

Product-to-Service Extension: The Impact of Brand Equity on Upscaled Service

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Abstract

A recent trend in the luxury industry shows many companies using brand extension strategies to leverage their assets among competitors. Despite the popularity of brand extensions, limited research has been conducted to determine its effectiveness when using parent product brands in order to introduce new service brands. Thus, the primary purpose of this study is to propose the framework to increase the understanding of luxury brand extensions by focusing on the horizontal category brand extension from product to service. The impact of perceived quality, brand association and brand loyalty of the luxury car brand on consumers' perception and attitude toward the rental car service brand was observed to differentiate from other research that focuses on brand extension within product categories. A total of 324 samples were collected and analyzed using structural equation modeling with AMOS. The brand association of the parent brand showed a significant impact on the evaluation of the extended service brand. In addition, a high level of the brand association was also found to influence the final purchase decision of the extended service brand. However, this study could not find any significant effect of perceived quality and brand loyalty for the parent product brand on the extended service brand. The framework proposed in this study has merit to increase the understanding of service brand extensions by exploring luxury car brands and luxury rental car brands. In the service brand extension, there was a gap in consumer perception between the product brand and the extended service brand. In order to maximize the positive impact of the parent brand, marketers and retailers should investigate the different roles of the brand equity items. © 2016 Wiley Periodicals, Inc.

Keywords: Service brand extension; Perceived quality; Brand loyalty; Brand association; Brand equity

1. INTRODUCTION

In the past few decades, brand extension has been an important source of growth strategy, particularly in the luxury industry. The many successes of luxury brands have led to substantial growth in the luxury markets,

and now the overall luxury market is estimated to be close to \$1 trillion (Bellaiche, Mei-Pochtler, & Hanisch, 2010). Especially in emerging countries such as China and India, the luxury market has increased considerably with the growth of the middle class (Hudders, Pandelaere, & Vyncke, 2013). Also, when companies expand their markets in the luxury industry, brand extension strategies are widely used because of the strong and symbolic image of luxury brands (Vickers & Renand, 2003). Luxury brand extension can substantially reduce marketing costs and enhance the possibility of success by engaging with previous consumers. Thus, many researchers and practitioners have focused attention on the process of the luxury brand extension

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to find ways of achieving competitive advantage in the global market. There are two types of brand extension (e.g., vertical and horizontal), but recent research in the luxury brand extension literature has mostly focused on investigating the vertical brand extension (Chung & Kim, 2014; Dall'Olmo Riley, Pina, & Bravo, 2015; Hennigs, Wiedmann, Behrens, Klarmann, & Carduck, 2013). Although these studies provide the evidence of the importance of luxury brand extension, not only vertical brand extension but also horizontal brand extension strategies are needed to be identified in various luxury industries to clearly understand what contributes to the success of the extended brand. This is especially true for horizontal brand extension, which uses the parent product brand to introduce the extended service.

The luxury industry is highly competitive, and brand equity has been seen as very important to reduce potential risk and increase symbolic power. Measuring brand equity is one effective way to provide a guideline for marketing strategy and decision making (Ailawadi, Lehmann, & Neslin, 2003). On the basis of a review of the literature, brand equity was recognized as the antecedent of evaluation of service brand extensions in the luxury industry. Brand extension is widely applied as a growth strategy in many industries, both product and service industries. Many luxury companies introduce the extended brand based on well-known parent brand identity, high brand awareness, perceived quality, retention of sales value, and customer loyalty (Phau & Prendergast, 2000). However, a brand extension strategy has not always had a positive impact. Exclusive luxury brands that introduce the extended brand may produce negative opinions among their original customers (Keller, 1993). Therefore, luxury companies need to make decisions based on an understanding of the parent brand in order to increase the benefit of brand extension.

