

RESEARCH BRIEF

Antecedents of Thai Home Improvement Retailer Customer Satisfaction

Atisin Suebsaiaun and Thepparat Pimolsathean
King Mongkut's Institute of Technology Ladkrabang, Thailand
55671171@kmitl.ac.th

According to a Deloitte (2016) Thai consumer survey, Thai urban consumers focus on finding the right product—one that possesses the right set of product attributes to satisfy their unique needs and desires. The higher their purchasing power, the greater their willingness to pay for these specific attributes. Also, Thai consumers are a trendy crowd, especially when it comes to brand name consumer electronics and appliances categories. Consumers are also very brand loyal, with e-commerce purchases increasing swiftly (Bharadwaj, Chaudhary, Kittikachorn, & Rastogi, 2017).

Thailand has also become a leader in e-commerce potential in Southeast Asia, currently growing at a 33.5% annual rate (Figure 1) due to its high penetration numbers in social media (58%), mobile technologies (149%), and the Internet (54%; Deloitte, 2016). From these totals, we find Thai Generation Y consumers (Thais born between 1981 and 2000) to be some of the most connected users in the world (Pumim, Srinuan, & Panjakajornsak, 2017) They are also the largest segment of Thai smartphone owners which have a lifetime spending potential of over US\$5 trillion (Siam Commercial Bank Economic Intelligence Center, 2015).

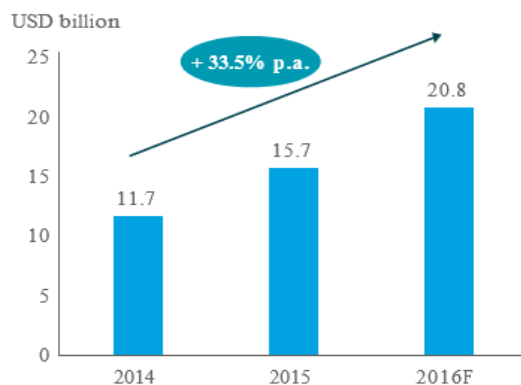


Figure 1. Growth of B2C E-Commerce in Thailand.

Source: Electronic Transactions Development Agency (2016).

This is consistent with Bharadwaj et al. (2017), who stated that a new social media model is driving e-commerce in Thailand, with 40% of the purchases digitally influenced. Furthermore, Thai consumers report conducting up to 60% of their online research using websites and apps such as Messenger, Instagram, Line, Kaidee, and Facebook.

These digital citizens have also become homeowners, with the Thai home improvement retail sector emerging as a dynamic and competitive one. In greater Bangkok alone, an estimated 80,000–100,000 new houses and some 30,000–40,000 new condos are registered every year (Oxford Business Group, 2018). The home improvement industry, which covers everything from hard goods such as construction materials, bath, and kitchenware, to electrical appliances and soft goods, has rapidly grown in recent years, driven primarily by increasing competition across the country. This is consistent with a Knight-Frank study, in which it was reported that a total of 32,258 units were launched in the second half of 2017 (Figure 2), the highest new supply recorded in eight quarters (Siriboon, 2018). As a result, accumulated condominium stock in Bangkok surged to 538,920 units, increasing 6.4% half on half (HoH).

This is consistent with Tan (2017), who has reported that the largest and fastest growing region in the world for sales of home improvement products is the Asia-Pacific region, with the sector’s regional market

worth US\$91 billion in 2016, accounting for 35% of global sales. Also, the Asia Pacific market grew at an astounding rate of 30% from 2011 to 2016 (surpassing North America in 2012), with current projections expecting a sustained growth of 20% over the next five years.

Therefore, higher consumer purchasing power and rapid expansion in residential property development trigger strong growth potential for home improvement retailers. However, an investigation is required to determine how changing technologies (E-CRM, social media, smartphones, product delivery platforms, online advertising, etc.) affect business service quality, customer satisfaction, and profitability (Broderick & Vachirapornpuk, 2002; Hallowell, 1996; Zhu, Wymer, & Chen, 2002).

While the main reasons for social media are greatly understood, many retailers do not know exactly the key benefits of social media marketing. One of the main key benefits of social media marketing is the potential for greater trust between vendors and their customers. Social media can quickly introduce a brand to potential customers, vendors, and their supply chain affiliates. It also retains a digital footprint of the brand and its communication and is a convenient way for customers to accomplish their due diligence on a brand.

