Measuring Customer-Based Restaurant Brand Equity

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Investigating the Relationship between Brand Equity and Firms' Performance

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Strong brand equity is significantly correlated with revenues for quick-service restaurants. In a study 394 respondents gauged the strength of seven quick-service restaurant brands doing business in Seoul, Korea. The study tested four elements of brand equity, namely, brand awareness, brand image, brand loyalty, and perceived quality. Of those attributes, brand awareness had the strongest direct effect on revenues, while loyalty had the least effect. Dividing the restaurants into high-performing and low-performing groups, the researchers found that customers differentiated the high-performing restaurants on several product-quality measures, including knowledgeable employees and food served on time and as ordered. Oddly, high- and low-performing restaurants were not differentiated on such other quality factors as making quick corrections to errors, experienced personnel, and cleanliness. One other contrary finding was that although brand equity comprises all four factors being tested, awareness showed the smallest effect on brand equity, far eclipsed by image, loyalty, and product quality.

Keywords: brand equity; brand image; brand loyalty; firms' performance

The most important assets for many restaurant businesses are the brand name and what that brand represents. If handled appropriately, branding adds to the food-service firms' competitive advantage. Most restaurant chains have recognizable

brand identifiers. Customers easily recognize the red-and-white canopy of T.G.I. Friday's, for instance, or McDonald's golden arches.[1] Beyond the visible or tangible factors, though, the meaning of a brand—that is, the underlying attributes—is critical to the success of food-service firms because strong brands often provide the primary points of differentiation between various competitors. Strong brands aid customers in better visualizing and understanding intangible products and services. Furthermore, they reduce customers' perceived monetary, social, or safety risks in buying services, which are difficult to evaluate before purchase.[2] Building a strong brand with great equity provides a number of possible benefits to a service firm (compared with having a weak brand): greater customer loyalty, less vulnerability to competitive marketing actions, larger profit margins, potentially favorable customer reaction to price changes, increased marketing communication effectiveness, and brand-extension opportunities.[3]

Quick-service restaurant (QSR) chains are among the many types of restaurants that are interested in building strong brands, but achieving that goal is not always easy. Given that many QSR chains' products and services are not inherently differentiated and the channels of distribution are not distinctive, customers often have only price and brand equity to differentiate one brand from its competitors. In the absence of strong brands, the only remaining ongoing marketing mechanism is price manipulations, usually in the form of discounting.[4] Indeed, the QSR industry has heavily relied on price promotions as an important marketing activity. That emphasis has resulted in continual price wars that have damaged customer loyalty and reduced revenue.[5]

In contrast, renewed efforts to establish brand equity could be the key to building brand value and preventing product and service commoditization. Restaurant managers can build brand equity with strong and consistent product and service performance. Strong brands are built by pursuing distinctiveness in performing and communicating the service, making emotional connection with customers, taking advantage of branding to define the restaurant's reason for being, and encouraging employees to internalize the brand so that they can build it for customers.[6] Consequently, effective marketing programs on branding cultivate customers' confidence, which induces customers' loyalty and their willingness to pay a premium price for the brand.

Branding and brand equity have been topics of interest to hospitality researchers for many years, although many aspects of branding remain to be explored. Prasad and Dev showed that strong branding would be a quick way for hotel chains to identify and differentiate themselves.[7] They suggested that computation of brand equity allows executives of hotel companies to compare the strength of brands in a competitive environment, to trace a hotel brand's equity over time, and to develop remedial marketing strategies when necessary.

There have also been some postulates regarding the positive relationship between brand equity and a firm's performance.[8] Aaker suggests that brand equity creates value for the firm, as well as for the customer.[9] This value-creation proposition has been well supported. For example, positive customer-based brand equity augments revenue,[10] improves a firm's ability to command premium prices,[11] boosts value during mergers and takeovers,[12] and invokes favorable stock mar-

ket responses.[13] Along that line, the main purpose of our study is to determine the possible association between brand equity (based on customers' assessments) and QSR firms' performance. We would expect QSRs with strong brand equity to command a higher volume and average check, due to high customer satisfaction and a positive price–value relationship—all resulting in higher sales revenue. There are many well-known QSR brands, but only some of them cross the initial stage of brand awareness to the combination of quality, image, and loyalty that constitute sound brand equity. The fact that brand awareness does not always translate into image and loyalty is why some customers are reluctant to purchase the best-known brands. However, there is a dearth of empirical research actually demonstrating the relationship between brand equity and corporate performance in restaurant brands. The results of our study could identify guiding principles to help executives of QSR chains maximize the value of their brands.