The success or failure of luxury brand extensions can be determined by the consumers' evaluation, attitude, and perception of the extended brand. Thus, the primary goal of this study was to examine the impact of the brand equity of the luxury parent brand, including perceived quality, brand association, and brand loyalty, in the process of introducing the extended service brand. As a luxury car brand was tested for this study, it can be differentiated from other research that focuses on luxury fashion brands. The luxury high-tech segment is important to marketers and retailers due to the market volume, and it is increasing with the

growth of the middle class and fast-growing high-tech industry. Besides the middle-class consumer, low-income consumers also spend money on purchasing luxury brands (Van Kempen, 2007). Similarly, Hansen and Wänke (2011) found that luxury brands are represented more abstractly for low-income consumers.

2. LITERATURE REVIEW

2.1. Luxury Brand Extension

There have been several attempts at defining the concept of a luxury brand. Nueno and Quelch (1998) suggested that a luxury brand has a superior functionality and emphasizes the status and image of an individual. They defined the traditional characteristics of luxury: consistent delivery of premium quality, a heritage of craftsmanship, a recognizable style or design, a limited production run of any item to ensure exclusivity, a global reputation, uniqueness, personality, and values. Similarly, the concept of luxury was used to describe the prestige brand, which has a higher level of quality and value in this study. Consumers purchase luxury products or brands to show the user's success and social status, as well as to provide the user a sense of confidence in the ability to possess luxury products. Sombart (1992) suggested that the concept of luxury buying is regarded as the satisfaction of demand beyond the ordinary or average standard of living. With the intense competition in the luxury market, companies need to develop new products to leverage their assets and retain current customers. Many brands use brand extension strategies to launch new products. Recently, the luxury high-tech industry, including the luxury car industry, has increased, and the global market for luxury cars is valued at around 300 billion euros (Statista, 2015). Among the luxury high-tech category, luxury car brands such as Audi, BMW, and Mercedes-Benz developed extended brands to target more consumers. Although many luxury automakers have penetrated into the American luxury car market (Marber, Kooros, Wright, & Wellen, 2002) by using various product lines, most of the research about luxury brands has been focused on luxury fashion brands. Thus, in this study, the luxury car brand was explored to find important factors that positively influence the evaluation of the extended service brand.

Brand extension strategies are widely applied and investigated in many industries. Companies can take

the benefits of using brand extension strategies to increase their market share with a lower than normal cost product development. Wong (2011) showed that there are four advantages of brand extension: 1) ease of linking the extended brand and the parent brand, 2) relying on brand trust of the parent brand, 3) low cost of marketing, and 4) the high revenue of the extended brand. However, there are also negative effects of brand extensions, such as diluting the original brand image and cannibalization. For instance, if a new product is tagged with the parent brand, it may enhance the likelihood of cannibalization occurring (Sharp, 1993). Therefore, understanding consumers' evaluation processes is important to the success of implementing brand extension strategy in service.

Brand extension is categorized into vertical and horizontal. Vertical brand extension means launching new products in the same product category with the parent brand at a different price or quality point (Keller & Aaker, 1992). Vertical brand extensions have been extensively examined by researchers (Chung & Kim, 2014; Taylor & Bearden, 2002). In vertical brand extension, the degree of correlation between the parent and the extended brand considerably influences consumers' perception (Taylor & Bearden, 2002). The horizontal brand extension is usually regarded as a strategy of using the parent brand name to launch a new category. In a horizontal brand extension, the parent brand name is used to introduce a new product in a different category from the parent brand (Kim, Lavack, & Smith, 2001). Chen and Liu (2004) proposed that horizontal brand extensions involve developing a new concept that provides an attribute-based competitive advantage in its category. For instance, Ferrari, the luxury car brand, extended its line to perfume and cosmetics under the same brand name.

Horizontal brand extension divides into line extension and category extension. Line extension refers to when the parent brand is used to introduce a new product into a new market segment within a product category currently served by the parent brand, whereas category extension can be explained by creating new products in a different product category from the parent brand (Sharon, 2011). The research of luxury brand extension has been focused on brand extension among products category. However, luxury products and luxury services have distinct characteristics. For instance, consumers purchase luxury products because of their uniqueness and symbolic image, while luxury services may be created by unique experience

through special treatment (Cailleux, Mignot, & Kapferer, 2009). Thus, marketing strategies for products and services should be different in many ways. This study focused on the categorical extension. In order to distinguish from previous horizontal brand extension, this study used a term "product to service extension" to describe a process in which the extended brand is a service brand (e.g., rental services) that was developed from the product brand (e.g., luxury car). In this study, consumer evaluation of the service brand which is extended from the luxury product brand was examined.

