RELATIONSHIPS AMONG CORPORATE IMAGE, SERVICE QUALITY, SWITCHING COSTS, CUSTOMER SATISFACTION AND LOYALTY: AN EXAMPLE OF TOYOTA'S DISTRIBUTORS IN TAIWAN

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Abstract

This paper seeks to understand the relationships among corporate image, service quality, switching costs, customer satisfaction and loyalty by referring to customer satisfaction as the triple mediating variable. A survey was conducted via convenience sampling on front-desk personnel, supervisors and customers, existing and prospective, of Toyota's service centres and distributors. This paper applies the partial least squared linear structural equation modelling (PLS-SEM) to examine the goodness-of-fit of the linear model and outer model. This is followed with a path effect analysis of the structural model with Bayesian estimations and path coefficient of latent variables (a.k.a. unobservable variables) in the inner model. Sobel tests are also conducted to gauge whether the direct effects, mediating effects and total efficient effects are significant. The research findings indicate correlations among corporate images, service quality, switching costs, customer satisfaction and loyalty. Meanwhile, customer satisfaction has the almost complete mediating effects. Meanwhile, the research findings serve as a template for companies to boost customer satisfaction with better corporate image and service quality, and prevent customer loss by increasing switching cost. This will boost customer loyalty and repurchase intention of existing and prospective customers.

Keywords: corporate image, service quality, switching costs, customer satisfaction, customer loyalty

1 INTRODCUTION

Corporate image is the most immediate and impactful impression that comes to the consumers' minds about companies. Since inception, Toyota has been striving to product quality automobiles. Other than its continued pursuit of perfection in cars, Toyota is also extending

its brand and creativity to different aspects of car owners' life. As technologies evolve, Toyota has been dedicated to the offering of environmental friendly vehicles. Toyota is also developing new energy vehicles by leveraging its leadership in internal combustion engines and hybrid vehicles [1] . Toyota has established a strong presence in the Taiwanese market and one reasons for its high market share is the corporate image in environmental protection, safety, car durability and petro efficiency. Toyota is known for its service quality and responsiveness. This increases the switching costs and boosts customer satisfaction and loyalty.

Martineau [2] believed that corporate image is a subjective attitude, feelings and impressions that consumers have toward companies. Chuang [3] suggested that corporate image, service quality, perceived values all have positive influence on customer loyalty and satisfaction. Hsiao [4] indicated that service quality has positive effects on customer loyalty and corporate image. Meanwhile, corporate image also has a positive impact on customer loyalty. Wu [5] posited that the better the firm image, the greater the consumer attitude and customer loyalty. Liao [6] contended that that the relationship between customer satisfaction and customer loyalty is subject to the influence of switching costs. Lin [7] pointed out the significant and positive correlation between customer satisfaction and customer loyalty. In sum, the relationships among corporate image, service quality, switching costs, customer satisfaction and loyalty is a

topic worthy of attention. Based on the above motivations, this paper seeks to explore the relationships among corporate image, service quality, switching costs, customer satisfaction and loyalty by using customer satisfaction as the triple mediating variable. A survey was conducted on Toyota's distributors, existing and prospective customers in Taiwan. The objectives of this study are as follows:

(1) To understand the relationships between corporate images, service quality, switching costs, customer satisfaction and loyalty for Toyota's distributors and customers, existing and prospective; and

(2) To examine whether customer satisfaction has triple mediating effects in the research mode.

2 LITERATURE REVIEW

2.1 Literature Regarding Key Constructs

Below is a review of the literature in relation to key constructs in this paper, i.e. corporate image, service quality, switching costs, customer satisfaction and loyalty.

2.1.1 Definition of corporate images

There is extensive literature on corporate images. This paper defines corporate images as the general perception and evaluation that a person holds toward a company on the basis of known and relevant information. This image is created by personal and subjective opinions, and may not necessarily reflect the truth about the company.

The above definition is a summary of the following literature:

Gunther [8] interpreted corporate images from the

perspective of company activities. Hence, corporate images can be defined as the combination of knowledge, feelings, beliefs and convictions associated with company activities.

Martineau [2] believed that corporate image are a subjective attitude, feeling and impression consumers have toward companies.

Walters [9] indicated that corporate images are subjective feelings or impressions consumers have toward companies or company activities.

Cornalissen [10] suggested that the word of mouth and other factors affect corporate operation and this very process establishes corporate images.

Fang [11] argued that corporate images are the media through which consumers understand products/services. This reduces concerns and mitigates uncertainty associated with purchase decisions. Good corporate images enhance purchase willingness and foster a sense of trust.

Lin [12] defined corporate images as the attitude consumers hold toward companies. Corporates images encompass the overall images and the images about company operations and products.

Lien [13] suggested that corporate images are an external expression of corporate culture and spirits. They are a general impression the public gathers in contact with companies.

2.1.2 Definition of Service Quality

This paper defines service quality as the evaluations customers make toward the quality of total services. This is a comparison between the expected level of services and perceived quality of services rendered. Service quality is the degree to which customer expectations are met.

The above definition is a summary of the following literature:

Parasuraman, Zeithaml and Berry [14] believed that service quality is the comprehensive evaluations or attitudes consumers have Good services beat the expectations of consumers.