In April 2013, Lowe’s, which is the second largest home improvement retailer in the world,

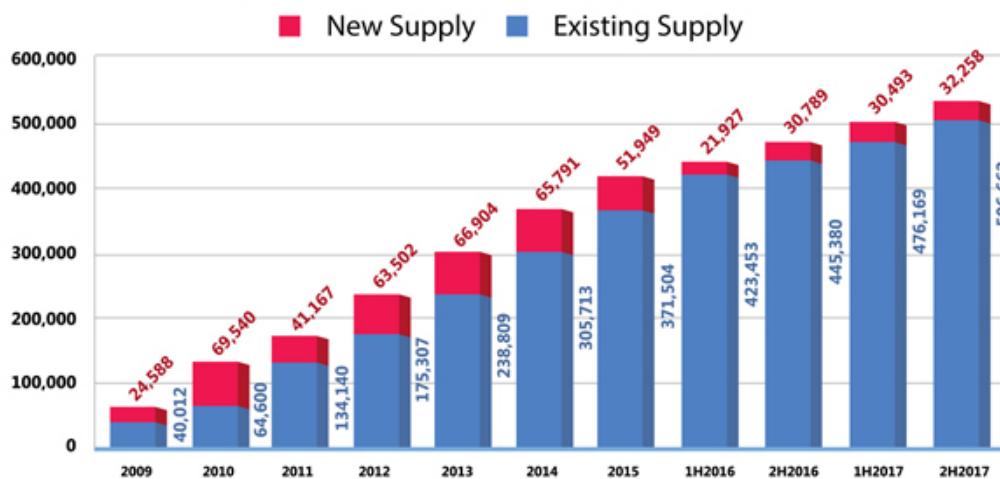


Figure 1. Bangkok Condominium Support for the period 2009–2017.

Source: Siriboon (2018).

launched their extremely successful “Fix in six” campaign on the social media channel Vine. From the six-second videos that give tips for home improvement, Lowe’s generated over 65 million views from the 115 vines it created (Girdler, 2016). Subsequently, Lowes went on to produce the award winning “Made in a Minute” videos using Facebook’s 360-degree video feature and Snapchat as a resource for sharing do-it-yourself [DIY] projects called “In a Snap.” The target audience was younger millennials aged 18–30. Finally, at the beginning of August 2016 when Instagram released their new *Stories* feature, Lowes revamped their “In a Snap” tutorials to be shared there as well.

However, not everyone mirrors Lowe’s success, as according to a survey conducted by the North American Retail Hardware Association (NRHA), only 2% of the respondents identified their social media efforts as excellent, while 46% classified their efforts as fair or poor (Welter & Logel, 2016). So, while more retailers are engaging in Facebook, Twitter, Pinterest, and Instagram, most seem to feel they have a long way to go. It was, however, interesting to note that from the same survey, 86% of all retailers indicated they used social media channels for doing business, with 99.5% of these using Facebook. One retailer commented that although his store only got 500 likes, he knew of no other advertising channel to reach that many people.

This leads to a number of unanswered questions concerning the use of social media in electronic

customer relationship management (E-CRM). The study, therefore, wished to develop a model of the factors that play a role in the relationships between E-CRM and service quality (SQ), corporate social responsibility (CSR), and customer satisfaction (CS). Furthermore, using the globally accepted SERVQUAL model and its five dimensions, the study would also like to investigate SQ’s relationships with CS and CSR. And finally, the study will seek out what factors influence CSR and CS.

Model and hypotheses development, therefore, led to the inclusion of E-CRM, SQ, and CSR and their effects on Thai home improvement retailer CS. From this, the following hypotheses and conceptual framework were developed (Figure 3):

- H1: Electronic customer relationship management (E-CRM) has a direct and positive influence on service quality (SQ).
- H2: Electronic customer relationship management (E-CRM) has a direct and positive influence on corporate social responsibility (CSR)
- H3: Electronic customer relationship management (E-CRM) has a direct and positive influence on customer satisfaction (CS).
- H4: Service quality (SQ) has a direct and positive influence on corporate social responsibility (CSR).

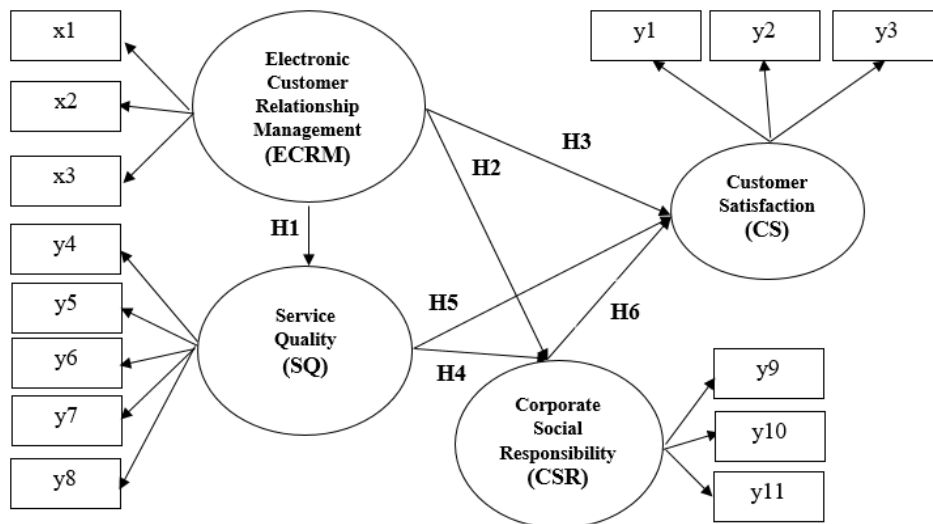


Figure 3. The conceptual framework.

