The Influences of Brand Innovation on Customer Value: Using Double-Distal Mediators of Brand Perception and Brand Equity

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ABSTRACT

The purpose of this study is to verify the situation of innovative activities held by a Japanese motor corporation in Taiwan versus customer value, using brand perception and brand equity as the mediators. A questionnaire-based survey was conducted on chiefs of sections (and higher-level) at a particular Japanese motor corporation in Taiwan. Simple random sampling was used to carry out the job of sampling to yield higher sample response rates. The overall model’s goodness-of-fit effect concerning the structural and measurement models were verified using linear Structural Equation Modeling (SEM). Regarding the path coefficients for implicit/unobservable variables in the structural model, the MacKinnon PRODCLIN 2 program was employed to test how significant the model’s total effect, specific mediating effects and direct effects are. Research results showed that: (1) the overall model had a statistically significant total effect, which suggests a distal mediating effect in the model constructed by the author; (2) the brand innovation exerted a significantly direct effect on customer value; (3) both brand perception and brand equity exerted significant and almost the same specific mediating effects.

Keywords: brand innovation, customer value, brand perception, brand equity, distal mediator

INTRODUCTION

Currently, Taiwan’s automotive sales industry has been confronted with extremely intense competition. As a result, it has been a crucial key to victory for business competitiveness in Taiwan’s automotive sales industry that brand equity must be formed to enhance customer value by continuous brand innovation created from professional knowledge, and accumulative brand perception. Therefore, any organizations will combine brand perception and accumulative brand equity on a basis of brand innovation for the purpose of creating customer value. Accordingly, the establishment of sustainability becomes a key factor for business success.

Brand innovation has currently become the most important issue to brand management during the era of knowledge-based economy. Only continuity of innovation will maintain the vitality of a brand; therefore, businesses’ attention to consumer acceptance to brand innovation should give a demonstration.

In addition, both Porter (1980) and Day (1990) stressed excellent customer value is a key factor to achieve business success. Only those businesses understanding customers’ requirement and expressing their concerns on customer value will have competitive advantage, which will be the key to achieve successful business operation.

Furthermore, brand equity builds brand advantage in customers’ minds that lets the brand product build up its competitive advantage in the market, winning customers’ positive preference and impression on the brand product; moreover, customers will be increasingly aspired to purchase the product. However, Keller (2003) advocated it is necessary to strive a lot to build up a powerful brand; thus, applied effort will create a brand receiving consumers’ resonance and response.
Apart from the above, marketing executives can strengthen the brand knowledge and image in consumers’ minds by using media advertising and others; and then, consumers’ brand perception will be enhanced to increase the brand customer value.

Consequently, this author conducted a case study of a particular Japanese motor corporation in Taiwan and built a research model for analyses/verification in an attempt to understand the model’s goodness-of-fit. The specific purposes of this study were:
1. To verify and understand whether the brand innovation implementation has a distal mediating effect on customer value in a particular Japanese motor corporation in Taiwan;
2. To verify and understand whether the brand innovation implementation exerts a significant, positive and direct effect on customer value in a particular Japanese motor corporation in Taiwan;
3. To verify and understand whether the brand innovation implementation, mediated by brand perception, exerts a significant, specific and indirect mediating effect on customer value in a particular Japanese motor corporation in Taiwan;
4. To verify and understand whether the brand innovation implementation, mediated by brand equity, exerts a significant, specific and indirect mediating effect on customer value in a particular Japanese motor corporation in Taiwan;
5. To determine which of the two mediators (i.e., brand perception and brand equity) has a larger specific indirect effect.

LITERATURE REVIEW

The purpose of this study is to verify the effects of brand innovation implementation by a Japanese motor corporation in Taiwan on customer value, using brand perception and brand equity as the mediators. The relevant theories and studies are stated as follows:

Brand Innovation

Today, consumers have to deal with arrays of product items where mere brand building is not enough since the lapse of time will get consumers numb with brand perception and freshness; therefore, brand innovation aims to convey either direct or indirect experiences to consumers through every interaction of innovative concepts. This is the best promoter of the brand publicity to form the concept attitudes and ideas for the brand (Chang, 2011).

Schultz and Barnes (1999) believed a brand can not only let consumers hold the ownership, but also give consumers market meaning, which represents what consumers are, and the belief in the brand to advance higher social position. A brand is not just a name, symbol, or icon; it is a relationship with consumers.

Grant (2006) believed the brand innovation operational definition was: “A brand is just like a story, being a key to drive cultural logic, establishes the continuity and association to have every new concept added to a brand’s benefits and make the brand alive in the hearts of people.” Brand innovation poured innovative concept activities into an existing brand so that there are eight items of brand innovation: (1) Concept of New Tradition; (2) Faith; (3) Human Herd Instinct; (4) Connection; (5) Neo-Luxury; (6) Time; (7) Excitement; and (8) Control. From the aspect of cultural evolution, every new concept can be added to a brand’s benefits and make the brand alive in the hearts of people.