Brand Equity and Its Dimensionality

Keller coined the term *customer-based brand equity* (CBBE) and defined it as "the differential effect of brand knowledge on customer response to the marketing of the brand."[14] The premise of the CBBE approach is that the power of a brand lies in what customers have learned, felt, seen, and heard about the brand over time. That is, the power of a brand is in what resides in the minds of customers.[15] Keller explained the importance of understanding the multidimensionality of brand equity in developing a consumer behavior theory regarding branding.[16] Adopting too narrow a perspective may result in a lack of richness necessary to provide integrative theoretical insights and marketing solutions.[17] According to Aaker, brand equity is a multidimensional concept that consists of brand loyalty, brand awareness, perceived quality, brand associations, and other proprietary assets.[18] Examining the common dimensions of brand equity, Yoo and Donthu adopted four of Aaker's five categories, namely, brand loyalty, brand awareness, perceived quality, and brand associations.[19] Yoo and Donthu excluded Aaker's proprietary assets dimension because it is not relevant to the CBBE measure.[20] Other researchers identified similar dimensions. Shocker and Weitz proposed brand loyalty and brand associations as dimensions of brand equity.[21] For his part, Keller suggested brand knowledge, a construct embracing both brand awareness and brand image.[22] In this framework, *brand image* refers to the set of associations linked to the brand that customers retain in their memories.[23] Yoo, Donthu, and Lee proposed and tested a model in which perceived quality, brand loyalty, and brand associations all contribute to brand equity.[24]

For the purpose of our study, brand equity consists of four dimensions: brand loyalty, brand awareness, perceived quality, and brand image. Brand image, in turn, consists of three dimensions of brand associations: their favorability, strength, and distinctiveness. The reason for including brand image as a dimension of CBBE arises from its important role in determining the differential response that makes up brand equity. In summary, strong brand equity means that customers have high brand-name awareness, maintain a favorable brand image, perceive that the brand is of high quality, and are loyal to the brand.

Sample and Data Collection

Subjects for our study were selected from shoppers entering a mall between the

hours of 1:00 p.m. and 6:00 p.m., Monday, Wednesday, and Saturday, during two weeks at a single location in the city of Seoul, Korea. The shopping mall was selected because it presented a real shopping setting and it attracted a high proportion of the young customers who are important clients for fast-food chains. According to a report by Korea Food & Restaurant Information Inc.,[25] people who are single and in their twenties represent the most important customer base, followed by those in their thirties and forties who are married and with children. Together, those groups constitute more than 80 percent of the total traffic in the Korean quick-service industry. Approximately one-third of the subject mall's guests were young people who are younger than thirty years old and another one-third were between thirty and forty years old, mainly due to the mall's location near densely populated residential areas and surrounding environments that attract many young people.

Effective brand management—in particular, ensuring brand awareness in consumers—offers financial return for quick-service restaurants.

The shoppers, who were intercepted in a convenience sample, were asked to participate in a study conducted as part of a university grant. Although we could not know a priori that a convenience sample of this kind would be representative of the population, it was a reasonable approach for collecting data from the throngs in the center of large shopping mall. Moreover, as we explain below, our sample was not statistically different from the population in question. In this way, we collected data from actual customers in a realistic setting. Those who agreed to participate in the study were asked to complete and return the survey directly to the data collectors. Of the 950 surveys that were distributed, 394 usable surveys were collected, for a response rate of 41.5 percent.

Basic Theories and Questions

This study's core purpose is to investigate the correlation between CBBE and a QSR chain's performance. Support for this inference can be found in the study of Prasad and Dev, which we mentioned above.[26] They suggested that hotels with strong brand equity will achieve higher occupancy and average daily rates, resulting in higher operating performance. Based on the main purpose of this study, our analysis focused on three research questions:

1. Does CBBE differ between high-performing restaurants and low-performing restaurants with respect to the individual attributes of brand loyalty, brand awareness, perceived brand quality, and brand image?
2. Will those four individual components of brand equity have a significant effect on the restaurant firms' performance?
3. Will brand equity as a whole have a significant influence on the performance of the restaurant firms?