Lin [15] suggested that service quality is the evaluations by customers regarding the level of services based on the gap between their expected services and perceived of services rendered.

Ong [16] defined service quality as the comparison made by consumers based on their expectation of service levels against the process of service rendering and the perceived outcome of the service.

Andrew, Clayton and Charles [17] posited that service quality is the level of customer expectations being met.

Etzel, Walker, and Stanton [18] pointed out that service quality is measured by customers by comparing their expectations and the perceived level of service provided.

Hsu [19] believed that service quality is an abstract concept. The level of service quality varies given the subjective nature of consumers' judgement. Service quality is the perceived gap between consumer's expectations and the service they actually receive.

Fang [11] thought that customers evaluate service quality they perceive based on their subjective judgment. The results vary due to external and internal

factors.

2.1.3 Definition of Switching Costs

This paper defines switching costs as the price consumers pay for switching to another supplier or vendor. Switching costs are an inhibitive factor for the development of new service providers.

The above definition is based on the following literature:

According to Porter [20] , switching costs are the one-off costs associated with the change of partners, in contrast with the continued costs for the maintenance of relationship with partners.

Jackson [21] defined switching costs as the psychological, physical and economic costs a customer pays when switching a supplier.

Anderson & Narus [22] indicated that switching costs is an inhibitive factor for the development of new service providers.

Fornell [23] thought that obstacles to switching include search costs, learning costs, incentives to loyal customers, habits of customers and emotional costs. This is on top of financial, social and psychological risks that a buyer undertakes.

Gremler [24] defined switching costs as the actual or perceived costs, monetary or non-monetary, incurred by customers who have decided to switch service providers.

Burnham, Frels & Mahajan [25] regarded switching costs the costs incurred by customers who are switching to another vendor or supplier.

Chang & Chen [26] suggested that switching costs are

the costs associated with time, money and efforts perceived by consumer who are switching suppliers.

2.1.4 Definition of Customer Satisfaction

This paper defines customer satisfaction as the level of satisfaction or disappointment customers perceive about the products/services provided. It is an attitude after consumption and an-post evaluations on products/services. This process reflects the level of preference after consumption and affects future spending decisions.

The above definition is a summary of the following literature:

Fornell [23] indicated that consumer satisfaction is a holistic attitude anchored on experience. In other words, consumer satisfaction is the overall assessment of all the purchase experience with products/services. It is a performance indicator for companies in the past, present or future.

Woodruff [27] believed that consumer satisfaction is an immediate response that reflects value to consumers when they use products under specific circumstances.

Fournier & Mick [28] indicated that satisfaction is the conceptualized process regarding a single transaction or a product over time. It is an evaluation involving a series of mutually influencing factors.

Peter & Olson [29] suggested that customer satisfaction is the level of expectations for products being met or exceeded.

Zeithaml, Bitner and Gremler [30] contended that customer satisfaction is the assessment customers make on the basis of their needs and expectations being met.

Wong [31] posited that customer satisfaction in general is an emotional status. The assessment is subject to the influence of utility.

Lin and Wang [32] suggested that customer satisfaction is an accumulation of shopping experience for products/services. This experience forms the foundation of further shopping for products/services.

Chen [33] said that customer satisfaction is an ex-post assessment of their purchase at a specific occasion or point in time. It is the difference from their perceived satisfaction.

Liu, Wang and Chen [34] thought that customer satisfaction is the level of customer needs and expectation being met or exceeded by products/services.

Chuang, Chen and Chen [35] believed that customer satisfaction refers to the level of satisfaction or disappointment customers feel about products/services.

Kotler, Ang, Leong and Tan [36] suggested that customer satisfaction is a comparison made by customers by measuring the gap between their expectation and perceived performances/results of products.

2.1.5 Definition of Customer Loyalty

This paper defines customer loyalty as the customers satisfied with products/services are committed to further purchases of the same products/services, and willing to recommend such products/services to others. The above definition is a summary of the following literature:

Stum & Thiry [37] indicated that customer loyalty is

the intensity of the relationship between personal attitudes and repurchases/recommendations.

Prus & Brandt [38] pointed out that customer satisfaction drives customer loyalty, which is a commitment from customers to maintain a long-standing relationship with a brand or a company.

According to Bhote [39] , customer satisfaction is a willingness from satisfied customers to promote for the products/services of specific companies.

Oliver [40] pointed out that customer loyalty is a commitment to repurchase the products/services of the same brand even in different scenarios or amid fierce competition from other brands.

Wallace, Giese and Johnson [41] indicated that customer loyalty is a preference for a specific option in their attitude and behavior when offered with two options.

Rundle-Thiele [42] stated that customer loyalty is repurchases of specific products/services in both attitude and behavior. Loyal customers are very willing to recommend such products/services to others.

2.2 Literature Regarding Pair-Wise Correlations of Research Dimensions

2.2.1 Corporate Images and Customer Satisfaction

Based on the following literature on the correlation between corporate images and customer satisfaction, this paper develops H_1: Toyota's good corporate image among distributors in Taiwan has positive and significant influence on customer satisfaction.

According to Yao [43] , if control variables are taken into account, corporate images have positive influence

on customer loyalty. Control variables such as switching costs, trust and customer satisfaction all have positive effects on customer loyalty.