To sum up, the perspectives of Grant (2006) were adopted in this study for the brand innovation operational definition and classification.
Brand Perception

Seringhaus (2002) agreed the concepts of fine brand perception mainly are subjective value decisions formed by the perceptions from individuals, relatively others or with regard to temperament.

Tauber (1988) pointed out brand perception highly fits consumers that will easily transfer relevantly positive or negative association from parent brands to extensive products. The fit of brand perception is a decisive factor whether a brand would be successful or not.

For consumers’ purchase process, the brand perception is a very important influential factor. Hoyer and Brown (1990) studied and manifested brand perception has great influence on consumers’ purchase selection; they believed brand perception is a basis for first priority while selecting a product. It shows the importance of the brand awareness.

Vigneron and Johnson (2004) studied and manifested that measuring of perceived brands can be classified into: (1) Non-personal Perception (Conspicuousness, Uniqueness, Quality); and (2) Personal Perception (Pleasure, Extended Self).

Brand perception is one of the connotations of brand knowledge. Keller (1993) validated that brand perception comprises brand recall and brand recognition. Brand recognition means consumer’s capability to identify a brand according to specific brand clues, and brand recall, a capability to recall specific brands according to different product categories. Therefore, consumers will recall the products with high brand perception when they recall one certain product category; and then, they will habitually purchase the products they are familiar with and famous brands. As a result, brand perception plays an extremely important role in consumers’ purchase decision making (Lu, 2008).

From above, this study referred to the definition made by Seringhaus (2002), that is: the concepts of brand perception mainly are subjective value decisions formed by the perceptions from individuals, relative others, and quoted the view of Keller (1993) that (1) brand recall and (2) brand recognition are important factors in regard to the measurement perspective of brand perception.

Brand Equity

From the point of view finance, Simon and Sullivan (1993) believed that brand equity is financial brand value made of customer brand advantage, as well as defined by increments of corporate future cash flows; meanwhile, it represents the brand equity to own extra value beyond all tangible assets.

From the point of view marketing, Tauber (1988) believed that brand equity has surmounted the added value of tangible assets owing to the market position achieved by the brand; consequently, the added value has created the corporate brand and the brand innermost value in consumers’ minds other than the functional value after consumers’ use of the product (Chung, 2011).

Aaker (1991) determined that brand equity is used to connect the brand, name and symbols to make a complex of assets and debts; and it is classified into five perspectives: (1) brand loyalty; (2) brand awareness; (3) perceived quality; (4) brand association; and (5) other proprietary brand assets.

Walfried, Mittal and Sharma (1995) stressed the relationship between the brand equity and consumers where five measurement perspectives were proposed. They are: (1) Awareness performance; (2) Social image; (3) Price/Value; (4) Trustworthiness and (5) Identification/Attachment.

To sum up, this study’s author proposed the conceptual definition for “brand equity” based on Aaker (1991) definition and classification. Herewith, the operational definition for each perspective is established as below:

(1) Brand loyalty: It is the core of the brand equity being an indicator to reflect consumers’ purchase behavior.
(2) Brand awareness: It can be regarded as a guarantee of quality to deliver familiarity and commitment, and can help consumers make the selection for one’s purchase decision making.

(3) Perceived quality: It means consumers’ conveying their cognitive level of the whole quality or superiority toward one certain product or service.

(4) Brand association: It is also called brand image, which means any association related to the brand in consumers’ memory; it is also a foundation for purchase decision-making and brand loyalty. If there is a higher degree of positivity and multiple times of brand association for the product or service, customers’ love for the brand becomes greater, making better brand image for the product or service.

(5) Other proprietary brand assets: It includes patents, trademarks, distribution channels, and so on. They are irreplaceable advantages for the establishment of a brand that can effectively prevent competitors from trying to affect your core customers and loyalty.

**CUSTOMER VALUE**

For consumers, they themselves must first pay a considerable price for gaining a product or the value generated from service; and every customer has not quite the same awareness and requirement for the product or service. Higher customer value will be generated in case of higher value in customers' minds and more expenses can be offered. Thence, you can create high customer value only if you have understood customers’ requirements (Chung, 2011).

Monroe and Krishnan (1985) indicated customer value has made a direct relationship with consumers’ preference or choice; if customer value is higher, consumers’ purchase intention to products will be higher.

Zeithaml (1988) indicated customer value means consumers making the overall assessment on products or the service effect based on gained and paid perception.