Measuring Brand Equity

The seven QSR brands that we studied are McDonald's, Burger King, Hardee's, Jakob's, KFC, Lotteria, and Popeyes. For those not familiar with Korea's market, Jakob's and Lotteria are two major domestic QSR brands. Exhibit 1 contains a detailed summary of the multiple-item scales and the reliability for QSR chains.

The six-item scale for brand loyalty was adapted from measures developed

by Aaker,[27] Odin et al.,[28] and Yoo and Donthu.[29] To measure brand loyalty, we used a seven-point, Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

A ten-item perceived-quality scale measures consumers' subjective responses to a brand's overall excellence or superiority and addresses the overall quality rather than individual elements of quality. These ten items, drawn from prior studies, were rated on a seven-point scale anchored from 1 (*strongly disagree*) to 7 (*strongly agree*).[30]

Brand image requires the development of scale items specific to a product category.[31] To derive appropriate items to represent the construct of brand image, we asked twenty-seven respondents of the purposive sample to express any emotions, ideas, or attitudes that they could associate with QSR chains. The open-ended responses were tabulated, and the eleven responses mentioned most frequently were selected as the scale items. In addition, we added three other variables to both categories. Those variables were "long history," "differentiated from other brands," and "familiar to me."[32] Thus, the brand-image construct was measured by fourteen items on a seven-point, Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Three brand-awareness measures (i.e., top-of-mind brand, unaided brand recall, and brand recognition) were drawn from previous research and measured as follows.[33] To measure the top-of-mind brand recall, we asked respondents to "write down the brand name that first comes to your mind." For unaided brand recall, we asked them to "list three other names that come to your mind at this moment." Then, to measure brand recognition, the respondents were given a list of brand names and asked to choose the brand names of which they were aware. Since two of these items are open-ended, we modified Haley and Case's five-point scoring approach for open-ended questions.[34] Instead of five points, our approach encompassed a seven-point scale, coding respondents' answers as 1 for "unrecognized brand in the aided recall"; 2 for "recognized brand in the aided recall"; 4, 5, and 6 (as we explain below) for "recalled brand without aid"; and 7 for "top-of-mind brand." This allowed us to transfer responses to approximate metric scales and to have a neutral point (3, for our purposes). Our further modification to the Haley and Case approach was that respondents were asked to list three brands instead of two to obtain a brand recalled without aid. The three brands recalled without aid were coded, in order, as 6 for the first brand recalled without aid, 5 for the second brand recalled without aid, and 4 for the third brand recalled without aid. The neutral point formed an interval between "without aid" and "aided" recall to clearly distinguish between the two. Thus, we employed a total of thirty-three items to capture the four dimensions that consist of CBBE.

Even though profit-related financial ratios may be a more accurate proxy than revenue to measure a QSR chain's performance, measures of return are strongly associated with management's ability rather than with the level of direct earnings from customers or buyers. To test only the direct effect of customers' visitation levels without considering any expense or investment, we employed only sales as a firm's performance measure. Thus, we obtained contemporaneous revenue information for the seven selected QSR chains from the Korean Restaurant Association. To control for the restaurant chains' size differences, we calculated sales per unit by dividing total sales revenue by the

Exhibit 1:
Scale Items for QSR Chain Survey

Scale Item	M *(1 = strongly disagree, 7 = strongly agree)*
Brand loyalty scale: Cronbach's alpha = .860	
I regularly visit this restaurant.	3.53
I intend to visit this restaurant again.	4.70
I usually use this restaurant as my first choice compared to other restaurants.	3.71
I am satisfied with the visit to this restaurant.	4.45
I would recommend this restaurant to others.	4.08
I would not switch to another restaurant the next time.	3.34
Perceived quality scale: Cronbach's alpha = .916	
The staff served food in promised time.	4.33
The staff quickly corrects mistakes.	3.85
Well-dressed, clean, and neat staff.	4.17
Visually attractive menu reflecting the restaurant's image.	3.77
Serving ordered food accurately.	4.04
Well-trained, experienced personnel.	3.54
The restaurant provides clean dining areas and restrooms.	3.89
Employees shift to maintain speed and quality of service.	3.68
The restaurant employees are knowledgeable about the menu.	3.86
The restaurant has operating hours convenient to all of its customers.	3.95
Brand image scale: Cronbach's alpha = .804	
The dining area is frequented.	4.16
It maintains appropriate sound level.	4.56
Low price.	3.51
Service is prompt.	4.18
It is conveniently located.	4.67
It has a differentiated image from other restaurant brands.	4.06
It tastes good compared with price.	3.91
Employees are very kind.	3.90
It has a very clean image.	3.98
It has a cheerful and enchanting atmosphere.	4.40
There are many events.	3.08
I feel comfortable to visit alone.	3.15
It has a long history.	3.71
Its brand is familiar to me.	4.05
Brand awareness[a]	
Write down the name of a QSR chains in Seoul that comes first to your mind (top-of-mind brand).	NA
List three other names of QSR chains in Seoul that come to your mind at this moment (unaided brand recall).	NA
Of the following seven QSR chains, please circle the name of the restaurant name(s) you do not know (recognized and unrecognized brand in the aided recall).	NA