Hsiao [4] suggested that service quality has positive influence on customer loyalty. Service quality has positive influence on corporate images, which has positive influence on customer loyalty.

Wu [5] said that the better corporate images, the better consumer attitudes and customer loyalty.

Chuang [3] contended that corporate images, service quality and perceived value all have positive influence on customer loyalty and customer satisfaction.

As the above literature deals with different research subjects, this paper believes it is necessary to conduct a questionnaire survey and apply statistic techniques to validate H_1: Toyota's good corporate image among distributors in Taiwan has positive and significant influence on customer satisfaction.

2.2.2 Customer Satisfaction and Customer Loyalty

Based on the literature on the correlation between customer satisfaction and customer loyalty, this paper develops H_2: Customer satisfaction with Toyota's distributors in Taiwan has positive and significant influence on customer loyalty.

Lin [44] argued that the better corporate images, the greater customer loyalty. Put differently, corporate images have a positive and significant influence on customer loyalty. Jen [45] pointed out that customer satisfaction has positive influence on customer loyalty. Lin [46] agreed that customer satisfaction has a strong and positive influence on customer loyalty. Lin [7]

posited that there is a positive and significant correlation between customer satisfaction and customer loyalty. Chen [47] also believed that customer satisfaction has a direct impact on customer loyalty. Lin [48] indicated that customer satisfaction and customer loyalty are closely related. Yang [49] also stated that service quality, customer satisfaction and loyalty are significantly and positively correlated.

As the above literature deals with different research subjects, this paper believes it is necessary to conduct a questionnaire survey and apply statistic techniques to validate H_2: Customer satisfaction with Toyota's distributors in Taiwan has positive and significant influence on customer loyalty.

2.2.3 Corporate Images and Customer Loyalty

Based on the literature regarding the correlation between corporate images and loyalty, this paper develops H_3: Toyota's good corporate image among distributors in Taiwan has positive and significant influence on customer loyalty.

Chiu [50] indicated a positive correlation between corporate images and customer loyalty. Yao [43] suggested that corporate images have positive influence on customer loyalty if control variables are taken into account. Control variables such as switching costs, trust and customer satisfaction all have positive influence on customer loyalty. Hsiao [4] believed that service quality has positive influence on customer loyalty. This is because service quality has positive influence on corporate images and corporate images have positive influence on customer loyalty. Wu [5]

contended that the greater the corporate images, the better consumer attitude and customer loyalty. Chuang [3] also believed that corporate images, service quality and perceived value all have positive influence on customer loyalty and customer satisfaction.

As the above literature deals with different research subjects, this paper believes it is necessary to conduct a questionnaire survey and apply statistic techniques to validate H_3: Toyota's good corporate image among distributors in Taiwan has positive and significant influence on customer loyalty.

2.2.4 Service Quality and Customer Satisfaction

Based on the literature regarding the correlation between service quality and customer satisfaction, this paper develops H_4: The service quality of Toyota's distributors in Taiwan has positive and significant influence on customer satisfaction.

Lin [51] highlighted the positive correlation between service quality and customer satisfaction. Jen [45] also pointed out that service quality has positive influence on customer satisfaction. Chen [52] believed that service quality has positive and significant influence on satisfaction. Hsu [53] suggested that relationship marketing and service quality have direct, positive and significant influence on customer satisfaction. Meanwhile, relationship marketing, service quality and satisfaction have direct, positive and significant influence on customer loyalty. Lin [48] indicated that service quality and customer satisfaction are significantly correlated. Yang [49] also posited that service quality, customer satisfaction and loyalty are

significantly and positively correlated. Lin [54] contended that service quality has positive influence on customer satisfaction. Wang [55] indicated that the iPASS service quality perceived by senior high schools and vocational schools has positive influence on customer satisfaction. Yu [56] agreed that service quality has significant and positive influence on customer satisfaction. Liu [57] posited that service quality has significant influence on customer satisfaction.

As the above literature deals with different research subjects, this paper believes it is necessary to conduct a questionnaire survey and apply statistic techniques to validate H_4: The service quality of Toyota's distributors in Taiwan has positive and significant influence on customer satisfaction.

2.2.5 Switching Cost and Customer Satisfaction

Based on the literature concerning the correlation between switching costs and customer satisfaction, this paper develops H_5: The switching costs of customers with Toyota's distributors in Taiwan have positive and significant influence on customer satisfaction.

Liao [6] suggests that switching costs affect the relationship between customer satisfaction and loyalty. Lin [51] said that switching costs and customer loyalty are positively correlated, as switching costs enhances the influence of customer satisfaction on customer loyalty. Liu [58] indicated that switching costs have interfering effects on the relationship between customer satisfaction and customer loyalty. Chen [52] pointed out the significant and positive influence that switching

costs have on satisfaction. Yang [59] posited that switching costs are a moderator to the relationship between customer satisfaction and customer loyalty. Huang [60] indicated that switching costs as a moderator have certain influence on the relationship between customer satisfaction and customer loyalty.

As the above literature deals with different research subjects, this paper believes it is necessary to conduct a questionnaire survey and apply statistic techniques to validate H_5: The switching costs of customers with Toyota's distributors in Taiwan have positive and significant influence on customer satisfaction.