Slywotzky (1996) demonstrated the businesses created and gave consumers excellent customer value that would increase their whole value.

Sinha and DeSarbo (1998) believed customer value is given or from the value of customers, which will be generated from products or services themselves, or images unrelated to products or services, and experiences; moreover, it has been attained in the past or will be in the future, and consumers will measure the value based on their preference.

Barnes (2000) pointed out customers have different viewpoints of value that the value formation is highly personalized and heterologous.

Naumann (1995) mentioned a golden triangle mode of customer value in the book *Creating Customer Value*: customer value is classified into three perspectives, Product Quality, Service Quality and Price, for measurement; and it is believable that customers can use these three perspectives to recognize whether true value has been acquired or not.

Wu (1996) believed value is an object to help customers reduce cost or increase effect, and customers are those who perceive the value; thence, he had customer value classified into five perspectives: (1) Entity Effectiveness; (2) Psychological Effectiveness; (3) Time Effectiveness; (4) Location Effectiveness and (5) Purchase Effectiveness.

Sweeney and Soutar (2001) studied customer value to develop so-called “PERVAL” perceived value model, classified into (1) Emotional Value; (2) Social Value; (3) Price Value and (4) Quality Value.

From above, this study made the customer value definition by quoting Zeithaml’s definition (1988), that is: “customer value means consumers making the overall assessment on products or the service effect...
based on gained and paid perception”. As for the measurement perspectives for customer value, the perspectives of Sweeney and Soutar (2001) are quoted. Herewith, each operational definition of perspective is briefly described as below:
(1) Emotional Value: It refers to the effectiveness of feelings generated and state of influence when customers’ view to product and consumption.
(2) Social Value: It refers to the social concept of self-improvement from the product performance.
(3) Price Value: It refers to that customers invest in time, money, and efforts to earn large benefits, having satisfactory results.
(4) Quality Value: It refers to the effectiveness of customers’ recognized product quality and expected performance.

The Relationship between Brand Innovation and Customer Value


Lin (2009) indicated brand innovation is a rational behavior oriented by market demand for the purpose of satisfying customers’ demand.

Chang (2011) pointed out the risk of brand innovation is so huge that businesses not only must create the value of brand innovation research & development, but also master consumers’ real demand, and, market trends. Thence, it will accomplish a meaningful brand innovation. In addition, she also maintained that the essential job must be done first of winning consumers’ trust, values, and understanding the images and goals of brand building while businesses are carrying on brand innovation.

Besides, we developed hypothesis as per the following result based on the above literature in this study.

\[ H_1: \text{The brand innovation implementation significantly, positively and directly affects customer value at the corporation being examined in this study.} \]

The Relationship between Brand Innovation and Brand Perception

In regard to the literature of “The Relationship between brand innovation and brand perception”, this study explored such literature; but no findings have been made until now. However, the following hypothesis can be inferred from the 2.1 and 2.4 literatures in this study:

\[ H_2: \text{The brand innovation implementation significantly, positively, and directly affects brand perception at the corporation being examined in this study.} \]

The Relationship between Brand Perception and Customer Value

Lee (2008) demonstrated that the brand perceived value and purchase behavior will affect consumers’ purchase decision-making.

Wu (2010) indicated consumers with higher brand perceived value will show higher behavior intention.

Chen (2011) pointed out fashion brand consumers with higher brand perceived value will have higher customer satisfaction and lower price sensitivity.

To sum up, this study’s author proposed the following hypothesis:

\[ H_3: \text{The brand innovation significantly, positively, and directly affects customer value at the corporation being examined in this study.} \]
The Relationship between Brand Innovation and Brand Equity

Teng (2009) pointed out invention of brand strategy has a significant influence on both brand value and brand equity.

Lin (2011) pointed out service innovation has a significant positive influence on brand equity.

Liang (2012) pointed out tourist hotels’ innovation has a significant positive influence on brand equity.

To sum up, this study’s author proposed the following hypothesis, based on the above literature in this study, in spite of objects in the literature being not part of the automotive industry field:

**H4:** The brand innovation significantly, positively, and directly affects brand equity at the corporation being examined in this study.

The Relationship between Brand Equity and Customer Value

Yu (2005) pointed out the factor perspectives of customer value pursuit and customer basic brand equity mostly appear as a significant positive relationship.

Du (2010) pointed out brand equity, customer value and brand loyalty, and their two important influential factors including store image and degree of identification of in-store sales promotion, all attain to a highly significant positive relationship.

Chang (2011) indicated brand equity has a significant influence on customer value.

Chung (2011) indicated that brand equity has a positive influence both on customer value and purchase intention, as well as it will affect the purchase intention by customer value.