H5: Service quality (SQ) has a direct and positive influence on customer satisfaction (CS).

H6: Corporate social responsibility (CSR) has a direct and positive influence on customer satisfaction (CS).

Methods

Population and Sample

Mertler (2016) indicated that in education research if population size is around 1,500, a sample size of 300 is adequate. Also, beyond a certain point ($n=5,000$), the population size becomes irrelevant, and a sample size of 400 will be adequate. Increasing the size of the sample beyond this point is not critical, but does help the researcher improve their confidence level with the results of the research. However, to assure maximum reliability within the survey process as the research team had limited time and access to each home improvement retailer facility, a higher target was set at 500. Table 2, therefore, shows the provinces and home improvement retailers targeted for sample collection. From the use of multistage random sampling, 500 questionnaires were collected. The six target provinces included Bangkok, Samut Prakan, Nonthaburi, Samut Sakhon, Pathum Thani, and Nakhon Pathom. The home improvement retailer customers included HomePro, Thai Watsadu, Siam Global House, Mega Home, and Dohome.

Research Instrument

A five-level Likert agreement scale was used to evaluate Thai home improvement retailer customer loyalty (CL), with “1” indicating “strongly disagree,”

“3” indicating a “moderate” agreement, and “5” representing a response of “strongly agree.” The survey also consisted of two parts. Part 1 contained nine items concerning the shoppers’ personal characteristics. Part 2 consisted of five sections containing a total of 69 items. This included E-CRM with 15 items (reliability of 0.91), SQ with 26 items (reliability of 0.96), CSR with 13 items (reliability of 0.95), and finally, CS with 15 items (reliability of 0.96).

Instrument Design Process

The questionnaire items were extracted after an examination of the literature’s theory. Questionnaire validity was determined by interviews with five experts in their related fields, and use of the index of item objective congruence (IOC). This included two academic experts and three executives, including one from Home Pro, a second expert from Thai Watsadu, and the third from Mega Home. Further verification came from a 34 individual tests (try-out) not used in the subsequent study. The IOC used, in conjunction with the expert group, were tasked at evaluating the content of the survey’s items. By definition, an IOC score that is greater or equal to 0.50 is considered acceptable, with items with an IOC less than 0.50 either being rejected or revised (Tavakol & Dennick, 2011). From the five experts, questionnaire item scores ranged between 0.91 and 0.96, which is deemed highly reliable (Kline, 2011).

Data Collection

The process of data collection for the study began with a sample survey which had to be approved by the university management board. This was followed by applying for permission from the targeted home

Table 1
Thai Home Improvement Companies Surveyed (n=500)

Provinces	HomePro	Thai Watsadu	Global House	Dohome	Mega Home	Total
Bangkok	40	15	NA	NA	7	62
Samutprakan	40	15	27	NA	NA	82
Nonthaburi	40	15	NA	25	NA	80
Samutsakhon	40	15	NA	25	NA	80
Pathumthani	40	15	27	25	7	114
Nakhonpathom	40	15	27	NA	NA	82
Total	240	90	81	75	14	500

improvement retailer home offices, with subsequent visits to each of the targeted store's management. The retailers selected for the study came from their respective market shares (GSB Research, 2016), which at the time of the survey were as follows: 1. HomePro (9.97%), 2. Thai Watsadu (3.89%), 3. Global House (3.36%), 4. DoHome (3.15%), 5. Mega Home (0.59%).

From April–May 2018, the survey team went to the selected store every day, from opening to noon. From their positions at the store entrance, the survey team was able to intercept customers to elicit their participation. They were given the opportunity to fill out the survey online or by use of a paper questionnaire on a clipboard. Team members were always available to answer any questions and to verify questionnaire completion. After the allocated period of two months, 500 questionnaires had been collected. However, after

an audit of the questionnaires, only 465 were deemed usable. This represented a 93% completion rate of the 500 targeted.

Results

Table 2 shows the results from the 465 home retail shoppers who completed their questionnaire. From this, 56.10% were men, while 43.90% were women. The majority were between 31–40 years of age (35.30%) and had at least a four-year university degree (61.70%). Also, a large percentage (58.30%) were employed in private companies, with an amazing 73.30% of those surveyed stating they owned their own homes, and only shopped on the weekends (76.30%).