2.2.6 Switching Costs and Customer Loyalty

Based on the literature regarding the correlation between switching costs and customer loyalty, this paper develops H_6: The switching costs of customers with Toyota's distributors in Taiwan have positive and significant influence on customer loyalty.

Liao [6] suggested that there is a positive correlation between switching costs and customer loyalty. Wu [61] indicated that switching costs affect customer loyalty completely via dependence. Huang [60] highlighted the positive correlation between customer loyalty and service quality, customer satisfaction and switching costs. Cheng [62] also said that switching costs have positive influence on customer loyalty.

As the above literature deals with different research subjects, this paper believes it is necessary to conduct a questionnaire survey and apply statistic techniques to validate H_6: The switching costs of customers with Toyota's distributors in Taiwan have positive and significant influence on customer loyalty.

2.3 Research Structure

Based on the above research objectives, hypotheses and literature review, this paper develops a research structure (Figure 1) as follows:
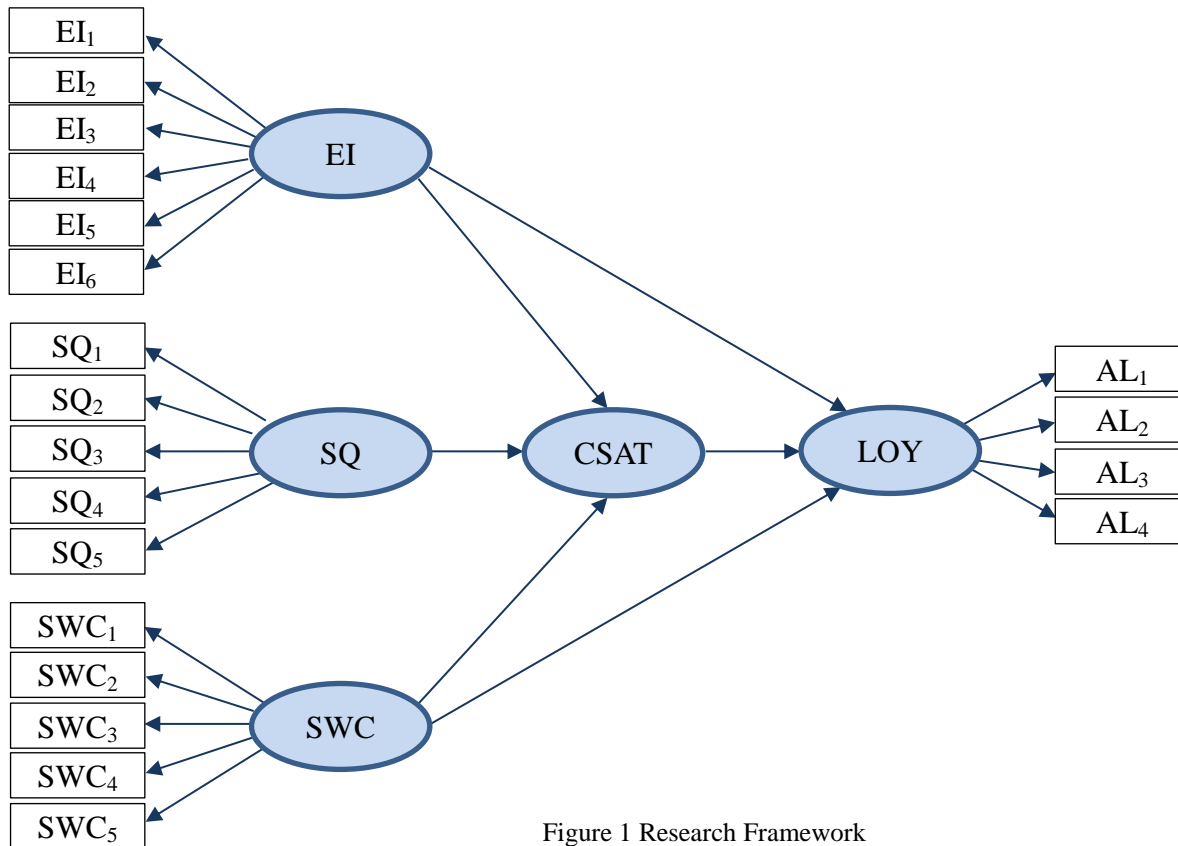
Figure 1 Research Framework

3 RESEARCH METHODOLOGY

3.1 Research Subjects and Questionnaire Design

This paper issues a questionnaire survey with convenience sampling of the supervisors, front-desk personnel and customers (existing and prospective) of Toyota's distributors in Taiwan. To enhance the content validity and reliability of the questionnaire, this paper conducts an expert questionnaire survey in the design phase and performs a pilot test to modify or eliminate unsuitable questions. A post-test is then administered with a total of 450 questionnaires issued. The number of recovered effective questionnaires is 395, at an effective recovery rate of 87.78%. Table 1 summarizes the question allocations to different variables in the main construct (conceptual) and sub-constructs (operational measurement).