To sum up, this study’s author proposed the following hypothesis:

**H5:** The brand equity significantly, positively, and directly affects customer value at the corporation examined in this study.

The Relationship between Brand Perception and Brand Equity

Ko (2007) pointed out the Brand Reputation shows a significant positive relationship with the brand equity.

Wu (2008) pointed out that “brand awareness”, “brand image” of brand equity show significant influence on the “emotional value” of customer value.

The study of Ho-shen, Wu (2012) indicated the product brand equity makes a significant positive relationship with both consumers’ purchase behavior and perceived value.

To sum up, this study’s author proposed the following hypothesis, in spite of objects in the literature being not part of the automotive industry field:

**H6:** Brand perception exerts a significant, positive, and direct effect on brand equity at the corporation being examined in this study.

RESEARCH METHOD

Fig. 1 illustrates how motivations, research objectives, and literature review cited in the previous passages led to this study’s hypotheses and conceptual research framework:
THE DESIGN OF QUESTIONNAIRE AND CMV TEST

Designing the Questionnaire

The questionnaire in this study was compiled on the basis of multi-dimensional measurement, combined with the afore-mentioned observable perspectives. On a 7-point Likert Scale, the answers were measured with 7 denoting Strongly Agree and 1 denoting Strongly Disagree: the score grows in proportion to the degree of agreement.

The 16-item questionnaire for the brand innovation perspective was patterned after that proposed by Grant (2006) on the basis of eight variables (i.e., Concept of New Tradition, Faith, Human Herd Instinct, Connection, Neo-Luxury, Time, Excitement and control), each comprising 2 questions.

The 8-item questionnaire for the brand perception perspective was inspired by the categorization proposed by Keller (1993) on the basis of two variables (i.e., brand recall and brand recognition), each comprising 4 questions.

The 10-item questionnaire for the brand equity perspective was patterned after that proposed by Aaker (1991) on the basis of five variables: brand loyalty, brand awareness, perceived quality, brand association and other proprietary brand assets. Designed on the basis of multi-dimensional measurement, the questionnaire contains 2 questions under each variable.

Finally, the 16-item questionnaire for the perspective of customer value was inspired by the categorization of customer value put forth by Sweeney and Soutar (2001). On the basis of four variables: “Emotional Value”, “Social Value”, “Price Value” and “Quality Value”, this questionnaire contains 4 questions under each variable.

CMV Test

This study’s author had been considering ways to lower the CMV ever since the questionnaire copies were given out for a survey. After the completion of CFA, a Haman’s single-factor test and a single-factor CFA (i.e., single-factor CMV test) were conducted to examine whether or not there is CMV regarding the perspectives. In other words, the chi-square difference testing allowed this study’s author to at least declare an insignificant CMV in case of a statistically significant difference (Chang, 2011).

Sampling Method

This study’s author conducted a questionnaire-based survey on chiefs of sections (and higher-level)
at a particular Japanese motor corporation in Taiwan. Simple random sampling was used to yield higher response rates. Thirty copies of the questionnaire were given out to experts in a pilot-test. A post-test was conducted after modifying the questionnaire in accordance with the experts’ suggestions. Three hundred and twenty copies of the official questionnaire were given out, with 245 valid copies returned at a 76.6% response rate (Fritz and Mackinnon, 2007).

The Data Obtained from Questionnaire and Measurement Model

This study’s author adopted Linear SEM in a Confirmatory Factor Analysis (CFA) of the research framework and based the questionnaire design on four latent variables (i.e., brand innovation, brand perception, brand equity and customer value), each of which was divided into observable/explicit sub-variables that contain several questions, as shown in the table below. After processing the collected data, the author created a primary file that preceded the design of questionnaire, using multi-dimensional measurement for construction of this study’s measurement model. However, the data was measured by dual parcels to ensure the computer software efficiently handled and/or measured all data (Chen, 2010). The questionnaire under each implicit or explicit variable was designed and derived from referential sources such as Grant (2006), Keller (1993), Aaker (1991), and Sweeney & Soutar (2001) (Chang and Lee, 2012).

RESULTS AND ANALYSIS

Linear structural model analysis

This study includes a CFA, an analytical method contrary to the Exploratory Factor Analysis (EFA), on the four implicit/latent variables of brand innovation, brand perception, brand equity and customer value. SEM is made up of structural and measurement models to efficiently tackle the causal relationships among implicit/latent variables. The three parts of model-testing in this study are: (1) goodness-of-fit of the measurement model; (2) goodness-of-fit of the structural model; and (3) the overall model’s conformity with goodness-of-fit indices. In other words, goodness-of-fit indices were applied to a test of the overall goodness-of-fit effect of SEM (Diamantopoulos & Siguaw, 2000; Lee, 2011).

