The Role of Customer Involvement in Mediating the Relationship Between Brand Equity and Customer Loyalty

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Abstract—**The prior research indicated there were significant relationship between customer involvement, brand equity, and customer loyalty. The purpose for the study was to find out how customer involvement mediates the relationship between brand equity and customer loyalty. The participants for this research were selected as the consumers having the shopping experience for smart phone in Taiwan, resulting in 182 individual surveys for this research. The results supported hypothesis and revealed brand equity and customer involvement had significant and positive relationship with customer loyalty, while customer involvement has partial indirect effect on customer loyalty in path analysis. Finally, this research generated the suggestions for business strategies and suggested future scholar studies.**

Keywords—customer involvement, brand equity, customer loyalty, consumer behavior

I. THEORETICAL FOUNDATION

Current consumer behavior researches have recognized customer involvement, brand equity, and customer loyalty are significant subjects. Simoes and Dibb [1] also stated powerful brand image will enhance consumers' faith for unseen value, deliver customers better product image or appreciate the intangible assets, and decrease consumers' perceived financial, social, or safety risk. Aaker and Keller [2] indicated the brand equity is the key indicator for customer retention. The most well-known brand equity model was provided by Aaker [3]. This model stated that brand equity encompasses five dimensions, such as brand awareness, perceived quality, brand royalty, brand association, and other proprietary asset. Many previous studies of brand equity (Atilgan, Aksoy, and Akinci [4]; Kim and Kim [5]; Yoo, Donthu, and Lee [6]) have empirically applied this theory. Santouridis and Trivellas [7] defined customer loyalty was the customer's attitude for re-purchasing intentions for buying same products. Jones and Sasser [8] recognized the customer involvement was a significant factor to influence customer behavior and argued the different level of customer involvement will affect customer purchasing behavior. Knox and Walker [9] indicated customer involvement will affect the final decision during purchasing procedure and the higher-involved customer will behave higher loyalty. And this behavioral intention will help to maintain the business relationship between customers and companies.

Hu [10] and Hu [11] conducted a research and supported the concept that customer involvement, brand equity, and perceived risk, had significant and positive relationship with customer loyalty. Based on the research by Olsen [12], the customer involvement has acted a complete mediator role between customer satisfaction and repurchase loyalty. Knox and Walker [9]claimed customer involvement played an important role when maintain loyalty relationship with customer. Previous studies have suggested there were significant and positive relationship between customer loyalty, brand equity, and customer involvement. This research expanded these theories and ground studies, conducted more detailed analysis, and intended to examine the indirect effect of customer involvement for the relationship between brand equity and customer loyalty.

II. RESEARCH HYPOTHESES

This study tried to investigate: (a) to examine the indirect effect of customer Involvement for the relationship between brand equity and customer loyalty.(b) to create the suggestions for business application for electrical consumer products, and (c) to find out areas for future scholarly inquiry. Baron and Kenny [13] suggested a variable function as a mediator when it meets the conditions as follow: (a) variations in levels of the independent variable able significantly account for variations in the presumed mediator., (b) variations in the mediator significantly account for variations in the dependent variable., (c) When (a) and (b) were controlled, a previously significant relationship between the independent variable and dependent variable was no longer significant, this means the strong confirmation for a dominant mediator.

The researcher developed the hypothesis based on the principle of Baron and Kenny [13] as follows: There is indirect effect of customer involvement for the relationship

between brand equity and customer loyalty. And the three sub-hypothesis are as follows: 1.Hypothesis(a): There is significant relationship between brand equity and customer involvement., 2.Hypothesis(b): There is significant relationship between brand equity and customer loyalty., 3.Hypothesis(c): There is significant relationship between brand equity or customer involvement, and customer loyalty.

III. METHODOLOGY

A. Questionnaire

Three questionnaires have adopted in this study: The Customer Loyalty Questionnaires (6 items) was from the research by Hu [11] and the scales were based on the theory by Aydin and Ozer [14], and encompasses four dimensions: repeated purchase (1 item), price toleration (2 items), recommendations (2 items) and cross purchase (1 item). The Brand Equity Questionnaires (7 items) was from the research by Hu [11] and the scales were based on the definition by Kayaman and Arasli [15] concept model, while this research adopted four dimensions: brand awareness (1 item), brand association (2 items), perceived quality (2 items) and brand loyalty (2 items) for examining the perception of brand equity by customers. The Consumer Involvement Questionnaires (10 items) was from the research by Hu [11] and the scales were based on the definition by Kapferer and Laurent [16] CIP model (Consumer Involvement Profile), which encompasses five dimensions: interest (3 items), pleasure (2 items), symbolic value (2 items), importance (1 item), and risk probability (2 items).