Table 2
Home Retail Shoppers' Descriptive Analysis

Sex	Frequency	Percent
Male	204	43.90
Female	261	56.10
Total	465	100
Age		
Less than or equal to 20 years of age.	15	3.20
21 - 30 years	113	24.30
31 – 40 years	164	35.30
41 – 50 years	117	25.20
More than 50 years old	56	12.00
Total	465	100
Education		
Undergraduate degree	78	16.80
Bachelor degree	287	61.70
Master's degree	93	20.00
PhD	7	1.50
Total	465	100
Occupation		
Student/university student	27	5.80
Private company employee	271	58.30
Government/State Enterprise employee	80	17.20
Private business/freelance	61	13.10
Housekeeper	19	4.10
Other? Please specify.	7	1.50
Total	465	100

What is your status for the purchase of materials and equipment used?	Frequency	Percent
Homeowner	341	73.30
Project owner	13	2.80
Renter	77	16.60
Contractor	8	1.70
Engineer	6	1.30
Architect	2	0.40
Purchasing department/factory	11	2.40
Other? Please specify.	7	1.50
Total	465	100
Monthly Income (10,000 Thai baht = \$USD312)		
Less than 10,000 baht	35	7.50
10,001-20,000 baht	124	26.70
20,001-30,000 baht	112	24.10
30,001-40,000 baht	86	18.50
40,001-50,000 baht	34	7.30
More than 50,000 baht	74	15.90
Total	465	100
During which time period do you visit this store?		
Saturday – Sunday and public holidays	355	76.30
Monday - Friday	110	23.70
Total	465	100
How many times over the past 12 months have you visited this store?		
This is my first time.	90	19.40
This is my second time.	94	20.20
I have been here 3-6 times.	180	38.70
I have been here 7-10 times.	52	11.20
I have been here more than 10 times.	49	10.50
Total	465	100
What type of products do you shop for? (Answer more than 1 if applicable).		
Building materials.	143	8.83
Doors, windows, components parts, or wooden cornice.	59	3.64
Hardware and tools.	112	6.92
Electronics.	242	14.95
Bathroom faucets and tile.	153	9.45
Household appliances.	177	10.93
Paint and chemicals.	75	4.63
Lighting and electrical supplies.	165	10.19
Plumbing and garden equipment.	99	6.11
Furniture and bedding.	132	8.15
Home decoration and gift shop.	146	9.02
Stationary	62	3.83
Car accessories	36	2.22
Religious supplies	12	0.74
Other? Please specify.	6	0.37
Total	1619	100

Confirmatory Factor Analysis (CFA) Results

A CFA was carried out using SEM with LISREL (Linear Structural Relationships) 9.10 (Byrne, 2010; Diamantopoulos & Siguaw, 2000; Jöreskog & Sörbon, 2015). As suggested by Anderson and Gerbing (1998), a 2-step analysis is conducted in which analysis of the measurement model and both sets of exogenous (Table 4) and endogenous variables (Table 5) are conducted separately. In the second step, an analysis of the SEM of the two competing models of customer satisfaction (CS) is measured.

Convergent and Discriminant Validity

In research concerning SEM modeling, Jöreskog and Sörbom (2015) stated that construct validity is usually accessed by use of a CFA. Convergent

validity is also concerned with whether or not a set of items share a high proportion of common variance. The following criteria have been suggested for satisfying acceptable convergent validity (Barclay, Higgins, & Thompson, 1995; Hair, Hult, Ringle, & Sarstedt, 2016; Henseler, Ringle, & Sinkovics, 2009): (1) factor loadings should be above 0.5, (2) average variance extracted (AVE) should reach 0.5 as a minimum, and (3) composite reliability (CR) should be above 0.6–0.7. All four factors have an AVE value that is above 0.5, and they all show very good levels of internal consistency, as their CR is between 0.63 and 0.77 (Table 5). Based on the above evaluation, it was concluded that the measurement model had satisfied the criteria of convergent validity.

Table 3
CFA of the Exogenous Latent Variable

constructs	α	CR	AVE	Observed variables	loading	R ²
Electronic Customer Relationship Management (E-CRM)	0.91	0.87	0.70	Social Media (x1)	0.80	0.63
				Customer Relationship Management (CRM) (x2)	0.87	0.75
				Corporate Social Responsibility (CSR) (x3)	0.84	0.71

Note. Chi-Square = 0.00, df = 0, *p*-value = 1.00, RMSEA = 0.00.

Table 4
CFA of the Endogenous Latent Variables.

constructs	α	CR	AVE	Observed variables	loading	R ²
Customer Satisfaction (CS)	0.96	0.86	0.67	Perceived Quality (y1)	0.87	0.76
				Perceived Value (y2)	0.83	0.68
				Perceived Expectation (y3)	0.75	0.56
Service Quality (SQ)	0.96	0.94	0.77	Reliability (y4)	0.88	0.78
				Responsiveness (y5)	0.86	0.74
				Assurance (y6)	0.87	0.76
				Empathy (y7)	0.86	0.74
Corporate Social Responsibility (CSR)	0.95	0.84	0.63	Comments on the concept of CSR (y9)	0.79	0.64
				Readiness to implement CSR concepts (y10)	0.81	0.66
				Patterns of CSR activities (y11)	0.78	0.61

Note. Chi-Square = 14.31, df = 27, *p*-value = 0.978, RMSEA = 0.000.