Results and Analysis of CMV Test

A multi-factor CFA displays the nested structure of a single-factor CFA, which means the nested multi-factor CFA is a subordinate structure under the single-factor one. In this study, a chi-square difference test was conducted with the hypothesis of “there is little difference between the single-factor CFA model and multi-factor one (as shown in Fig. 2 and Fig. 3).” The test results proved a difference between the two models, given the highly significant gap in their chi-square values, without any evidence that the CMV is present.

The test was conducted in the following steps:

(1) A Fig. of single-factor CFA was compiled to derive statistics such as the chi-square values, degree of freedom, and goodness-of-fit.
The figure was revised according to the initial factor model (see Fig. 3) before an analysis was carried out to derive statistics of another model, namely the chi-square value, degree of freedom and goodness-of-fit (Open CMV multifactor.amw file).

Comparing the two models
\[ \Delta df = 209 - 63 = 146; \Delta \chi^2 = 468.54 - 138.55 = 329.99 \]

Calculating the Statistical Significance

Activate the STATABLW program, select Distribution \( \rightarrow \) Continuous \( \rightarrow \) Chi-Square, specify the \( \Delta df \) and \( \Delta \chi^2 \) and click on Enter, and we will obtain the p-value. The p-value in this study is 0, which indicates a highly level of significance that rejects the null hypothesis while proving the difference between the two models examined (see Fig 2 and Fig 3). Apparently, it is impossible that CMV is present in any of this study’s dimensions. The calculation of coefficients will not be biased because CMV is not a concern in the present study, which makes confusing explanations of research results unlikely.

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**Fig 2: Single-Factor CFA**

- \( e_1 \) to \( X_1 \) with 0.82
- \( e_2 \) to \( X_1 \) with 0.83
- \( e_3 \) to \( ME1-1 \) with 0.84
- \( e_4 \) to \( ME1-2 \) with 0.82
- \( e_5 \) to \( ME2-1 \) with 0.83
- \( e_6 \) to \( ME2-2 \) with 0.85
- \( e_7 \) to \( Y_1 \) with 0.80
- \( e_8 \) to \( Y_2 \) with 0.81

One factor CMV
- chi-square = 468.541
- degree of freedom = 209
- norm chi = 10.376
- gfi = 0.9; agfi = 0.901
- msea = 0.038
Analyzing Fit of the Measurement Model

To a large extent, factor loading is intended to measure the intensity of linear correlation between each latent/implicit variable and a manifest/explicit one. The closer the factor loading is to 1, the better an observable variable is in measuring latent variables. Since this study’s reliability is supported by the fact that factor loadings for all observable variables range between 0.7 and 0.9, all observable/explicit variables in the measurement model appropriately gauged the latent/implicit ones. The Average Variance Extracted (AVE), on the other hand, gauges an implicit/implicit variable’s explanatory power of variance with regard to an observable one, with the AVE value growing in proportion to the reliability and convergent validity of that particular implicit/latent variable. As a rule, AVE must be larger than 0.5 for an observable variable’s explainable variance to exceed the measurement error (Fornell and Larcker, 1981). Since the values of factor loadings, Composite Reliability (C.R.) and Cronbach’s $\alpha$ in this study all exceed 0.7, with AVE values invariably larger than 0.5, the latent/implicit variables have excellent reliability and convergent validity (see Table 1, Table 2 and Fig. 3).
Table 1: Judgment Indicators for the Measurement Model  
Standardized Regression Weights: (Group number 1 - Default model)  

<table>
<thead>
<tr>
<th>Implicit /latent variables</th>
<th>Observable /explicit variables</th>
<th>Factor loading</th>
<th>Composite Reliability, C. R.</th>
<th>Cronbach’s α</th>
<th>Average Variance Extracted, AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Innovation</td>
<td>x1</td>
<td>.813</td>
<td>.814</td>
<td>.803</td>
<td>.604</td>
</tr>
<tr>
<td></td>
<td>x2</td>
<td>.824</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Perception</td>
<td>ε1</td>
<td>.823</td>
<td>.821</td>
<td>.813</td>
<td>.614</td>
</tr>
<tr>
<td></td>
<td>ε2</td>
<td>.814</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Equity</td>
<td>ε3</td>
<td>.813</td>
<td>.811</td>
<td>.803</td>
<td>.611</td>
</tr>
<tr>
<td></td>
<td>ε4</td>
<td>.821</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Value</td>
<td>y1</td>
<td>.813</td>
<td>.812</td>
<td>.803</td>
<td>.661</td>
</tr>
<tr>
<td></td>
<td>y2</td>
<td>.813</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this study, the discriminant validity among the model’s dimensions is determined using the AVE method. Fornell and Larcker (1981) said there would be discriminated validity between dimensions when the AVE exceeds the square of correlation coefficients in each dimension. Table 2 proves the discriminant validity among this study’s perspectives (i.e., brand innovation, brand perception, brand equity and customer value).

