



## The Role of Self-service Technology (SST) Service Quality in Enhancing Customer Relationships: The Case of Mobile Banking Services in Thailand

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**Abstract:** The purpose of the study is to explore the role of self-service technology (SST) service quality in enhancing customer-bank relationships. Specifically, based on the commitment-trust theory of relationship marketing, the study aims to examine the effect of SST service quality on customer trust and customer commitment in the context of mobile banking in Thailand. To test research hypotheses, the study employed a quantitative survey of 226 respondents. Structural equation modeling was utilized for data analysis. Results indicated that SST service quality embracing convenience, functionality, perceived control, and security within the mobile banking context has a large direct effect on both customer trust and customer commitment, two key constructs of relationship marketing success. The current study has extended the understanding of technology-driven service quality to relationship marketing body of knowledge. For managerial implications, it is imperative for bankers to provide higher quality services of mobile banking by prioritizing service quality factors to develop ongoing relationships with their customers.

**Keywords - Self-service technology, service quality, customer relationships, mobile banking, customer trust, customer commitment.**

### Introduction

Firms' use of new technologies to serve customers is increasingly growing and becomes one key component of customer-firm interactions (Lin and Hsieh, 2007). The disruptiveness of technologies encourage firms to adopt technological solutions to improve their customer experiences (Lo and Campos, 2018). Self-service technologies (SSTs) are mechanisms that replace the direct contact between the service firms and their customers (Lin and Hsieh, 2007). They allow customers to generate and utilize the services without direct interaction with service employees (Iqbal, Hassan, and Habibah, 2018). SSTs are expected to become crucial components for long-term business success (Lin and Hsieh, 2007). With the increasing popularity of SSTs, it is necessary for firms to understand the perceived service quality of SSTs. Perceived service quality represents an overall impression (Ladhari, 2009) and has become a major factor for business success (Al-Hawari, 2011). The high-quality services can attract new customers, enriches customer retention, increases productivity and a market share, and finally improves firm performance (Johnston and Kong, 2011; Duncan and Elliott, 2004). Firms such as banks progressively provide their services online. Within this context, it is necessary for them to provide quality services to build successful relationships with their customers (Al-Hawari, 2011). A strong relationship encourages positive attitudes toward the firm, creating customer satisfaction, and generating word of mouth recommendations (Chenet, Dagger, and O'Sullivan, 2010). Relationship marketing, the act of establishing, developing, and maintaining successful relational exchanges (Morgan and Hunt, 1994) has been one of the major paradigms in the marketing literature in recent decades (MacMillan, Money, Money, and Downing, 2005). While traditional marketing focuses on attracting new customers, relationship marketing put more emphasis on developing long-term relationships with customers (Macmillan et al., 2005). The renowned commitment-trust theory of relationship marketing was originally proposed by Morgan and Hunt (1994). They suggested that two key constructs, trust and commitment, constituted the effective cooperation that is imperative for relationship marketing success. In the study of relationship marketing, customer trust and commitment are key constructs in establishing relationship quality (Brown, Crosno, and Tong, 2019, Lo and Campos, 2018). In general, extant studies have basically examined the impact of perceived quality provided by service employees on relationship quality. Fewer researches investigate the role of SST service quality in developing and sustaining customer relationships. The new technological environment requires a re-examination of theories and concepts adapted to a drastically transformed marketplace (Mukherjee and Nath, 2007). Therefore, this study applies the commitment-trust theory of relationship marketing (Morgan and Hunt, 1994) to study the relational outcomes caused by SST service quality.

To examine the role of SST service quality in promoting customer-firm relationships, the current study focuses on mobile banking services, an important category of SSTs (Meuter, Ostrom, Roundtree, and Bitner, 2000, Lin and Hsieh, 2011). According to the annual Global Digital Report 2019, 74% of Thailand's internet users access financial services via mobile devices, which is well ahead of the global rate of 41% (Fang, 2019). Bank transfers are the most popular transaction to make e-commerce and personal payments (Iwamoto, 2019). More importantly, Thailand dominated the top position among 46 countries in the world for internet users engaging in mobile banking, according to the Digital 2020 report (Leesa-Nguansuk, 2020). In particular, during the COVID-19 outbreak, social distancing or physical distancing practice has been the new normal for Thai people in 2020. To be safe, consumers avoid going to public places. Consequently, they might engage more self-service technologies via the Internet including mobile banking services. Therefore, the present research attempts to empirically reveal the relationships between SST service quality and relational outcomes in the context of mobile banking in Thailand.

### Objectives of the Study

The current study applies the commitment-trust theory of relationship marketing (Morgan and Hunt, 1994) to explore the role of SST service quality in enhancing customer-firm relationships. They proposed that successful relationship marketing requires trust and commitment. Thus, objectives of the study are described as follows.

1. To examine the effect of SST service quality on customer trust in the context of mobile banking in Thailand.
2. To examine the effect of SST service quality on customer commitment in the context of mobile banking in Thailand.

**LITERATURE REVIEW** To examine the role of SST service quality in enhancing customer relationships, a review of related literature is conducted as follows.