Table 5
Statistics for Convergent and Discriminant Validity.

Latent variable	CS	CSR	SQ	E-CRM
CS	1.00			
CSR	.68**	1.00		
SQ	.82**	.59**	1.00	
E-CRM	.76**	.59**	.74**	1.00
ρ_c (Construct Reliability)	0.86	0.84	0.94	0.87
ρ_v (AVE)	0.67	0.63	0.77	0.70
\sqrt{AVE}	0.82	0.80	0.88	0.84

Note. **Sig. < .01.

Secondly, discriminant validity is the extent to which a construct distinctly differentiates from others. In this context, assessment of whether the four factors were different from one another was undertaken by testing whether the square root of the AVE for any given two factors is greater than the correlation between these two factors (Fornell, Johnson, Anderson, Cha, & Bryant, 1996). Also, as shown in Table 5, the four factors have distinctive properties that capture different aspects of Thai home retailer CS.

The Direct Effect (DE), Indirect Effect (IE), and Total Effects (TE)

Table 6 shows the DE, IE, and TE of each construct (Bollen, 1987). According to Olobatuyi (2006), the independent variable that has the greater coefficient (TE) accounts for more variance in the dependent variable or is the more important cause of the dependent variable. Table 6, therefore, shows that CS is influenced by E-CRM the most due to the TE value of 0.87. CS also has a direct positive relationship with SQ, as indicated by the TE value of 0.63, and CSR (0.23).

Structural Equation Model (SEM) Results

The SEM results in Figure 4 and Table 8 are from the analysis of the variables effects on Thai home improvement retailer CS, which showed that all models met the required criteria as $p = 0.71$, the root mean square error of approximation (RMSEA) = 0.00, the goodness of fit index (GFI) = 0.98, the adjusted goodness of fit index

(AGFI) = 0.97, and the standardized root mean square residual (SRMR) = 0.01 (Table 7). The final measurement model was also determined to explain 73.0% of the variance of the underlying construct, which showed a good level of explanatory power. Each factor under the overarching construct also displayed fair to good levels of reliability. Therefore, all causal factors in the model had a positive influence on the CS. The causal variables influencing CS were E-CRM, SQ, and CSR with a total value of influence at 0.87, 0.63, and 0.23, respectively.

Discussion

With the commercialization of what became known as the Internet, any student of technology transfer would have confidently predicted that the transition into commercial markets would give rise to great obstacles and challenges. This is consistent with Greenstein (2001) who stated that if one looked forward from the advent of the commercialized Internet in 1992, it was uncertain whether these challenges would take a long time to solve and whether commercial users' needs would be difficult to address. In general, conventional analysis anticipates one of three challenges: technical, commercial, and structural challenges.

It appears, however, after 26 years, the challengers have finally been overcome, and online commerce (e.g., Amazon, Jingdong, Alibaba, eBay, etc.) is taking the world by storm. Empowered by the Internet, e-commerce

Table 6
DE, IE, and TE From Path Model Analysis (n=465)

Dependent Variables	Effects	R ²	Independents		
			CSR	SQ	E-CRM
Customer Satisfaction (CS)	DE	.77	0.23 **	0.55 **	0.27 **
	IE		–	0.08 *	0.60 **
	TE		0.23 **	0.63 **	0.87 **
Corporate Social Responsibility (CSR)	DE	.46		0.35 **	0.40 **
	IE			–	0.28 **
	TE			0.35 **	0.68 **
Service Quality (SQ)	DE	.66			0.81 **
	IE				–
	TE				0.81 **

Note. *Sig. < 0.05, **Sig. < 0.01, E-CRM = electronic customer relationship management.

Table 7
Criteria, Values, Results, and Theory of the Values of Goodness-of-Fit Appraisal

Criteria Index	Criteria	Values	Results	Supporting theory/comments
Chi-square (χ^2)	(p > 0.05)	45.97 (p=0.71)	passed	(Jöreskog & Sörbon, 2015)
Relative $\chi^2 - \chi^2/df$	≤ 2.00	0.88	passed	(Byrne, 2010)
GFI	≥ 0.90	0.98	passed	(Jöreskog & Sörbon, 2015)
AGFI	≥ 0.90	0.97	passed	(Baumgartner & Hombur, 1996).
RMSEA	≤ 0.06	0.00	passed	(Hu & Bentler, 1999)
SRMR	≤ 0.05	0.01	passed	(Diamantopoulos & Siguaw, 2000)
Cronbach's Alpha	≥ 0.80	0.91-0.96	passed	(Tavakol & Dennick, 2011)

is quickly spreading out to most industries, as enterprises find it an effective method in increasing business performance. Confirmation of this comes from a 2016 Global B2C e-commerce report by the E-commerce Foundation (2016) in which it was reported that approximately 2.5 billion consumers in the world used the Internet to purchase goods and services online for a total amount of US\$2.671 trillion. Asia-Pacific and North America are among the top regions for the highest positions, at a total B2C e-commerce turnover of US\$1.057 trillion and US\$644 billion, respectively in 2016.