Table 2: Estimated Values for Discriminated Validity within the Confidence Interval

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Ψ±2σ</th>
<th>Bias-corrected</th>
<th>Percentile method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower</td>
<td>Upper</td>
<td>Lower</td>
</tr>
<tr>
<td>X→ME1</td>
<td>.481</td>
<td>.304</td>
<td>.622</td>
<td>.301</td>
</tr>
<tr>
<td>ME1→ME2</td>
<td>.522</td>
<td>.421</td>
<td>.624</td>
<td>.410</td>
</tr>
<tr>
<td>ME2→Y</td>
<td>.481</td>
<td>.382</td>
<td>.584</td>
<td>.382</td>
</tr>
<tr>
<td>ME1→Y</td>
<td>.473</td>
<td>.381</td>
<td>.564</td>
<td>.371</td>
</tr>
<tr>
<td>X→ME2</td>
<td>.471</td>
<td>.401</td>
<td>.544</td>
<td>.391</td>
</tr>
<tr>
<td>X→Y</td>
<td>.491</td>
<td>.391</td>
<td>.582</td>
<td>.381</td>
</tr>
</tbody>
</table>

Analyzing Fit of Structural Model

This study’s author made sure that the model passed the goodness-of-fit test before calculating the parameter estimates, Standard Errors (S.E.) and Critical Ratio (C.R.) among latent variables, as shown in Table 3 and Table 4 (Leeb, 2008).

Table 3: Path Analysis Results of the Structural Model (Un-standardized)

<table>
<thead>
<tr>
<th>Path Coefficients for Each Pair of Latent Variables</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Innovation (X) → Brand Perception (ME1)</td>
<td>0.993</td>
<td>0.123</td>
<td>8.073</td>
<td>***</td>
<td>c</td>
</tr>
<tr>
<td>Brand Perception (ME1) → Brand Equity (ME2)</td>
<td>1.104</td>
<td>0.131</td>
<td>8.427</td>
<td>***</td>
<td>b3</td>
</tr>
<tr>
<td>Brand Equity (ME2) → Customer Value (Y)</td>
<td>1.002</td>
<td>0.133</td>
<td>7.534</td>
<td>***</td>
<td>b2</td>
</tr>
<tr>
<td>Brand Perception (ME1) → Customer Value (Y)</td>
<td>1.003</td>
<td>0.171</td>
<td>5.865</td>
<td>***</td>
<td>a1</td>
</tr>
<tr>
<td>Brand Innovation (X) → Brand Equity (ME2)</td>
<td>0.972</td>
<td>0.151</td>
<td>6.437</td>
<td>***</td>
<td>a2</td>
</tr>
<tr>
<td>Brand Innovation (X) → Customer Value (Y)</td>
<td>0.951</td>
<td>0.152</td>
<td>6.257</td>
<td>***</td>
<td>b1</td>
</tr>
</tbody>
</table>

Note: * indicates P<0.05; ** indicates P<0.01; *** indicates P<0.001
Table 4: Standardized Regression Weights: (Group number 1–Default model)

<table>
<thead>
<tr>
<th>Path Coefficients for Each Pair of Latent Variables</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Innovation (X) → Brand Perception (ME1)</td>
<td>.641</td>
</tr>
<tr>
<td>Brand Perception (ME1) → Brand Equity (ME2)</td>
<td>.822</td>
</tr>
<tr>
<td>Brand Equity (ME2) → Customer Value (Y)</td>
<td>.661</td>
</tr>
<tr>
<td>Brand Perception (ME1) → Customer Value (Y)</td>
<td>.642</td>
</tr>
<tr>
<td>Brand Innovation (X) → Brand Equity (ME2)</td>
<td>.683</td>
</tr>
<tr>
<td>Brand Innovation (X) → Customer Value (Y)</td>
<td>.672</td>
</tr>
</tbody>
</table>

Note: * indicates P<0.05; ** indicates P<0.01; *** indicates P<0.001

Indices of Fit of the Overall Model

This study’s author adopted SEM for modeling in order to explore how implicit variables connect to one another in the Structural Model, whether the measurement model has measurement reliability, and how the overall model’s goodness-of-fit effect is. While $\chi^2$, d.f., GFI, AGFI, NFI, CFI, RMR and RMSEA are the goodness-of-fit indicators for the overall model, it is preferable that $\chi^2$/d.f. <5, 1>GFI>0.9, 1>NFI>0.9, 1>CFI>0.9, RMR<0.05 and RMSEA<0.05 (Bagozzi & Yi, 1988). In this study, the overall model has a satisfactory goodness-of-fit effect because $\chi^2$/d.f. <5 and the values of GFI, AGFI and NFI all exceed 0.90, with a below-0.05 RMR, as shown as in Table 5 (Leea, 2011).