Table 1: Questionnaire Structure

Main constructs	No. of questions	References
Corporate images (EI)	6	Lin [12] and Lien [13]
Service quality (SQ)	5	Lin [15] and Ong [16]

Switching costs (SWC)	5	Liao [6] , Chiu [50] , Lin [51] and Cheng [62]
Customer satisfaction (CSAT)	5	Chuang et al. [35]
Customer loyalty (LOY)	4	Liao [6] , Wu [5] and Huang [60]

3.2 Partial Least Squares Regression- Lineal Structural Model (PLS-SEM)

There are two SEM families: covariance-based SEM (CBSEM) and variance-based SEM, a.k.a. partial least square SEM (PLS-SEM). Table 2 shows the differences of these two models. This paper uses PLS-SEM due to its following advantages: (1) model complexity; (2) exploratory research; (3) non-normal data; (4) focus on prediction; (5) theory development; (6) convergence ensured; (7) use of categorical variables; and (8) theory testing etc. [63] . Meanwhile, the PLS-SEM model is employed to understand the goodness of fit in the inner model and the outer model [64] .

Table 2 CBSEM vs. PLS-SEM

	CBSEM	PLS-SEM
Goal	Sample matrix closest to expected co-variances	Greatest explanatory power for dependent variables
Data source	Raw data, covariance matrix or correlation matrix with standard deviation	Raw data (format: .csv or .txt)
Software	AMOS, LISREL, EQS, MPLUS etc.	Smart PLS, PLS-Graph, Visual PLS etc.

Source: Hair et al [63] & this study

### 3.3 Questionnaire Data Processing and Measurement System

This paper sets up five inner (latent) variables, i.e. corporate image, service quality, switching costs, customer satisfaction and loyalty. Each latent variable can be further divided into outer (observable) variables, and a number of questions are allocated to each observable variable. The original surveyed data is processed into data files. To understand the goodness of fit of the inner model and the outer model, this paper employs the PLS-SEM model to examine the path coefficients of individual latent (unobservable) variables in the inner model. This paper uses the Bayesian estimation to analyze the path effects of the structural models and then conducts the Sobel tests, to gauge the significance of direct effects, mediating effects and total effects.

3.4 CMV Test

This study uses "latent marker variables with PLS and one marker variable" as the control variable to examine whether there exists CMV problem, and the questionnaire does not exist the common methods bias as shown in Figure 2.
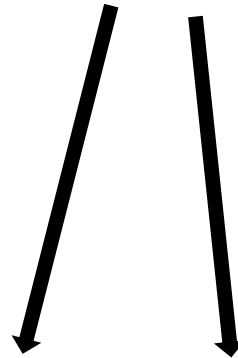
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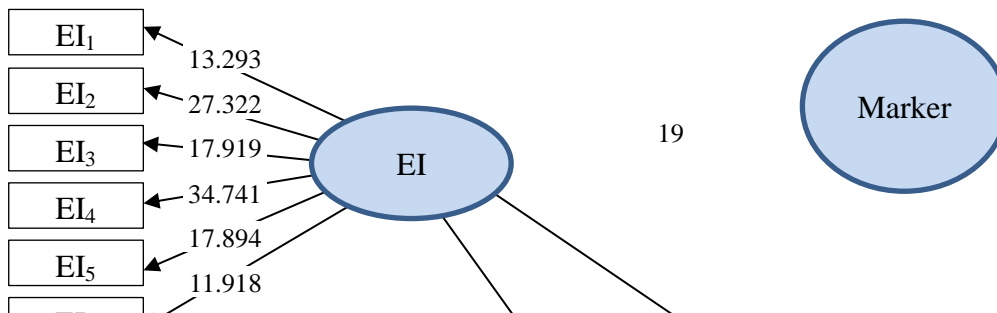
Figure2 Latent marker variable with PLS

4 RESEARCH ANALYSIS & FINDINGS

4.1 Outer Model

The outer model in this paper is a reflective one. Table 3 shows the assessment of this reflective model. The Cronbach's α is greater than 0.8, Composite Reliability (CR) greater than 0.5, Average Variance Extracted (AVE) greater than 0.5. Hence, the outer model has convergence validity. Meanwhile, the AVE is larger than square of constructs correlation, indicative of the discriminate validity in the outer model. Table 4 indicates that the factor loading is higher than low cross-loading, another indication of the discriminate validity in the outer model ([65] & [64]).

Tables 3   Indicators for Convergence Validity and AVE Discriminate Validity of Outer Model

	AVE	Composite Reliability	Cronbach's α	(1)	(2)	(3)	(4)	(5)	(6)
EI→CSAT	0.649	0.917	0.890	0.806					
CSAT→LOY	0.778	0.933	0.904	0.605	0.882				

EI→LOY	0.490	0.870	0.825	0.491	0.528	0.700			
SQ→CSAT	0.682	0.914	0.882	0.338	0.392	0.365	0.826		
SWC→CSAT	0.658	0.905	0.869	0.534	0.505	0.664	0.405	0.811	
SWC→LOY	0.432	0.831	0.811	0.412	0.423	0.531	0.442	0.411	0.657