a. No Cronbach's alpha is available due to the conversion of three original items to one-scale measure by transferring *do not know at all* to 1; *aided recall* to 2; *unaided recall* to 4, 5, and 6; and *recalling top-of-mind brand* to 7.

Exhibit 2:
Brand Equity Rating

	Brand Loyalty[a]	*Brand Awareness*[b]	*Perceived Quality*[a]	*Brand Image*[a]	*Total Brand Equity*
Burger King	4.41[c] (n = 58)	3.75 (n = 394)	4.07 (n = 54)	3.93 (n = 56)	16.16
Hardee's	3.08 (n = 57)	2.19 (n = 394)	3.90 (n = 48)	3.62 (n = 54)	12.79
Jakob's	4.11 (n = 54)	1.45 (n = 394)	3.92 (n = 42)	3.55 (n = 47)	13.03
KFC	4.52 (n = 55)	4.12 (n = 394)	3.94 (n = 46)	4.22 (n = 54)	16.80
Lotteria	3.91 (n = 53)	4.03 (n = 394)	4.13 (n = 50)	3.97 (n = 50)	16.04
McDonald's	4.46 (n = 56)	4.46 (n = 394)	4.43 (n = 53)	4.43 (n = 53)	17.78
Popeyes	4.18 (n = 58)	3.12 (n = 394)	3.92 (n = 53)	3.85 (n = 60)	15.07

a. On a scale of 1 to 7, where 1 = *strongly disagree* and 7 = *strongly agree* on positive meanings.
b. Scale where 1 = *do not know at all*, 2 = *aided recall*, 4 to 6 = *unaided recall*, and 7 = *recalling top-of-mind brand*.
c. Mean value of responses from respondents.

number of units available during the survey period.

Characteristics of Respondents

The sample consisted of 174 male (44.2 percent) and 220 female (55.8 percent) respondents, whose average age was 25.3 years. In terms of education level, more than half of the respondents held a bachelor's degree, 66 had a high school degree (16.8 percent), 59 had an associate's degree (15.0 percent), and 33 had a postgraduate degree (8.4 percent). The average monthly frequency of visit to a fast-food restaurant was 5.7 times, and the average spending per visit was US$3.40. Two checks for the representativeness of our sample showed that our sample is not significantly different from typical QSR restaurant patrons. First, we compared the profiles of the respondents with those of a recent survey conducted by Korea Food & Restaurant Information for fast-food consumers. The profiles of the survey results are summarized as follows: the average age was approximately twenty-seven years, the average monthly frequency was 5 times, and the average expenditure per visit was approximately US$3.00. Second, the respondents of this study were compared with the customer profiles of three QSR chain restaurants that are reported to have about average sales relative to other chain units. We compared the demographic profiles (gender, age, and education), frequency of visit, and average spending per visit. The chi-square test and t-test results indicate that no significant differences were found between the sample and QSR restaurant patrons on those variables ($p < .10$). The finding that there were no significant differences between our sample profiles and typical QSR patrons' profiles is important in that it provides a reasonable basis for concluding that our sample is representative of the population on the QSR patrons.

Brand Equity Rating

Prior to discussing the relationship between brand equity and firms' performance, we present the results of the brand equity ratings of the seven QSR chains (Exhibit 2).

For brand awareness, McDonald's (mean = 4.46) was the highest, followed by KFC with 4.12. Jakob's (mean = 1.45) was the least known, probably because Jakob's is a fairly new domestic brand established in 1999. In terms of brand loyalty, KFC (mean = 4.52) was more highly rated by the Korean customers whom we sampled than any other brand, followed by McDonald's (4.46) and Burger King (4.41). With the lowest loyalty mean (3.08), Hardee's was behind the two domestic brands, Jakob's (4.11) and Lotteria (3.91). We noted with interest the finding that long-established Hardee's garnered lower brand equity than the relatively new brand, Jakob's.