2.2. Brand Equity and Perceived Quality

Brand equity is widely examined as a significant factor in market success and plays a significant role in the success of brand extension endeavors (Dacin & Smith, 1994; Keller & Aaker, 1992). Srivastava and Shocker (1991) defined brand equity as the aggregation of all accumulated attitudes and behavior patterns in the extended mind of consumers, distribution channels, and influence agents, which will enhance future profits and long-term cash flow. In this study, brand equity refers to the customer-based brand equity, and it was hypothesized to be a factor that influences consumers' perceptions of the service brand extension. The perspectives and items used in studying customer-based brand equity vary by different authors. Authors in this study adopted three of Aaker's (1991) components: 1) perceived quality, 2) loyalty, and 3) brand association.

A number of studies on brand extension have found that evaluations of a brand extension may be affected by consumer perceptions of the original brand and the similarity between the core brand and the extended brand (Völckner, Sattler, Hennig-Thurau, & Ringle, 2010). Shocker and Weitz (1988) insisted that the impact of a brand's equity can leverage a brand's existing equity into new categories. A successful brand extension can bring a positive effect to the parent brand by increasing the brand equity of the parent brand (Dacin & Smith, 1994; Keller & Aaker, 1992). In contrast, a poor brand extension can dilute consumer evaluation of a parent brand (Loken & John, 1993). Thus, brand extension strategy may positively or negatively affect not only the parent brand but also the extended brand in the luxury industry.

Perceived quality means a subjective judgment about a product's overall excellence or superiority

(Zeithaml, 1988). Perceived quality refers to an intangible perception by the consumer regarding a product or service's quality (Ramaseshan & Tsao, 2007). A consumer's judgment about specific products or services is the perceived quality of the goods or services. High-perceived quality is related to good experiences with a product or brand and it may provide differentiation of and preference for a specific brand. As perceived quality identifies a component of brand value, high-perceived quality drives consumption of one brand rather than other competing brands (Zeithaml, 1988). In the luxury industry, the brand name is also a signal of perceived quality of products, and it has influence on reducing marketing costs and increasing utility. The consumer's perceived quality of the brand is associated with brand loyalty. Yoo, Donthu, and Lee (2000) suggested that perceived quality and brand associations have an influence on brand loyalty, and it might affect brand equity. Brand loyalty, perceived quality, and brand associations were expected to have an influence on brand equity. In addition, the perceived quality of the parent brand influences the success of the extension by increasing the consumer's parent brand conviction (Völckner et al., 2010). According to Aaker (1990), the customer's perceived quality is an important criterion that determines successful brand extension. High levels of perceived quality drives consumers' positive evaluations of service brand extensions (Hem, de Chernatony, & Iversen, 2003; Van Riel, Lemmink, & Ouwersloot, 2001). Horizontal brand extension involves introducing a new brand in the different product category at a different quality level. However, perceived quality varies from objective quality, which is related to both intangible and tangible features (Zeithaml, 1988). Although perceived quality influences brand equity, perceived quality does not always affect customer satisfaction (Hellier, Geursen, Carr, & Rickard, 2003). The effect of perceived quality may vary by product or service type. Völckner et al. (2010) explored the positive role of the parent brand quality when service brand extension is successful. Consumers tend to believe that the new product has high quality when the brand name was associated with the established brand (J. P. Choi, 1998). Seminar (1987) reported the impact of using the same brand name on the similarity between the parent and new products. On the basis of the above review and discussion of the literature, this study developed a scenario concerning the extended service brand with the luxury product brand name. The following hypotheses were proposed for service brand extension of the

possible relationship of perceived quality and brand extension:

H1: There is a positive relationship between the perceived quality of the luxury parent brand and brand loyalty to the luxury parent brand.

H2: There is a positive relationship between the perceived quality of the luxury parent brand and the evaluation of the extended brand.