Table 4 Discriminate Validity

	EI	LOY	SQ	CSAT	SWC
AL1	0.42	*0.86*	0.45	0.44	0.33
AL2	0.48	*0.94*	0.46	0.47	0.34
AL3	0.45	*0.91*	0.44	0.47	0.33
AL4	0.26	*0.92*	0.38	0.46	0.34
CS1	0.25	0.41	0.36	*0.75*	0.27
CS2	0.35	0.36	0.55	*0.70*	0.20
CS3	0.36	0.36	0.46	*0.80*	0.28
CS4	0.35	0.39	0.46	*0.73*	0.18
CS5	0.34	0.38	0.34	*0.76*	0.28
EI1	*0.91*	0.45	0.42	0.39	0.15
EI2	*0.94*	0.46	0.42	0.39	0.18
EI3	*0.87*	0.45	0.43	0.37	0.25
EI4	*0.86*	0.47	0.43	0.38	0.24
EI5	*0.85*	0.45	0.42	0.36	0.23
EI6	*0.88*	0.46	0.43	0.35	0.25
SWC1	0.21	0.34	0.41	0.32	*0.89*
SWC2	0.22	0.34	0.40	0.31	*0.89*
SWC3	0.13	0.35	0.32	0.25	*0.81*
SWC4	0.17	0.28	0.28	0.23	*0.85*
SWC5	0.17	0.30	0.30	0.31	*0.80*
SQ1	0.34	0.42	*0.84*	0.50	0.37
SQ2	0.33	0.43	*0.74*	0.44	0.36
SQ3	0.42	0.43	*0.86*	0.54	0.36
SQ4	0.35	0.39	*0.86*	0.51	0.33
SQ5	0.31	0.35	*0.75*	0.42	0.25

Remarks:

(1) **Bold fonts** indicate factor loadings

(2) Serif fonts indicate cross loadings

4.2 Inner Model

The validity indicators of the inner model are as follows:

(1) Coefficient of determination (R^2): R^2 of the dependent inner variables are greater than 0.67, indicative of practical value, $R^2=0.33$ indicative of a

medium level of explanatory power, R^2=0.19 indicative of a weak level of explanatory power [63] ;

(2) Path Coefficient;

(3) Effect size (f^2): this indicator represents the influence of independent variables on dependent variable. If f^2>0.35, it suggests strong influence of the independent variables on dependent variable; if f^2=0.15, it suggests medium influence and if f^2=0.02, it suggests weak influence [66] . Meanwhile, if predictive relevance (Q^2) >0, it indicates the influence of independent variables on dependent variable. The greater the Q^2, the stronger the predictive relevance is. This is derived with the blindfolding function;

(4) Goodness of Fit (GOF): the equation $\sqrt{RR^2*AVE}=\sqrt{redundancy}$, when $\mathbf{GOF}$ $_{small}$=0.1，GOF $_{medium}$=0.25，GOF $_{large}$=0.36.

According to Table 5, among the path coefficients of the inner model, only the path coefficient from SWC to LOY (SWC→LOY) is not statistically significantly (P value> 0.001). All the other path coefficients have P-values of smaller than 0.001 and hence reach statistical significance.

According to Table 6, the R^2 of dependent variables (CSAT & LOY) are 0.673 and 0.683, respectively and both greater than 0.67. The redundancy value is 0.615, indicative of goodness of fit in the inner model.

Table 5 Path Coefficients (Mean, STDEV, T-Values)

	Original Sample(O)	Standard Deviation (STDEV)	T Statistics (IO/STERRI)	P Values
EI→LOY	0.454	0.084	5.405	0.001
EI→CSAT	0.483	0.093	5.194	0.001
SQ→CSAT	0.272	0.062	4.387	0.002
CAST→LOY	0.314	0.053	5.925	0.002
SWC→LOY	0.042	0.286	0.147	0.056
SWC→CSAT	0.278	0.051	5.451	0.003

Table 6 the R^2 of dependent variables (CSAT & LOY)

	R^2	Communality	AVE	Redundancy
EI		0.649	0.649	**0.615**
LOY	0.683	0.778	0.778	
SQ		0.490	0.490	
CSAT	0.673	0.682	0.682	
SWC		0.658	0.658	
EI		**0.432**	**0.432**	

4.3 Overall Model Estimates

Figure 3 shows the standardized model estimates, regression path coefficients and R squares of the dependent variables.
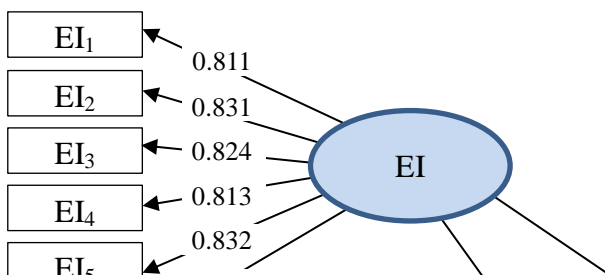
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Figure 3 Significance Tests using Smart PLS