In terms of perceived quality, McDonald's (mean = 4.43) was the highest, followed by Lotteria (4.13) and Burger King (4.07). In terms of brand image, McDonald's showed the highest value (mean = 4.43), followed by KFC, Lotteria, Burger King, and Popeyes. On the other hand, Hardee's (3.62) and Jakob's (3.55) showed the lowest mean values for brand image.

Summarizing all four mean values of the brand equity dimensions for each of the seven QSR chains, McDonald's (total = 17.78) showed the highest brand equity rating of the seven brands in our study. KFC (16.80) ranked second, Burger King (16.16) ranked third, and Lotteria (16.04) ranked fourth. The bottom three were Popeyes (15.07), Jakob's (13.03), and Hardee's (12.79).

The overall ranking above is similar to that of Interbrand's worldwide research, in which McDonald's came in ahead of KFC, which topped Burger King in brand value. A British consulting group, Interbrand annually estimates and ranks the value of major global brands. In the firm's rankings for the year 2001, McDonald's was 9; KFC, 51; and Burger King, 80.

Comparison of High- and Low-performing Restaurants

This study used an independent *t*-test to determine whether respondents' opinions differed between high- and low-performing restaurants with respect to the attributes underlying brand loyalty. To categorize the high- and low-performing group of restaurants, we used median sales per restaurant unit as a cutoff point. Restaurant chains that equaled or exceeded the median of sales per unit were classified as the high-performing group, and the below-median group was categorized as low performers.

According to our survey scheme, each respondent was requested to answer the questionnaires for a specific restaurant that he or she could most certainly remember from his or her most recent visit. This provided an underlying premise of an independent *t*-test, such that dividing restaurants into two different performing groups would result in two corresponding independent groups of respondents. One definite advantage of this approach could be to obtain the most reliable answers from respondents' previous diverse experiences of multiple restaurant visits.

Having divided the restaurants, however, we found no differences between the high-performing group and the low-performing group on any of the six brand-loyalty attributes (see Exhibit 3). Comparing the two groups, respondents showed no higher loyalty to high-performing restaurants based on the six attributes than they did to the low-performing restaurants.

On the other hand, high-performing restaurants did stick out in people's minds. With regard to brand awareness, there was

Exhibit 3:
Mean Differences of Brand Loyalty between High- and Low-performing Restaurants

	High-sales Restaurants[a] *(n = 170)*		*Low-sales Restaurants (n = 224)*		
Variable (Brand Loyalty)	M	SD	M	SD	t-*value*
Regularly visiting this restaurant	4.19	1.27	4.17	1.24	0.05
Having intention to visit this restaurant again	5.05	1.21	4.96	1.19	0.778
Using this restaurant as my first choice compared to other restaurants	4.96	1.20	4.83	1.17	1.186
Being satisfied with the visit to this restaurant	4.72	1.27	4.67	1.13	0.460
Recommending this restaurant to others	4.06	1.27	3.97	1.25	0.635
Would not switch to another restaurant the next time	3.55	1.48	3.34	1.37	1.453

a. Median is employed to categorize low- and high-performance restaurants.

Exhibit 4:
Mean Differences of Brand Awareness between High- and Low-performing Restaurants

	High-sales Restaurants[a] *(n = 170)*		*Low-sales Restaurants (n = 224)*		
Variable	M	SD	M	SD	t-*value*
Brand awareness[b]	4.10	0.29	2.69	0.95	20.799***

a. Median sales per restaurant unit is employed to categorize high- and low-performance restaurants.
b. Brand awareness was originally measured by three-item scales and converted to one-scale measure by transferring *do not know at all* to 1; *aided recall* to 2; *unaided recall* to 4, 5, and 6; and *recalling top-of-mind brand* to 7.
***$p < .01$.

a significant mean difference between high- and low-performing restaurants. Respondents showed a higher mean brand awareness for the high-performing group than for the low-performing group (see Exhibit 4).