2.2.1. Brand Association

Aaker (1991, p. 109) defines brand association as "anything linked in memory to a brand." Brand association is important in determining the different perceptions in the consumer's memory, and it also has the benefit of communicating a well-established brand. The brand association helps consumers to generate perceived fit between the original and the extended brand (Aaker, 1991). This positive overall perception leads to positive consumer attitudes toward a particular brand. Brand associations connect with various elements such as loyalty, ideas, episodes, and instances, and brand associations are complicated. Thus, brand association influences customers' buying decisions (Yoo et al., 2000). In the luxury industry, significant relationships between brand associations and brand loyalty were found in female fashion brands (Marber et al., 2002). Brand association generates a positive feeling and a positive attitude in consumers, and it provides a basis for extensions (Aaker, 1991). Strengthening of existing brand associations of the parent brand may lead to success in vertical brand extension by creating positive associations of the extended brand (Pitta & Prevel Katsanis, 1995). Consumers tend to transfer their associations of the parent brand when they evaluate the extended product or brands.

Brand association and its importance in brand extension from product to service categories has not been studied extensively. In the luxury industry, it becomes difficult to maintain brand association to the parent brand when introducing the extended brand (Huber & Schlegel, 2013). Regarding the success of the luxury brand extension, increasing perceived fit between the parent product and the extended product is a key factor. Perceived fit is related to any parent brand association (e.g., category, brand concept, brand-specific associations) that connects the parent brand and the extended brand (Bridges, Keller, & Sood, 2000). Because increasing perceived fit for the new product category

can be accomplished with bearing the parent brand name, many companies launch new products with the same brand name to leverage the brand equity in the established markets (Salinas & Pérez, 2009). In order to examine the effect of brand association with the parent brand, an extended service brand using the same luxury brand name was proposed. Authors assumed that using the original brand name resulted in high levels of perceived fit between the product brand and the extended brand. The degree of brand associations of the parent brand may influence the success of the service brand extension. Based on this, the following hypotheses were formulated:

H3: There is a positive relationship between the brand association of the luxury parent brand and brand loyalty to the luxury parent brand.

H4: There is a positive relationship between the brand association of the luxury parent brand and evaluation of the extended service brand.

2.2.2. Brand Loyalty

The last antecedent of this model is brand loyalty. Brand loyalty refers to the general commitment to rebuy a preferred product or service despite situational influences and marketing efforts (Oliver, 2010). Loyalty plays a significant role in maintaining current customers, as well as in increasing market share and revenue. On the basis of the relationship between brand loyalty and consumer satisfaction, retailers focus on developing the extended brand with the expectation of a related purchase by current customers. Brand loyalty motivates consumers to repurchase a unique brand routinely. Examining the brand loyalty toward a particular brand helps retailers and marketers to anticipate repurchasing behaviors.

Hem and Iversen (2003) found a positive relationship between brand loyalty and brand extensions by investigating loyal behavioral intention toward the parent brand and consumer evaluation of the extension. The authors expected that service brand extensions would be successful when the consumer has a high level of loyalty and familiarity with the parent brand. In the fashion industry, brand loyalty influences consumer purchase intention toward the extended brand (T. M. Choi, Liu, Liu, Mak, & To, 2010). In this context, this research assumed that luxury brands have a high level of brand loyalty, which has a positive effect on the evaluation of the extended service brand. Hence, the

following hypothesis of the relationship between brand loyalty and brand extension evaluation was proposed:

H5: There is a positive relationship between brand loyalty to the luxury parent brand and the evaluation of the extended service brand.