B. Population and Data Collection

The population were identified the consumers who had the experience to buy smart phone in this research. The researcher applied convenience sampling method with anonymous survey to ensure the response rate is acceptable. The researcher distributed the hard copy of questionnaires to participants directly. After contacting with available person agreeing to participate this research, the researcher distributed the hard copy of questionnaires to participants directly. A total of 220 consumers have had participated this study. After deducting 38 invalid response, the total number of valid responses was 182, providing an adjusted response rate of 83 %.

C. Validity and Reliability

The Analysis of Moment Structure software (AMOS) was applied to examine validity and reliability issues for CFA tests. The composite reliability (CR) and average variance extracted (AVE) values were measured to examine the internal consistency as an estimate of reliability for questionnaires and all indices were summarized in Table 1. Fornell and Lacker [17] suggested CR and AVE value are supposed greater than .7 and .5 separately. Hair, Anderson, Tatham and Black [18] also suggested key components for convergent validity as: 1. Factoring loadings ($>$.7), 2. Composite Reliability ($>$.7), 3. Square multiple Correlations, SMCs ($>$.5), 4. Average Variance Extracted , AVE ($>$.5). After reviewing all CFA

models (Table 2), the reliability and convergent validity were acceptable in this research.

TABLE 1: The Results of CFA Analysis for Reliability and Convergent Validity

Factors	Parameters of Factors				Convergent Validity			
	UNStd FL	S.E	C.R.	P	Std. FA	SMC	C.R.	AVE
BE1	1				.82	.67		
BE2	.98	.08	12.07	***	.82	.68	.74	.42
BE3	.95	.08	12.12	***	.83	.68		
BE4	.86	.08	10.74	***	.75	.60		
CI1	1				.95	.90		
CI2	.85	.07	12.60	***	.78	.61		
CI3	.75	.07	11.35	***	.72	.52	.80	.50
CI4	.69	.08	8.79	***	.60	.36		
CI5	.35	.08	4.41	***	.33	.11		
CL1	1				.65	.42		
CL2	1	.15	6.84	***	.60	.35	.62	.31
CL3	1.59	.19	8.58	***	.89	.80		
CL4	1.32	.16	8.14	***	.74	.55		

Note: BE1: brand Awareness, BE2: brand association, BE3:perceived quality, BE4: brand loyalty; CI1: interest, CI2: pleasure , CI3: symbolic value, CI4: importance CI5: risk probability; CL1: repeated purchase , CL2: price toleration , CL3:recommendations, CL4: cross purchase

TABLE 2: Model Fit Index

Factors	Model Fit Index					
	$\chi 2$	DF	$\chi 2$/DF	GFI	AGFI	RMSEA
Brand Equity	10.11	2	5.056	.972	.860	.150
Customer Involvement	30.41	5	6.082	.935	.804	.168
Customer Loyalty	17.506	2	8.753	.958	.788	.207

Construct validity encompass two factors as discriminant validity and convergent validity. The convergent validity has been tested to explain the construct validity in Table 1. The researcher applied Bootstrap Confidence Intervals approach to evaluate the discriminant validity as Table 3.

TABLE 3. Testing Results of Bootstrap Confidence Intervals for Discriminant Validity

Parameter			Estimate	$\psi\pm2\sigma$		Bias-Corrected		Percentile	
				Lower	Upper	Lower	Upper	Lower	Upper
BE	<-->	CI	.633	.505	.761	.500	.748	.502	.749
CL	<-->	CI	.663	.539	.787	.520	.772	.529	.779
CL	<-->	BE	..837	.759	.915	.736	.897	.755	.907

Note: BE: brand equity, CI: customer involvement, CL: customer loyalty

Torkzadeh, Kouferos, and Pflughoeft [19] claimed the values within intervals should not include value 1.00 when the model demonstrated reasonable discriminant validity. The

results of tested indices met this standard and revealed the discriminant validity was reasonable.