E-CRM

According to the results from the first three hypotheses (H1–H3), E-CRM's role in SQ, CSR, and

CS were all found to be both positive and direct. This is backed up by Bharadwaj et al. (2017) who stated that a new social media model is driving e-commerce, with new trends—and their strategic implications—providing critical input for companies seeking to expand their reach and share of a consumer's wallet in Thailand. Thai consumers are the most brand-conscious and brand-loyal consumers in the region, with many consumers loving the convenience of shopping online using laptops and smartphones. This helps them avoid some of the most congested traffic in the world, while also making use of the online social media model as a treasure hunt and an adventure.

In Sweden, research into E-CRM effects on customer satisfaction determined that live chat and e-service quality had a direct effect on how satisfied (and trusted) a customer felt about the company they were

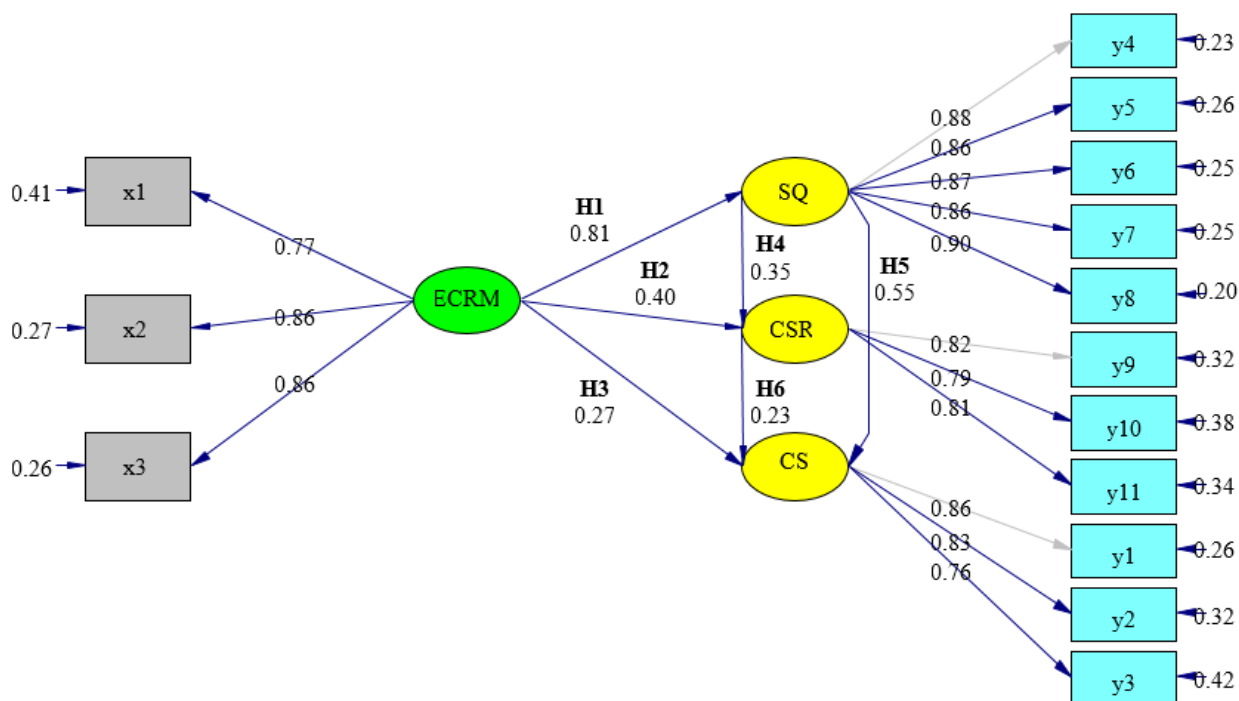


Figure 4. Final model of Thai home improvement retailer customer satisfaction.

Note. Chi-Square = 45.97, df = 52, p-value = 0.70873, RMSEA = 0.000

Table 8
Results of the Hypothesis Testing.