Each element of brand equity would be transferred from the luxury car brand to the extended service brand. As perceived quality, brand loyalty and brand association all relate to the overall brand equity (Tong & Hawley, 2009). Brand equity of the product brand may influence consumers' purchase intention toward the service brand. Although brand equity has been widely investigated, studies on the impact of brand equity on horizontal brand extension have almost exclusively targeted luxury products. According to Keller and Aaker (1992), consumers' knowledge about service extension may be influenced by the parent brand's quality and may be able to reduce uncertainty regarding the purchase of the extended service. On the basis of the findings of positive effects among variables of the brand equity of the parent brand, it becomes obvious that evaluation of the extended service brand affects purchase intentions. Bhat and Reddy (2001) found a positive relationship between consumers' affect and purchase intention toward brand extensions. It is similar to the cognitive structure attitude and behavior intention (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). In this aspect, consumers who perceived the parent brand favorably could make purchasing decisions regarding the service brand based on a positive evaluation. Thus, the following hypothesis was proposed:

H6: There is a positive relationship between brand extension evaluation and purchase intention toward the extended service brand.

A conceptual model was developed to test the measurements of customer-based brand equity in service brand extension, which is shown in Figure 1.

3. METHODOLOGY

By using the Statistical Package for the Social Science (SPSS), reliability, validity, and factor analysis were performed. After this stage, the proposed model was tested using structural equation modeling (SEM) to observe causal relationships among the variables. The SEM refers to a family of statistical procedures for testing whether collected data are consistent with a theoretical model (Kline, 2011). SEM technique has been

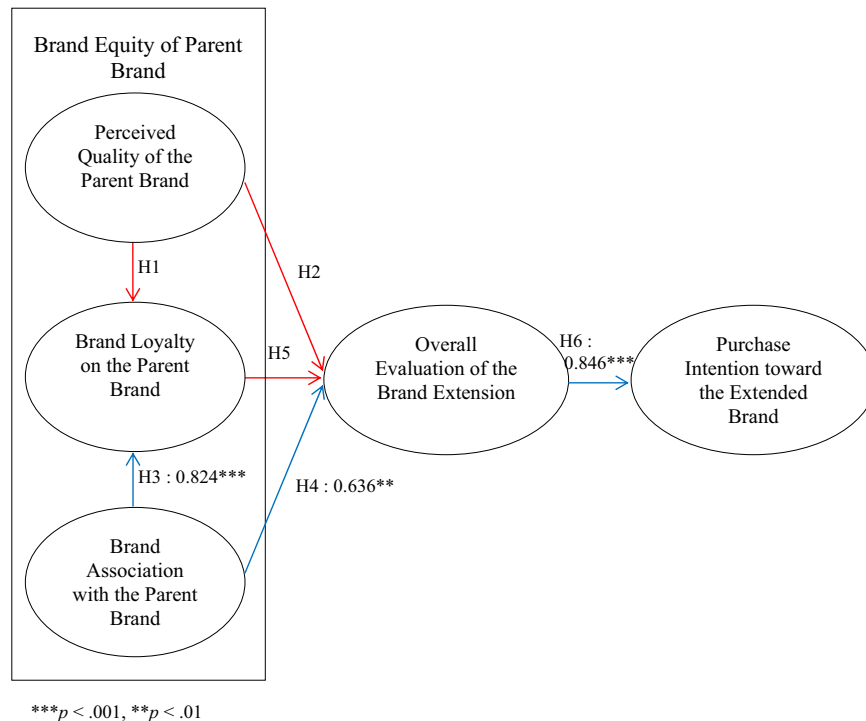


Figure 1 The SEM results of the proposed research model of service brand extension.

widely used to observe the relationships between the latent constructs in psychology, sociology, and human management research (Ellis & Allaire, 1999; Merritt, 2011; O'Shea & Hankins, 2000). In this study, SEM was also employed in order to find out the relationship between variables, including attitudes (i.e., perceived quality, brand association, brand loyalty) toward luxury car brands and intention to evaluate brand extensions of high-tech brands.

