaporn Mahasuweerachai** (email: mahasuw@okstate.edu, phone: 405-612-1493) or **Dr. Hailin Qu** (email: h.qu@okstate.edu, phone: 405-744-6711). If you have questions about your rights as a research volunteer, you may contact Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu. Thank you for your valuable time and assistance.

Sincerely,

Patcharaporn Mahasuweerachai
Ph.D. Candidate
School of Hotel and Restaurant Administration
Oklahoma State University
Phone: 405-612-1493
Email: mahasuw@okstate.edu



VITA

Patcharaporn Mahasuweerachai

Candidate for the Degree of

Doctor of Philosophy

Thesis: A STUDY OF SPILLOVER EFFECTS OF MULTIPLE HOTEL BRAND
EXTENSIONS

Major Field: Human Sciences

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Human Sciences at Oklahoma State University, Stillwater, Oklahoma in July 2012.

Completed the requirements for the Master of Business Administration at National Institute of Development Administration, Bangkok, Thailand in 2003.

Completed the requirements for the Bachelor of Economics at Khon Kaen University, Khon Kaen, Thailand in 1998.

Experience:

University Dining Services graduate assistant, at Oklahoma State University, Stillwater, Oklahoma.

Teaching Assistant and Research Assistant at National Institute of Development Administration, Bangkok, Thailand

Professional Memberships:

International Council of on Hotel, Restaurant and Institutional Education (ICHRIE)

Name: Patcharaporn Mahasuweerachai

Date of Degree: July, 2012

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: A STUDY OF SPILLOVER EFFECTS OF MULTIPLE HOTEL BRAND
EXTENSIONS

Pages in Study: 174

Candidate for the Degree of Doctor of Philosophy

Major Field: Human Sciences

Scope and Method of Study: The purposes of the study were (1) to propose and test a theoretical model on the spillover effects of previous hotel brand extensions on customer attitudes toward subsequent hotel brand extensions, customer perceptions of core brand reputation, and core brand loyalty; and (2) to provide practical implications and suggestions for the lodging industry and future research. An online survey was conducted to collect data. A total of 511 responses were analyzed using confirmatory factor analysis, structural equation modeling, and multiple group analysis methods.

Findings and Conclusions: The results of structural equation modeling revealed that (1) for a hotel brand that has been extended more than one extension, the performance of any previous hotel brand extensions, measured by customer perceptions of service quality in three dimensions, physical environment quality, interaction quality, and outcome quality, had positive impacts on customer attitudes toward subsequent hotel brand extensions, customer perceptions of core brand reputation, and core brand loyalty; (2) outcome quality had the strongest effect on both perceived overall service quality of subsequent hotel brand extensions and core brand reputation; and (3) the relationship between perceived physical environment quality of previous brand extensions and perceived overall service quality of the subsequent brand extension was moderated by perceived image similarity of the two extensions. The results suggested that before implementing the multiple brand extension strategy, hotel management needs to ensure that service quality of each hotel under the umbrella brand meets customer expectations. This is because low perceptions of service quality of one hotel has repercussions for all hotels of an umbrella brand, weakens reputation of the core brand, and lowers perceptions of service quality of newly extended hotel brands, which consequently decrease loyalty of the core brand.

ADVISER'S APPROVAL: Dr. Hailin Qu