There were five significant mean differences in perceived quality attributes between the high- and low-performing restaurants. Those were food served in promised time; well-dressed, clean, and neat staff appearance; serving ordered food accurately; employees knowledgeable about menu; and convenient operating hours. High-performing chains appear to achieve high perceived quality in those features. However, there were no significant mean differences between the two restaurant groups in other seemingly important attributes, such as quickly correcting anything wrong, a visually attractive menu reflecting the restaurant's image, well-trained and experienced personnel, clean dining areas and restrooms,

Exhibit 5:
Mean Differences of Perceive Quality between High- and Low-performing Restaurants

	High-sales Restaurants[a] *(n = 170)*		*Low-sales Restaurants (n = 224)*		
Variable (Perceived Quality)	M	SD	M	SD	t-*value*
Food served in promised time	4.60	1.35	4.15	1.38	3.246***
Quickly corrects mistakes	3.59	1.25	3.43	1.19	1.234
Well-dressed, clean, and neat staff	4.25	1.31	3.86	1.38	2.795***
Visually attractive menu reflecting the restaurant's image	4.54	1.45	4.33	1.35	1.448
Serving ordered food accurately	4.22	1.26	3.85	1.13	2.921***
Well-trained and experienced personnel	4.01	1.27	3.95	1.18	0.450
Clean dining area and restrooms	4.05	1.26	3.97	1.24	0.628
Employees shift to maintain speed and quality of service	3.94	1.19	3.80	1.24	1.058
Employees knowledgeable about menu	4.17	1.19	3.88	1.15	1.700*
Convenient operating hours	4.83	1.32	4.59	1.19	1.988**

a. Median sales per restaurant unit is employed to categorize high- and low-performance restaurants.
*$p < .1$. **$p < .05$. ***$p < .01$.

and employees' maintaining speed and quality of service during busy times (see Exhibit 5).

Customers are likely to develop a set of beliefs about where each restaurant brand stands on each attribute. In this study, the set of beliefs held about a particular brand, that is, the brand image, appears to significantly differentiate between high- and low-performing restaurants. With regard to brand image, respondents reported significant mean differences for all attributes except the following three: low price, kind staff, and feel comfortable to visit alone. Respondents rated the high-performing group higher than they did the low-performing group on the following attributes: frequented dining area, appropriate sound level, prompt service, convenient location, differentiated image, value for money, cleanliness, cheerful and enchanting, a variety of events, long history, and familiarity (see Exhibit 6).

Deriving a Brand Equity Structure

Factor analysis was first employed to examine the validity of brand equity structure, which comprises the four underlying dimensions that we are testing (i.e., brand loyalty, brand awareness, perceived quality, and brand image). Factor analysis with principal components and varimax rotations produced just one factor, which had

Exhibit 6:
Mean Differences of Brand Image between High- and Low-performing Restaurants

	High-sales Restaurants[a] (n = *170*)		*Low-sales Restaurants* (n = *224*)		
Variable (Brand Image)	M	SD	M	SD	t-*value*
Frequented dining area	4.61	1.54	3.79	1.48	5.304***
Appropriate sound level	4.86	1.54	4.32	1.50	3.459***
Low price	3.50	1.29	3.50	1.31	0.034
Prompt service	4.35	1.20	4.08	1.07	2.359**
Conveniently located	4.86	1.26	4.54	1.17	2.610***
Differentiated image	4.54	1.40	3.71	1.56	5.427***
Value for money	4.04	1.25	3.81	1.20	1.823*
Kind staff	3.94	1.13	3.89	1.24	0.421
Cleanliness	4.21	1.17	3.84	1.28	2.920***
Cheerful and enchanting	4.69	1.27	4.21	1.38	3.516***
A variety of events	3.51	1.52	2.91	1.49	3.872***
Feel comfortable to visit alone	4.21	1.69	4.16	1.75	0.253
Long history	4.29	1.53	3.29	1.41	6.591***
Familiarity	4.35	1.43	3.83	1.43	3.580***

a. Median sales per restaurant unit is employed to categorize high- and low-performance restaurants.
*$p < .1$. **$p < .05$. ***$p < .01$.

Exhibit 7:
Dimensions of Brand Equity Structure

Brand Equity	*Factor Loading*
Brand loyalty	.774
Brand awareness	.545
Perceived quality	.741
Brand image	.834
Eigenvalue = 2.14	
Variance explained = 53.5%	

eigenvalue greater than 1.0 and a factor loading of .50 or greater.