Table 5: Assessment of Fit of the Overall Model

<table>
<thead>
<tr>
<th>Determination index</th>
<th>$\chi^2$</th>
<th>DF</th>
<th>GFI</th>
<th>AGFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMR</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fit value</td>
<td>882.66</td>
<td>453</td>
<td>0.914</td>
<td>0.901</td>
<td>0.802</td>
<td>0.721</td>
<td>0.041</td>
<td>0.032</td>
</tr>
</tbody>
</table>

Standardized Results of SEM Analysis

The model’s overall framework was resulted from computer-aided standardization, as shown in Fig. 4.
Analytical Testing of Path Effects for the Structural Model

Focused on the path coefficients between implicit/unobservable variables in the structural model, this study’s author adopted Mackinnon PRODCLIN 2 in an analytical test (MacKinnon, Fritz, Williams and Lockwood, 2007) to determine the statistical significance of that model’s path effects, distal mediation effect, specific mediation effect, direct effect and total effect (see Table 6). According to Table 4.6, the distal mediation effects, specific indirect mediation effects, direct effects and total effect are all significantly positive in this study’s structural model. The structural model in Fig. 4 contains path coefficients that suggests: (1) the distal mediation effect in the structural model is denoted by $a_1*b_3*b_2$; (2) the specific indirect effect of brand perception is denoted by $(a_1*b_1)/(c+a_1*b_1)$; (3) the specific indirect effect of brand equity is denoted by $(a_2*b_2)/(c+a_2*b_2)$; (4) the direct effect is denoted by $(c)$; (5) the total effect is the sum of indirect and direct effects. Values of the five effects were calculated as follows:

1. The distal mediation effect regarding path coefficients in the structural model $(a_1*b_3*b_2) = 0.641*0.822*0.661 = 0.348$
2. The direct effect $(c) = 0.641$.
3. (I) The total effect concerning the brand perception variable = indirect effect + direct effect $= 0.642*0.672+0.641 = 0.431+0.641 = 1.072$;
   (II) The total effect concerning the brand equity variable = indirect effect + direct effect $= 0.683*0.661+0.641 = 1.092$.
4. The specific indirect effect of brand perception $(a_1*b_1)/(c+a_1*b_1)$ $= (0.642*0.672)/(0.641+0.683*0.661) = 0.402$.
5. The specific indirect effect of brand equity $(a_2*b_2)/(c+a_2*b_2)$ $= (0.683*0.661)/(0.641+0.683*0.661) = 0.413$.

The calculations above suggest that, in the model built for this present study, the variables between brand perception and brand equity have almost the same specific indirect effect; specific indirect effect of the former is 0.402, and the latter 0.413.

<table>
<thead>
<tr>
<th>Variable</th>
<th>MacKinnon PRODCLIN2 95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>X→ME1</td>
<td>.309</td>
</tr>
<tr>
<td>ME1→ME2</td>
<td>.674</td>
</tr>
<tr>
<td>ME2→Y</td>
<td>.431</td>
</tr>
<tr>
<td>ME1→Y</td>
<td>.423</td>
</tr>
<tr>
<td>X→ME2</td>
<td>.443</td>
</tr>
<tr>
<td>X→Y</td>
<td>.451</td>
</tr>
</tbody>
</table>

According to Table 6, the distal mediation effects, specific indirect mediation effects, direct effects and total effect are all significantly positive in the structural models in this study.

The following results were derived from analyses mentioned above:
1. The brand innovation exerts a distal mediation effect on customer value at the corporation being examined in this study, hence the substantiated $H_2$, $H_4$ and $H_6$ (Hypothesis substantiated);
2. The brand innovation significantly, positively and directly affects customer value at the corporation being examined in this study, with a 0.672 standardized path coefficient that supports $H_1$ (Hypothesis substantiated);
3. The brand innovation implementation, mediated by brand perception, exerts a significant, specific and indirect mediating effect on customer value at the corporation being examined in this study, hence the substantiated H1, H2 and H3 (Hypothesis substantiated);

4. The brand innovation implementation, mediated by brand equity, exerts a significant, specific and indirect mediating effect on customer value at the corporation being examined in this study, hence the substantiated H1, H4 and H5 (Hypothesis substantiated);

5. The two specific mediators of *brand perception* and *brand equity* have almost the same specific indirect effect.

**CONCLUSIONS AND SUGGESTIONS**

**Conclusions**

Conclusions were derived from the afore-mentioned data analyses and results, as detailed in the following passages:

1. Hypotheses H2, H4 and H6 Supported: The brand innovation implementation has a distal mediating effect on customer value at the corporation being examined in this study. This conclusion is the same as the research arguments of Liang (2012), Lin (2011) and Wu (2012). In spite of different industries of research objects, their research conclusions had something in common: (1) the brand innovation implementation will positively affect the brand perception; (2) the brand perception will positively affect the brand equity; and (3) the brand equity will also positively affect the customer value.