IV. RESULTS

The Structure Equating Modeling (SEM) by AMOS software was applied to test the model structure in this study. The path model is shown in Figure one.

For model fit issues: The Chi-Square value was 141.24. The Normedo value was 2.278. Ullman [20] suggested the Normedo value should below 2.00. The Goodness of Fit Index (GFI) value was .892, and scholars recognized the GFI value should greater than .900. The Adjusted Goodness of Fit Index (AGFI) value was .841. Macallum and Hong [21] stated AGFI value should greater .800. The Comparative Fit Index (CFI) value was .937, while the CFI value has been discussed its value should close to 1.00. The Root Mean Square Error of Approximation (RMESA) value was .084, while Hu and Bentler [22] claimed RMESA value should close to .06. Therefore, in overall, all indices explained the issue of model fit was reasonable.

FIGURE One: Factor Analysis for Responsiveness Items
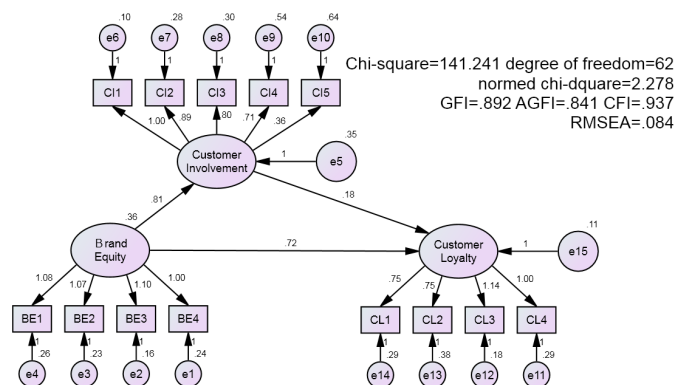
Note: BE1: brand Awareness, BE2: brand association, BE3:perceived quality, BE4: brand loyalty; CI1: interest, CI2: pleasure , CI3: symbolic value, CI4: importance CI5: risk probability; CL1: repeated purchase , CL2: price toleration , CL3:recommendations, CL4: cross purchase

Regression models of path analysis from SPSS software were applied to examine the hypothesis and the results were summarized in Table 4. The results supported the H(a): There is significant relationship (β=.526, p<.05) between brand equity and customer involvement. The results also supported the H(b): There is significant relationship (β=.668, p<.05) between brand equity and customer loyalty. The results supported the H(c): Customer involvement presented partial indirect effect (β=.241, p<.05) on relationship between brand equity and customer loyalty. The results of Sobel test (z=6.3, α=.05) presented the value of $z > |1.96|$ and also supported the H(c).

TABLE 4: Regression Models of Path Analysis for Customer Involvement Mediating the Relationship between Brand Equity and Customer Loyalty

		Unstd. B	SE	Std. B	t	R^2
Model 1	BE	0.526***	0.06	0.549***	7.668	.302
	DV: CI					
Model 2	BE	0.668***	0.05	0.704***	13.304	.496
	DV: CL					
Model 3	BE	0.541***	0.058	0.571***	9.374	.537
	CI	0.241***	0.06	0.243***	3.994	
	DV: CL					

Note1: ***p<.0.001(2-tailed), **p<.0.01(2-tailed), *p<.05 level (2-tailed).

Note2: BE: brand equity, CI: customer involvement, CL: customer

V. CONCLUSIONS AND RECOMMENDATIONS

The outcomes of this research revealed the fact that customer involvement and brand equity had significant relationship with customer loyalty. Customer involvement also partially mediated the relationship between brand equity and customer loyalty. This means both brand equity and customer involvement played the significant roles to effect customer's perception on customer loyalty, while customer involvement has the indirect effect on customer loyalty. This fact revealed companies may not only focus on managing brand image, also should put more focus on building stronger customer involvement, or develop some promotion activities based on how encouraging customers to involve the process during shopping. The research results also found the complexities of customer behaviors on purchasing on smart phone, as the high price electrical consumer products. This research indicated the necessities for future study to identify more effective factors to influence the customer loyalty.

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