The results in Exhibit 7 generally support the assertion that the four dimensions in question are valid underlying variables of brand equity. It is of interest to note that brand image, brand loyalty, and perceived quality are loaded highly in the brand equity of the QSR chains we studied, whereas brand awareness is not highly loaded—although it still meets the significance threshold of .50.[35] The results imply that all four dimensions are found in the construct of brand equity in QSR chains. As we discuss next, the factor scores of brand equity were further employed to

Exhibit 8:
Effect of Brand Equity and Four Dimensions on Restaurant Firms' Performance

	Dependent Variable: Firms' Performance[a]		
Independent Variable	β	t	*Variance Inflation Factor*
Brand equity	.757	2.591**	
R	.757		
R^2	.573		
F	6.715		
Significance level	.001		
Brand loyalty	.025	0.819	1.030
Brand awareness	.832	9.357***	1.845
Perceived quality	.059	2.084**	2.367
Brand image	.084	2.708***	2.587
R	.838		
R^2	.702		
F	27.789		
Significance level	.001		

a. Sales per restaurant unit.
** Significant at .05 level. *** Significant at .01 level.

analyze the relationship between the entire context of brand equity and the firms' performance.

Causal Relationship between Brand Equity and Firms' Performance

To examine the relationship between brand equity and QSR firms' performance, we employed regression analysis. As an input variable of entire brand equity, we examined the effect of each factor score coefficient from the factor analysis (as depicted in Exhibit 7) on the restaurants' performance. Brand equity was first considered as one predictor variable measured in its entirety and then as four independent dimensions constituting the brand equity construct. In keeping with our earlier discussion, sales revenue per unit for the chain restaurants was used as a dependent variable.

When considering brand equity in its entirety as an independent variable (see Exhibit 8), the results show that brand equity has a strong correlation with performance of QSR chains ($R = .757$). This result supports our prior postulate that CBBE can be a critical factor for influencing hospitality firms' performance.

The second regression analysis in Exhibit 8 shows how the four underlying dimensions constituting brand equity influence performance of restaurants. The results disclose that the four underlying dimensions constructing brand equity have a strong correlation with the performance of QSR chains ($R = .838$). To detect the presence of multicollinearity, the variance inflation factor (VIF) is calculated and presented in Exhibit 8. (VIF measures how much the variances of the estimated regression coefficients are inflated as compared to when the independent vari-

ables are not linearly related.)[36] No significant collinearity was detected.

Among the four underlying dimensions, brand awareness, perceived quality, and brand image appear to be significant independent variables that influence the performance of QSR chains. That is, when we consider the relationship between brand equity and performance, it is brand awareness, perceived quality, and brand image that appear to dominate brand loyalty, even though all four underlying dimensions are found to be important constructs in brand equity.

In summary, overall brand equity, delineated from the four underlying dimensions, has shown a significant positive effect on the performance of QSR chains. The nature of the relationship between each underlying dimension of the brand equity and firms' performance, however, differs. Brand awareness, perceived quality, and brand image are found to have a significantly positive effect on the performance of QSR chains. The finding demonstrates that brand awareness, among all the other elements, is the most important dimension of hospitality brand equity in having a positive effect on firms' performance, even though it is rather of relatively low importance in the construct of brand equity itself.

Summary and Conclusions

To continue with the above point, although brand awareness was not a highly loaded variable in the factor of brand equity, it was found to be the most important element affecting a QSR chain's performance. From that finding, we suggest that a QSR restaurant should aim most of its advertising efforts at enhancing customer awareness so that customers at least consider that brand in the evoked set of choice alternatives. The results of this study imply that QSR chains should strongly consider brand awareness when attempting to establish brand equity from the customers' viewpoint. For instance, customers can build strong associations with specific QSR brands as children. In this case, top-of-mind advertising would be important for QSR operators to promote consumers to make quick purchase decisions based on advertising alone.[37] Heavy and successive promotional activities through the mass media seem to vastly prevail in QSR markets, although recent changes in the communication environment have led to more creative ways to approach customers. Besides TV commercials or magazine advertising, support activities and charity involvement in social, cultural, sports, or other kinds of public events can improve a firm's brand awareness.

Another important conclusion that may be drawn from this study lies in the fact that the perceived quality of a specific QSR brand is found to significantly affect its performance. It goes without saying that QSR chains should consistently provide quality products and services, such as serving food in promised time, serving ordered food accurately, staff knowledgeable about menu, convenient operating hours, and neat staff appearance. Not only is this good business, but it strengthens the brand. Standardization efforts are already well-known approaches for enhancing the perceived quality. A restaurant company can differentiate its service-delivery systems through its people, the physical environment, and the service-delivery process. What is so often forgotten is that it is the trained service personnel who enhance the core competencies in most QSR chains. This study shows that service personnel should be involved in a QSR's efforts to seek a competitive advantage at the same

time as the restaurant emphasizes standardization and speed.