Hypothesis	Coef.	t-value	Results
H1: Electronic customer relationship management (E-CRM) has a direct and positive influence on service quality (SQ).	0.81	17.71**	Supported
H2: Electronic customer relationship management (E-CRM) has a direct and positive influence on corporate social responsibility (CSR)	0.40	4.95**	Supported
H3: Electronic customer relationship management (E-CRM) has a direct and positive influence on customer satisfaction (CS).	0.27	4.79**	Supported
H4: Service quality (SQ) has a direct and positive influence on corporate social responsibility (CSR).	0.35	4.44**	Supported
H5: Service quality (SQ) has a direct and positive influence on customer satisfaction (CS).	0.55	10.02**	Supported
H6: Corporate social responsibility (CSR) has a direct and positive influence on customer satisfaction (CS).	0.23	5.00**	Supported

Note. **Sig. < 0.01

interacting with online (Lam & Li, 2017). Furthermore, in developing E-CRM systems, organizations need to satisfy their customer to maintain their success. To overcome the challenges, organizations need to adopt new solutions that provide them with abilities to integrate and manage all data, including customer and company data. That is the concept of electronic customer relationship management (Pan & Lee, 2003)

However, other global studies advise caution in the use of social media advertising. The reasons for this are that consumers can be overwhelmed with social media advertising, which can lead to consumers unsubscribing from the retailer or brand (Skeldon, 2017). Therefore, poorly targeted “spray and pray” style of marketing campaigns generate the most spam complaints, and the majority of such communications remain unopened.

Service Quality (SQ)

Developed in 1988, after decades of use, the *SERVQUAL* scale has been found to be effective for measuring user perceptions and expectations about service quality (Marshall & Murdoch, 2001). This observation is consistent with this study, in which SQ in both H4 and H5 were found to directly and positively influence CSR (0.35) and CS (0.55). Investigations have also confirmed that reliability is the most important dimension, and tangibility is less relevant to the service quality from the user’s perception (Parasuraman, Zeithaml, & Berry, 1985, 1988). Likewise, according to Prahalad and Hamel (1990), a corporate core competency has three characteristics. These include: (1) It is a source of competitive advantage and makes a significant contribution to perceived customer benefits, (2) It has applications in a wide variety of markets, and (3) It is difficult for competitors to imitate.

Corporate Social Responsibility (CSR)

In the final hypothesis [H6] for the study, CSR was confirmed to have a direct and positive influence on CS. This is consistent with other recent studies in which CSR has been determined to be an essential tool in the development of long-standing relationships between the customer and an organization or company (Servera-Francés & Arteaga, 2015). Support for this also comes from a 60-country Nielsen survey, in which 66% of the consumers polled indicated they were willing to pay more for sustainable brands manufactured

by a company that was socially or environmentally responsible (Nielsen, 2015). CSR, therefore, can be a factor that differentiates one seller from another in a crowded marketplace.

Furthermore, in India, CSR is stated to contribute indirectly to the business growth of the corporate enterprise. Therefore, every business enterprise which has annual revenues of over £105m is now mandated (since April 2014) to contribute 2% of their annual profits to charity (Balch, 2016). Areas they can invest this money include education, poverty, gender equality, and hunger. Although highly controversial, it does show the importance being placed on CSR by national governments and legislative bodies.

Additionally, CSR actions allow vendors to acquire a higher level of commitment with customers and society in general, which leads to an increase in a company’s customer trust, leading to strengthening the positive aspects of a customer’s purchase decision option.

Conflict of interest

None.

Ethical clearance

The study was approved by the institution.

References

- Anderson, J. C., & Gerbing, D. W. (1998). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(5), 204–215. doi: 10.1037//0033-2909.103.3.411
- Balch, O. (2016, April 5). Indian law requires companies to give 2% of profits to charity. Is it working? *The Guardian*. Retrieved from <https://tinyurl.com/ybtjfv28>
- Barclay, D., Higgins, C., & Thompson, R. (1995). The partial least squares (PLS) approach to causal modeling: Personal computer adaptation and use an illustration. *Technology Studies*, *1*(2), 285–324.
- Baumgartner, H., & Hombur, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing*, *13*, 139–161.
- Berry, L. L., Bennet, D. R., & Brown, C. W. (1989). *Service quality: A profit strategy for financial institutions*. Homewood, IL: Dow–Jones–Irwin.
- Bharadwaj, A., Chaudhary, A., Kittikachorn, P., & Rastogi, V. (2017). *Five consumer trends to watch in Thailand*. BCG Center for Customer Insight. Retrieved from <https://tinyurl.com/y7yjadel>