3.1. Data Collection and Sample Characteristics

Data were collected using an online survey. This study used a survey method by recruiting online participants through Amazon MTurk. Random sampling has been used in a number of studies. Amazon MTurk is a web-based platform to help various people such as marketers, retailers, and researchers who need to collect information about the marketplace. A survey link was posted on the Amazon MTruk website, and participants could get paid \$0.05 after they finished the survey. Because the purpose of this study was to assess whether the elements of brand equity could be stretched to an extended service brand, the questionnaire was designed

using the three dimensions of brand equity, including 1) perceived quality, 2) brand loyalty, and 3) brand association. Participation was undertaken through a self-administered questionnaire related to the luxury car brand and rental car service brand with scenario and visual demonstration of new rental services associated with the parent brand. The luxury car brand has high awareness and market share. A rental car service brand was proposed in this survey. The target sample were all older than age 18 years and lived in the United States. Participants were provided information, including virtual images about luxury cars and rental car service. A self-administered questionnaire was developed and consisted of four parts of 30 questions, including demographic questions. Totally, 324 subjects participated in the online survey.

Confirmatory factor analysis (CFA) was used to determine the patterns of the structure of each measurement in the proposed model (Anderson & Gerbing, 1988). The Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity test have been widely used to measure the proportion of variance data. The guidelines of KMO should range from 0.70 to 0.92 and show a significant probability level ($p < 0.001$) for the Bartlett's test of all constructs. The KMO value of this study was 0.92,

TABLE 1. Means, Standard Deviation, and Construct Intercorrelations

Variable Name / No. Items	Mean	Standard Deviation	PQ	BL	BA	OE	PI	Cronbach's alpha	AVE
PQ/6	5.527	1.012	1					0.736	0.736
BL/4	4.628	1.534	0.744**	1				0.575	0.575
BA/4	5.433	1.127	0.799**	0.720**	1			0.710	0.710
OE/3	5.710	1.037	0.599**	0.468**	0.618**	1		0.618	0.618
PI/7	4.931	1.269	0.658**	0.728**	0.690**	0.630**	1	0.514	0.514

Note: PQ = perceived quality; BL = brand loyalty; BA = brand association; OE = overall evaluation; PI = purchase intention.
**Correlation is significant at the .01 level (two-tailed).

TABLE 2. Results of Descriptive Analysis

Items	Frequency	%	Items	Frequency	%
Gender			Ethnicity		
Men	161	47.4	African American	17	5.0
Women	146	42.9	Caucasian American	138	40.6
Age			Hispanic American	13	3.8
18–24	51	15.0	Native American	5	1.5
25–34	126	37.1	Asian / Asian American	101	29.7
35–50	97	28.5	Others	35	10.3
50–	35	10.3	Marital Status		
Income			Married	173	50.9
Under \$25,000	93	27.4	Divorced	17	5.0
\$25,000–39,999	59	17.4	Widowed	2	0.6
\$40,000–54,999	51	15.0	Never married	116	34.1
\$55,000–69,999	35	10.3			
\$70,000–84,999	25	7.4			
\$85,000–99,999	13	3.8			
Over \$100,000	32	9.4			

and the Bartlett's χ^2 was 3,705.37 ($p < 0.001$). Thus, the results indicate that the samples met the criteria for factor analysis (Hair, Anderson, Tatham, & Black, 1998).

Reliability analysis was conducted using Cronbach's alpha (α). Table 1 also shows the reliability coefficients, ranging from 0.872 to 0.914, above or around the accepted cutoff of .700 (Nunnally, 1978). Average variance extracted (AVE) estimates range from 0.75 to 0.91 (Bagozzi & Yi 1988).

Descriptive analysis is appropriate to examine valuable information regarding the survey method as shown in Table 2. Most of the respondents' (37.1%) ages were from 25 to 34 years old, the second-largest group (28.5%) was 35 to 50 years old, and the third-largest group was from 18 to 24 years old (15.0%). This sample reflects the American Internet User Survey from the US census in 2013. US census data showed

that 22.7% of the 18 to 34 age group and 21.8% of the 35 to 50 age groups are Internet users. The income level of 27.4% of the respondents was less than \$25,000. US census data also indicate that nearly 23.9 percent of US consumers' income is lower than \$25,000.