High-performing restaurants received higher scores from respondents than did low-performing restaurants with respect to the following attributes constituting brand image: (1) frequented dining area; (2) appropriate sound level; (3) convenient location; (4) cheerful and enchanting; (5) differentiated image; (6) convenient operating hours; and (7) familiarity. An implication for QSR managers is that they should carefully design building interiors and exteriors to deliver a cheerful atmosphere and an appropriate sound level to attract young customers. Along that line, an empty-looking restaurant may convey negative images related to the attractiveness of the operation, public acceptance, and menu offerings. The fast-food restaurants that appeared to have a frequented dining area are still able to attract more customers, which in turn may increase their revenue. Careful real-estate planning should be well executed to obtain a convenient location, which is known as one of the most important restaurant-selection attributes. In addition, QSR operators should establish consistently effective operational policies to achieve a high operating performance because consumers considered convenient operating hours to be an important factor. Finally, QSR managers should do more work on differentiating their image, specifically through symbols and branding, as many of them adopted specific symbols and used these on their stationery. Advertising and promotional activities should also carry these symbols effectively to provide a differentiated and familiar image to a restaurant. Finally, a restaurant would likely benefit from designing a superior delivery process, such as an innovative drive-in or take-out service.

Brand image appeared to have the second strongest effect on the performance of QSR chains. The customer's beliefs affecting image may vary from the actual attributes because of the customer's individual experiences and the effects of selective perception, selective distortion, and selective retention. In light of this potentially problematic discrepancy between image and actuality, QSR operators should keep in mind that the management of image components is a long-term measure for achieving high revenue goals. Therefore, restaurant marketers must be equipped with a detailed knowledge of the important attributes of brand image, such as a frequented dining area, appropriate sound level, prompt service, differentiated image, cleanliness, cheerful and enchanting, long history, and familiarity. For example, the image for McDonald's was that it is perceived to be significantly more competent and exciting than either Burger King or Wendy's.[38] Burger King's image was perceived to be the least sincere and sophisticated but to be the most rugged.[39] In the real implementation, of course, this would require extensive research into the nature of the brand and its competitive positioning.

Another intriguing point here regards the positioning related to brand image. The image QSR chains create in the consumer's mind and how that chain is positioned are of more importance to its ultimate success than are the chain's actual characteristics. Brand managers usually position their brands so that they are perceived by the consumers to occupy a niche in the marketplace occupied by no other brands. Thus, for marketers, the value of a successful brand lies in its potential to

reduce substitutability. That result implies that brand awareness alone may not be enough to achieve high sales volume and perceived quality and that brand image should be carefully managed in tandem to promote good operational performance in QSR chains.

It is worth noting that brand loyalty, which is loaded highly on the brand equity construct in QSR chains, does not support a positive relationship with QSR firms' performance. One plausible conclusion is that consumers may place significant value in having a variety of choices when they select a QSR chain. In addition, eating out at a QSR outlet tends to be a low-involvement purchasing decision for most customers, and they may easily switch from one restaurant to another if a coupon or any price discount is available. Hence, QSR brand managers may face the fact that building brand loyalty in QSR chains would be a relatively difficult job compared with those of other restaurant segments, such as upscale and casual-dining restaurants.

In conclusion, the results of this study imply that strong brand equity can cause a significant increase in revenue and that a lack of brand equity in hospitality firms can damage potential cash flow. That is, if marketers in hospitality firms do not make an effort to improve CBBE, then marketers should expect declining sales revenues over time. Restaurant brand managers should keep in mind that many old, familiar brands may die due to overextension, poor brand management, or lack of investment in building brand value.

Future research requires contriving a more sophisticated measure of firm performance, perhaps using such financial measures as ROS (Return on Sale), ROE (Return on Equity), and ROA (Return on Asset). The financial ratios may represent a hospitality firm's performance better than operational performance, such as sales per unit as employed in this study. Finally, future research may develop a more hybrid and composite scale for approximating CBBE in multiple service industries, including hospitality brands. In light of these considerations, it is hoped that the findings in this study will provide a firm basis on which to undertake additional research.

Endnotes

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