- Bollen, K. A. (1987). Total, direct and indirect effects in structural equation models. *Sociological Methodology*, 17, 37–69. Retrieved from <https://tinyurl.com/ybmyqaol>
- Broderick, A. J., & Vachirapornpuk, S. (2002). Service quality in internet banking: The importance of customer role. *Marketing Intelligence & Planning*, 20(6), 327–335.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). New York, NY: Routledge. Retrieved from <http://tinyurl.com/ze7ze7d>
- Deloitte. (2016). *The Thailand consumer survey: Onwards and upwards*. Retrieved from <https://tinyurl.com/yqcbynnj>
- Diamantopoulos, A., & Siguaw, J. A. (2000). *Introducing LISREL*. London, UK: Sage.
- E-commerce Foundation. (2016). Global B2C e-commerce report 2016. Retrieved from <https://tinyurl.com/y76g6pym>
- Electronic Transactions Development Agency. (2016). Value of e-commerce survey in Thailand 2016. Retrieved from <https://www.eta.or.th>
- Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: Nature, purpose, and findings. *Journal of Marketing*, 60(4), 7–14. doi: 10.2307/1251898
- Greenstein, S. (2001). Commercialization of the Internet: The interaction of public policy and private choices or why introducing the market worked so well. In A. B. Jaffe, J. Lerner, & S. Stern (Eds.), *Innovation policy and the economy* (Vol. 1, pp. 151–186). Cambridge, MA: MIT Press. Retrieved from <http://www.nber.org/chapters/c10779.pdf>
- Girdler, L. (2016, November 5). Lowe's: Leader in home improvement and social media content marketing. Retrieved from <https://tinyurl.com/y9pmjfts>
- GSB Research. (2016). *Industry monitor (Thai)*. Retrieved from <https://tinyurl.com/y7rkwaor>
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Thousand Oaks, CA: Sage.
- Hallowell, R. (1996). The relationship of customer satisfaction, customer loyalty, and profitability: An empirical study. *The International Journal of Service Industry Management*, 7(4), 27–42.
- Henseler, J., Ringle, C., & Sinkovics, R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 20, 277–320.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. doi: 10.1080/10705519909540118
- Jöreskog, K. G., & Sörbom, D. (2015). *LISREL 9.20 for Windows*. Skokie, IL: Scientific Software International, Inc.
- Kline, R. B. (2011). *Principles and practice of structural equation modelling* (3rd ed.). New York, NY: The Guilford Press.
- Lam, H. C., & Li, Q. (2017). *Does electronic customer relationship management affect customer satisfaction and trust?* (Unpublished masteral thesis). Gävle University, Sweden. Retrieved from <https://tinyurl.com/yb78dyvc>
- Marshall, G., & Murdoch, I. (2001). Service quality in consulting marketing engineers. *International Journal of Construction Marketing*, 3(1), 41–49.
- Mertler, C. A. (2016). *Introduction to educational research*. Thousand Oaks, CA: Sage Publications.
- Nielsen. (2015). *The sustainability imperative: New insights on consumer expectations*. Retrieved from <https://tinyurl.com/yd56sp9t>
- Olobatuyi, M. E. (2006). *A user's guide to path analysis*. Boulder, CO: University Press of America.
- Oxford Business Group. (2018). A growth driver: The home improvement segment continues to expand. Retrieved from <https://tinyurl.com/y8ukp3n6>
- Pan, S. L., & Lee, J. N. (2003). Using E-CRM for a unified view of the customer. *Communications of the ACM*, 46(4), 95–99.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implication. *Journal of Marketing*, 49(4), 41–50. doi: 10.2307/1251430
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multi-item scale for measuring consumer perception of service quality. *Journal of Retailing*, 64(1), 12–40. Retrieved from <https://tinyurl.com/yb3mj7a7>
- Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, (May–June), 79–91.
- Pumim, A., Srinuan, C., & Panjakajornsak, V. (2017). Mobile phone customer loyalty in Thailand: A path analysis case study. *Asia-Pacific Social Science Review*, 16(3). Retrieved from <https://tinyurl.com/y7y9gxz4>
- Servera-Francés, D., & Arteaga, F. (2015). The impact of corporate social responsibility on the customer commitment and trust in retailing sector. *Ramon Llull Journal of Applied Ethics*, 6, 161–178. Retrieved from <https://tinyurl.com/y7fey9bq>
- Skeldon, P. (2017, June 2). 90% of UK consumers have unsubscribed from retailer comms in the past year. *Internet Retailing*. Retrieved from <https://tinyurl.com/yd2grtbh>
- Siam Commercial Bank Economic Intelligence Center. (2015, May 1). Marketing to Generation Y in Thailand. Retrieved from <http://tinyurl.com/o9xfor2>

- Siriboon, L. (2018, March 2). Knight Frank Thailand offers Bangkok condominium market outlook. Retrieved from <https://tinyurl.com/y9xwx8p9>
- Tan, J. (2017, October 4). *How home improvement retailers can thrive in Asia*. Euromonitor International. Retrieved from <https://tinyurl.com/ybsmyt9f>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. doi: 10.5116/ijme.4dfb.8dfd
- Welter, H., & Logel, S. (2016, March). Room for improvement. *Hardware Retailing*. Retrieved from <https://tinyurl.com/ya4nk231>
- Zhu, F. X., Wymer, W. J., & Chen, I. (2002). IT-based services and service quality in consumer banking. *International Journal of Service Industry Management*, 13(1), 69–90. doi: 10.1108/09564230210421164