4. RESULTS AND ANALYSIS

SEM was employed in order to find out the relationship between the dependent variables and the independent variable. As shown in Table 3, the χ^2/df value of 1.809 indicates a satisfactory level, as it is below the recommended 3.0 (Bollen & Long, 1993). Other representative indexes such as GFI and CFI were 0.913 and 0.915, respectively, which is above the generally accepted level of 0.9 (Hayduk, 1988). At 0.061, the root mean square error of approximation (RMSEA) is below the recommended cutoff level of 0.08 (Browne &

TABLE 3. Structural Equations Results for Hypotheses

Path	Estimates	t-Value	Hypothesis
H1: Perceived quality of the parent product brand → Brand loyalty on the parent brand	0.150	0.150	Not supported
H2: Perceived quality of the parent product brand → Overall evaluation of the extended service brand	-0.020	-0.020	Not supported
H3: Brand association with the parent product brand → Brand loyalty of the parent brand	0.824***	0.824***	Supported
H4: Brand association with the parent product brand → Overall evaluation of the extended service brand	0.636**	0.636**	Supported
H5: Brand loyalty on the parent product brand → Overall evaluation of the extended service brand	0.004	0.004	Not supported
H6: Overall evaluation of the extended service brand → Purchase intention toward the extended service brand	0.846***	0.846***	Supported

Note: $\chi^2 = 369.762$; $df = 112$; RMSEA = 0.078; CFI = 0.941; NNFI = 0.893.

*** $p < 0.001$. ** $p < 0.01$.

Cudeck, 1993). The results of the SEM show acceptable model fit for further analysis. The relationship between antecedents such as perceived quality, brand loyalty, and brand association of the parent product brand, and the evaluation toward the service brand extension was tested. The model results are presented in Table 3. Specifically, the influences of brand association toward brand loyalty and overall evaluation for the extended service brand were significant and positive as hypothesized, $\beta = 0.196$, t -value = 2.931. Also as hypothesized, the effect of positive evaluation on purchase intention toward the extended service brand is supported statistically, $\beta = 0.086$, t -value = 0.834. However, perceived quality does not influence brand loyalty of the parent product brand, $\beta = 0.399$, t -value = 3.801. The relationship between brand loyalty and the evaluation of the extended service brand was not supported, $\beta = 0.442$, t -value = 3.463.

5. DISCUSSION

The results of this study indicate that the perceived quality of the parent luxury brand does not directly relate to the brand loyalty of the parent brand. The reason why perceived quality of parent brand may be different from real quality or real service quality is because the dimension of service quality of parent product may be different from extended ones. Moreover, product providers and consumers have different views on the judgment of quality dimensions. It supports that if there is a lack of relationship between perceived quality and brand loyalty there is a gap of perception

between the product and extended service category (Aaker, 1996). More surprising is the fact that perceived quality does not have any impact on the evaluation of the service brand extension. Consumers in this study do not trust the extended brand based on information and perception about the parent luxury brand. Perceived quality of the product fails to be transferred to the evaluation of the extended service brand because the measuring quality differs between services and products; more attention is needed to investigate various influential factors, including price, employees, service environment, and service transactions. Thus, in order to understand consumers' perception and attitude toward service quality, a set of attributes that consumers use in evaluating the quality of the service provided should be measured (Asubonteng, McCleary, & Swan, 1996).

It was expected that high-level brand loyalty results in positive evaluation of extended brands. However, this research confirmed that brand loyalty is not transferred to the service brand. This result can explain why Versace, the Italian luxury fashion brand, did not succeed with its brand extension to jet design service. Although a high level of brand loyalty is the main characteristic of the luxury brand, a company should be more careful when it considers brand extension to service brands. Versace thought that it could use the brand equity of the parent brand, yet as is seen, this might not be transferred to the service category. Thus, it is very important for future research to distinguish the different types of brand extensions, whether vertical or horizontal, to predict future consumer behavior.

The empirical data and statistical tests in this study support the positive and direct effect of brand association on brand loyalty to the extended brand. It indicates that brand associations have a positive influence on brand extension to both product and service categories. Brand association means many things that are related to the brand, such as brand awareness, identity, and purchase intention. Therefore, a higher level of brand association with the parent brand can provide consumer differentiation and an advantage for the luxury brand extension into the service area. The results of this study showed that once the consumer has a positive brand association of the parent brand, that positive outlook carried over to brand loyalty and positive evaluation of brand extensions.