4.4 Significance Tests

Figure 4 shows that the significance tests on the model by using Smart PLS. The numbers on the line of the inner model indicate t values. The t values of greater than 1.96 indicate statistical significance. The unstandardized numbers in the outer model indicate measurement coefficients.
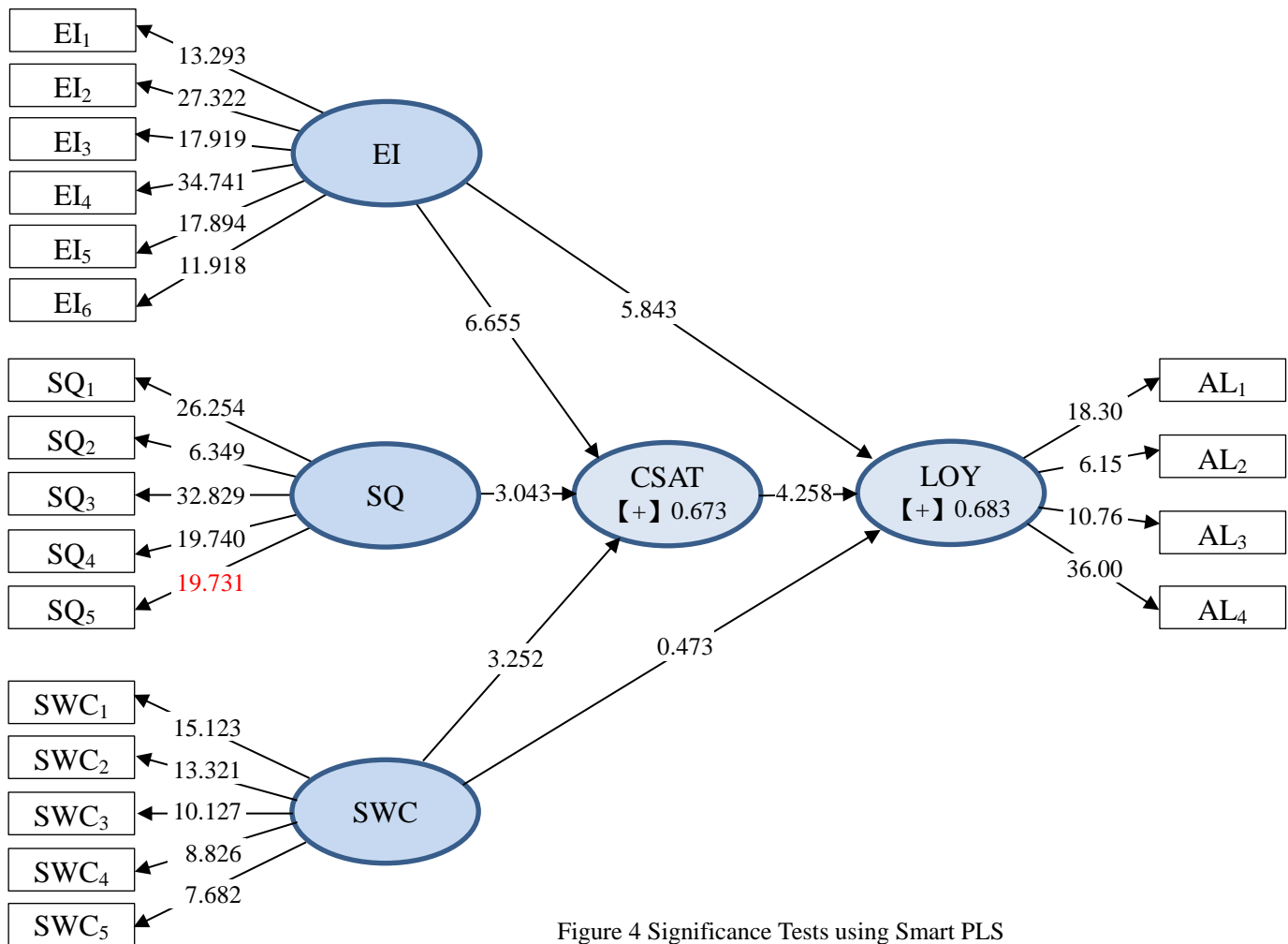

Figure 4 Significance Tests using Smart PLS

4.5 Test on Path Effects of Inner Model

Table7 Sobel Test: Bootstrapping→ Path Coefficients (Mean, STDEV, t-Values)

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (O/STERR)	
EI→LOY	5.843	0.385	1.066	1.066	5.481	c1
EI→CSAT	6.655	0.497	1.074	1.074	6.196	a1
CSAT→LOY	4.258	0.473	1.059	1.059	4.021	
SWC→LOY	0.473	0.088	0.286	0.286	1.654	c2
SWC→CSAT	3.252	0.231	0.821	0.821	3.961	a2
SQ→CSAT	3.043	0.304	0.724	0.724	4.203	b1&b2

Remark:

(1) EI→LOY and SWC→LOY (Direct Effect)

(2) EI→CSAT, CSAT→LOY, SWC→CSAT and SQ→CSAT (Indirect Effect)

Table 8 Total Indirect Effect

	EI→CSAT→LOY	SQ→CSAT→LOY	SWC→CSAT→LOY	VAF
Indirect Effect (IE)	0.431	0.289	0.108	0.828

Remarks:

(1) Total Effect (TE) = Direct Effect+ Indirect Effect

(2) VAF>80% means complete mediating effects. In this paper, a VAF of 0.828 means customer satisfaction (CSAT) has nearly complete mediating effects. It is in fact a triple mediator.

This paper uses Bayesian estimations to analyse the path effects of latent variables (unobservable) in the structural model. A Sobel test is also conducted in order to gauge whether direct effects, moderating effects and total effects are significant, with customer satisfaction (CSAT) as the triple mediator (Tables 7~8).

(1) T statistics of EI to CSAT (O/STERR) is 6.716>1.96. Therefore, indirect effects are significant.

(2) T statistics of CSAT to LOY (O/STERR) is 8.023>1.96. Therefore, indirect effects are significant.