2. Hypothesis H1 Supported: The brand innovation significantly, positively and directly affects customer value at the corporation being examined in this study. This conclusion is the same as the research arguments of Chang (2011); that is, the brand innovation will significantly and positively affect the customer value.

3. Hypotheses H1, H2 and H3 Supported: The brand innovation implementation, mediated by brand perception, exerts a significant, specific and indirect mediating effect on customer value at the corporation being examined in this study. This conclusion is the same as the research arguments of Lin (2009), Chen (2011) and Wu (2010). In spite of different industries of research objects, their research conclusions had something in common; that is, the brand innovation will positively affect the brand perception; additionally, the brand perception will also positively affect the customer value.

4. Hypotheses H1, H4 and H5 Supported: The brand innovation implementation, mediated by brand equity, exerts a significant, specific and indirect mediating effect on customer value at the corporation being examined in this study. This conclusion is the same as the research arguments of Cho (2008), Lin (2011) and Chung (2011). In spite of different industries of research objects, their research conclusions had something in common; that is, the brand innovation will positively affect the brand equity; additionally, the brand equity will also positively affect the customer value.

5. Comparing the specific mediating effects of brand perception and brand equity: The two specific mediators in this study (i.e., *brand perception* and *brand equity*) have almost the same specific indirect effect.
CONTRIBUTIONS OF THE PRESENT STUDY

Innovative applications of research method

Exploratory research enabled by multi-regression analyses accounts for a majority of the literature, leaving the CFA-based research framework with distal mediators rarely considered. Since the present study’s main perspectives are implicit variables, CFA and linear SEM, but not multi-regression analysis, appear to be suitable measurement tool and model framework, respectively. Moreover, this study includes a series of analyses and tests of reliability, validity and CMV in the design of questionnaire scales and model dimensions, using relatively new statistical methods. That explains why this study is relatively innovative in terms of research methodology.

Contributions to the practices

Unlike the previous studies that were largely based on EFA, this study’s author performed modeling in accordance with the summarized literature review and then verified the model’s goodness-of-fit effects. The present study, consequently, is a CFA-based one addressing topics that are both important and innovative in terms of business practices, with the research results providing a reference for further studies in relevant fields, and also for the management of the corporation being examined in this study seeking to improve customer value with strategic managerial decisions.

Managerial significance of the present study

The brand innovation has currently become the most important issue to brand management during the era of knowledge-based economy. Only continuity of innovation will maintain the vitality of a brand; therefore, businesses’ attention to consumer acceptance to brand innovation should give a demonstration. In other words, only those businesses understanding customers’ requirement and expressing their concerns on customer value will have competitive advantage, which will be the key to achieve successful business operation.

In addition, the brand equity is to build the brand advantage in customers’ mind that let the brand product building up its competitive advantage in the market, winning customers’ positive preference and impression on the brand product; moreover, customers will be increasingly aspired to purchase the product.

Furthermore, marketing executives can strengthen brand knowledge and image in consumers’ minds by using media advertising and others; and then, consumers’ brand perception will be enhanced to increase the brand customer value.

Therefore, this author conducted a case study of a particular Japanese motor corporation in Taiwan and built a research model for analyses/verification in an attempt to understand the model’s goodness-of-fit. For the managerial significance, it actually has made a great contribution to theory and practice.

Limitations and suggestions

1. Considering the limited amount of research resources, simple random sampling was used to yield information from the population and higher sample response rates. That method, however, led to sampling bias and unsatisfactory reliability. Future studies are advised to use the other sampling methods (e.g., simple random sampling and stratified random sampling methods) instead.
2. Regarding modeling for a CFA-based study like the present one, it is advisable that a simple verification
model be built to avoid excessive complexity, and the subsequently poor goodness-of-fit (Shun-yu Chen, 2010). This study’s author, therefore, decided to focus solely on the two mediators of brand perception and brand equity to determine whether the model constructed in this study suggests a distal mediating effect, and which of the mediators has a greater specific indirect effect. Future researchers, nevertheless, may increase the number of mediators and compare their specific indirect effects.

3. This study is focused solely on the CFA of a Taiwan-listed company, and future researchers are advised to conduct similar studies on a wider range of companies or different industries for comparative analyses of multiple groups.

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