In addition, the high level of evaluation leads the consumer to purchase specific products. A positive brand association in consumers' memory leads to the purchase intention toward the service brand extension by creating a positive attitude toward the extended brand, while the perceived quality and loyal attitude toward the luxury parent brand does not have a direct link with the extended service brand. Thus, companies should try to increase brand association in consumers' perception.

6. IMPLICATIONS

This research has several theoretical contributions. A theoretical contribution is made by combining brand equity theory with brand extension process from a luxury product to a service industry. Previous research focused on the impact of brand equity on vertical brand extension within the product category. This research first attempts to provide theoretical contributions on how to measure this concept in the horizontal brand extension from products to services using a luxury auto brand. Key drivers of the parent luxury brand that have an influence on the horizontal brand extension were demonstrated. Earlier research has provided the empirical evidence and theoretical framework to design the basic structure for this study. The authors developed a conceptual model to examine the three different elements of brand equity, which might have an influence on the horizontal brand extension of the luxury brand. Brand equity, including perceived quality, brand association, and brand loyalty to the parent brand, was measured, and the significant impact of brand association was revealed.

In addition, in the past, research has been conducted on the brand extension of fashion brands. However, in this study, brand extension from a high-tech product to a service category was investigated. Horizontal brand extension of the luxury car brand "Audi" into the car rental service "Audi-Rent-a-Car" was suggested. The results of the survey indicate differences with earlier researchers who found a positive impact of brand equity on brand extension in the fashion industry. Among the investigated constructs, brand association of the luxury brand only contributed to the extended service brand. In addition, a high level of brand association was also found to influence the final purchase decision of the extended brand. For the two remaining constructs, perceived quality and brand loyalty, this study could not find any significant relationship between high-tech luxury brands and extended service brands.

The managerial implications of this study must be highlighted. The direct relationship between brand association of the parent luxury brand and the extended service brand is important. The results suggest that marketers and retailers of the luxury brand should focus their investments on marketing activities, which increases the brand associations of the luxury product brand when they make a decision to develop the service brand. Companies can create a strong extended brand by focusing on the positive role of brand association of the parent brand. Brand association consists of various elements, such as brand image and feeling in the customer's mind. In order to increase brand associations in the minds of customers, the company needs to consider using offline stores and service providers who can provide better associations to customers. In addition, companies should use promotional activities and motivate word-of-mouth advertising to customers. Increasing the brand association with the extended brand might lead to the success of brand extensions. This will lead to benefits from the brand extension, such as reducing costs and risks of brand extension strategies.

7. LIMITATIONS AND FUTURE RESEARCH

The current research has several limitations that should be considered when examining the results. This study used a survey method by recruiting online participants through Amazon MTurk. Random sampling has been used in a number of studies. If the respondents of the survey differ from this study, they might have

different attitudes and perceptions toward both the parent brand and the extended brand. Similar to other survey-based empirical research, this study has a few limitations that include a relatively biased ratio of ages among the respondents. It may introduce some personal biases about attitudes toward luxury brands. Future research can reduce this uncertainty by collecting larger samples of target consumers of luxury brands.

A comparison of different impacts of brand equity dimensions on horizontal brand extension is important. Researchers should consider the brand extension between product and service categories of luxury brands. In addition, more mediating elements such as customer satisfaction need to be investigated. Although brand equity is important in marketing mix efforts, customer satisfaction may cause a significant impact on consumer attitudes and perceptions toward specific brands. Longitudinal analysis may be helpful to reveal such dynamic relationships between brand equity and brand extensions. The cultural differences in the consumer mind also need to be considered. Consumer attitudes and perceptions are affected not only by brand but also by culture. Thus, this variable needs to be further elaborated on. In this study, horizontal brand extension into the rental car service category of the high-tech luxury brand was investigated. Brand extensions to various other service categories, such as tourism and social media services, might provide depth of understanding of horizontal brand extension. Future studies should examine both vertical and horizontal brand extensions into various product and service categories to compare the role of the brand equity of the luxury brand.

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