(3) T statistics of EI to LOY (O/STERR) is 5.867>1.96. Therefore, direct effects are significant.

(4) T statistics of SWC to LOY (O/STERR) is 1.576 <1.96. Therefore, direct effects are not statistically significant.

(5) T statistics of SWC to CSAT (O/STERR) is

3.566>1.96. Therefore, indirect effects are significant.

(6) T statistics of SQ to CSAT (O/STERR) is 5.625>1.96. Therefore, indirect effects are significant.

Based on Figures 3 & 4, this paper derives the following research results:

(1) The good corporate image at Toyota's distributors in Taiwan has positive and significant influence on customer satisfaction (path coefficient =0.483; t=6.655). Hence, H_1 is supported.

(2) The customer satisfaction at Toyota's distributors in Taiwan has positive and significant influence on loyalty (path coefficient =0.314; t=4.258). Hence, H_2 is supported.

(3) The good corporate image at Toyota's distributors in Taiwan has positive and significant influence on customer loyalty (path coefficient =0.454; t=5.843). Hence, H_3 is supported.

(4) The service quality at Toyota's distributors in Taiwan has positive and significant influence on customer satisfaction (path coefficient =0.272; t=3.043). Hence, H_4 is supported.

(5) The customers' switching costs at Toyota's distributors in Taiwan have positive and significant influence on their satisfaction (path coefficient =0.278; t=3.252). Hence, H_5 is supported.

(6) The switching costs of customers at Toyota's distributors in Taiwan have positive influence on customer loyalty (path coefficient =0.042; t=0.473), although this influence is not significant. Hence, H_6

is partly supported.

5 CONCLUSIONS AND SUGGESTIONS

Based on the above analysis and findings, this paper presents research conclusions and contributions. Finally, research limitations are described and suggestions to future studies are provided.

5.1 Conclusions

This paper conducts a survey on the supervisors, front-desk personnel and customers (existing and prospective) of Toyota's distributors in Taiwan. A PLS-SEM model is constructed to explore the relationships among corporate images, service quality, switching costs, customer satisfaction and loyalty, with customer satisfaction as the triple mediator. Below are the research conclusions:

5.1.1 Corporate Images and Customer Satisfaction

Research findings support H_1: Corporate Images have positive and significant influence on customer satisfaction. This is consistent with Yao [43] , Hsiao [4] , Wu [5] and Chuang [3] .

5.1.2 Customer Satisfaction and Customer Loyalty

Research findings support H_2: Customer satisfaction has positive and significant influence on customer loyalty. This is consistent with Lin [44] , Lin [46] , Chen [47] , Lin [48] , and Yang [49] .

5.1.3 Corporate Images and Customer Loyalty

Research findings support H_3: Corporate images have positive and significant influence on customer loyalty. This is in line with Chiu [50] , Yao [43] , Hsiao [4] , Wu [5] , and Chuang [3] .

5.1.4 Service Quality and Customer Satisfaction

Research findings support H_4: Service quality has positive and significant influence on customer satisfaction. This is in line with Lin [51], Jen [45], Chen [52], Hsu [53], Lin [48], Yang [49], Lin [54], Wang [55], Yu [56], and Liu [57].

5.1.5 Switching Costs and Customer Satisfaction

Research findings support H_5: Switching costs have positive and significant influence on customer satisfaction. This is consistent with Liao [6], Lin [51], Liu [58], Chen [52], Yang [59], and Huang [60].

5.1.6 Switching Costs and Customer Loyalty

This paper develops H_6: Switching costs have positive and significant influence on customer loyalty. Research findings suggest positive but not significant influence. Hence, H6 is only partly supported. This is largely in line with Liao [6], Huang [60], and Cheng [62], and the inconsistency is probably due to different research scopes and subjects.

Based on the above six conclusions, the main constructs in this paper are correlated. Meanwhile, the goodness-of-fit is satisfactory with both inner and outer models. Meanwhile, customer satisfaction has nearly complete mediating effects. The mediating effects are not perfectly complete because switching costs have negative albeit not significant influence on customer loyalty. This is consistent with Baron and Kenny [67], the addition of a mediating variable with complete mediating effects in fact undermines the original relationship between independent variables and dependent variables.

5.2 Research Contributions

The research findings serve as a template for companies to effectively utilize good corporate images and service quality to enhance service quality and switching cost. This retains customers, boosts customer loyalty and encourages repurchase intention. It will also convert prospective clients into paying clients.

The research conclusions can serve as a reference to management in decision-making and understanding of the relationship among corporate images, service quality, switching costs, customer satisfaction and loyalty.

5.3 Research Limitations

Given the limited resources, this paper seeks to accomplish the research tasks as robustly as possible. However, there are certain limitations. This paper uses cconvenience sampling to achieve a higher effective recovery rate. However, there may be a bias if the effective sample is not representative of the population.

5.4 Suggestions to Future Studies

(1) The relationship among corporate images, service quality, switching costs, customer satisfaction and loyalty is applicable to all industries, and by no means limited to Toyota's distributors in Taiwan. This paper conducts a survey on the supervisors, front-desk personnel and customers (existing and prospective) of Toyota's distributors in Taiwan. Future studies can analyse different industries in order to broaden the scope or explore new perspectives.

(2) Future studies may use stratified random sampling.

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