### Self-service Technologies (SSTs)

Self-service technologies (SSTs) are defined as technological interfaces that enable customers to yield a service independent of direct service-employee involvement (Meuter et al., 2000). There are four types of SSTs employed by service providers: Internet, kiosks, interactive voice responses and mobile services (Meuter et al., 2000; Lin and Hsieh, 2011). In recent decades, SST adoption was emerging business phenomena of service industry (Iqbal et al., 2018). SSTs help service firms to decrease equipment and human resource costs (Iqbal et al., 2018). They can increase the efficiency and effectiveness of businesses with a more flexible alternative of time and space for customers (Lin and Hsieh, 2007). Increasing time and place convenience for customers results in the higher degree of satisfaction (Bitner, Brown, and Meuter, 2000). Conversely, SSTs provide more sophisticated methods of customer interaction. Therefore, SST adoption will vary based on the readiness and customer characteristics (Lin and Hsieh, 2007).

**SST Service Quality** Parasuraman, Zeithaml, and Berry (1988) defined service quality as a comparison between customer expectations for what a service firm should offer and its actual service performance. They developed the best known and most commonly used measure of service quality, namely the SERVQUAL scale. SERVQUAL measure includes five dimensions: 1) Reliability, 2) Responsiveness, 3) Assurance, 4) Empathy, and 5) Tangibility. However, SERVQUAL scale is not universal and needed to adapt to the specific service settings (Ladhari, 2008). In particular, five dimensions of SERVQUAL do not fit the data adequately in the online environment (Ladhari, 2009). In this study, SST service quality refers to a comparison between customer expectations for online self-service offered by a service company and the actual perceived self-service performance. In the SST context, some researchers developed the specific service quality measure for SST. Lin and Hsieh (2011) developed SSTQUAL scale with seven dimensions including functionality, enjoyment, security, assurance, design, convenience, and customization. Ding, Hu, and Sheng (2011) developed an e-SELFQUAL scale for measuring online self-service quality. Its dimensions are perceived control, service convenience, customer service, and service fulfillment. Al-Hawari (2011) proposed five factors to measure automated service quality consisting of convenience, queue management, personalization, responsiveness, and security. Mostafa (2020) utilized four dimensions to measure mobile banking service quality including perceived ease of use, perceived usefulness, perceived security/privacy, and perceived enjoyment.

Based on these measures and expert validation, this study adopts five dimensions to measure SST service quality in the mobile banking context in Thailand. Those dimensions are functionality, perceived control, convenience, security, and perceived enjoyment. Functionality means responsiveness, ease of use, and reliability (Lin and Hsieh, 2011). It reflects the usefulness and efficiency of using mobile banking. Perceived control refers to a cognitive state of flow experience and the belief that the person can predict probable event sequences (Ding et al., 2011). It is an important factor to measure mobile banking service quality as it alleviates customers' uncertainty. Convenience involves the ease with which a customer can access the mobile banking services (Al-Hawari, 2011, Lin and Hsieh, 2011). Security refers to privacy concerns of the customers (Al-Hawari, 2011, Lin and Hsieh, 2011). Perceived enjoyment means that the use of mobile banking is perceived as pleasurable on its own (Lin and Hsieh, 2011; Mostafa, 2020).

## 2.1 The Commitment-trust Theory of Relationship Marketing

According to Morgan and Hunt (1994: 22), relationship marketing is "all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges". They proposed the commitment-trust theory indicating that successful relationship marketing requires trust and commitment. According to the theory, both commitment and trust altogether produce the relational outcomes that stimulate efficiency, effectiveness, and productivity. Brown et al. (2019) also concluded that fundamental constructs in the study of relationship marketing are customer trust and commitment.

### 2.1.1 Customer Trust

Customer trust in a firm can be defined as "a customer's willingness to rely on a service provider in which a customer has confidence" (Moorman, Deshpande, and Zaltman, 1993: 82). Customer trust is based on overall firm's performance where positive result increases trust and negative performance decreases customer trust (Afzal, Khan, Rehman, Ali, and Wajahat, 2010). Trust is vital to relational exchange as it reduces uncertainty (Chenet et al., 2010) and becomes the foundation of the strategic partnership between the firm and the customer (Mukherjee and Nath, 2007). Typically, customers interact with front line employees. On the other hand, SSTs have unique characteristics that differentiate them from traditional service encounter. In this technological environment, customers generate services without direct interaction with employees. The difference implies that the firm has to understand the role of trust in a technology-mediated environment (Mukherjee and Nath, 2007).

### 2.1.2 Customer Commitment

Moorman, Zaltman, and Deshpande (1992: 316) defined relationship commitment as "an enduring desire to maintain a valued relationship". Morgan and Hunt (1994) proposed in their seminal paper that commitment is crucial to relational exchanges between the firm and customers. It represents the customer's willingness to undertake activities that will ensure the continuity of a relationship with the firm (Amoako, Neequaye, Kutu-Adu, Caesar, and Ofori, 2019). Therefore, customer commitment can increase firm reputation and a committed client becomes a source of information to predict behavioral intention (Solangi, Talpur, Shaikh, Mushatque, and Channa, 2019). According to Al-Hawari (2011), commitment is a key factor of lasting relationships in facilitating the customer behavior regardless of the changing environmental condition.

## 2.2 Mobile Banking Services in Thailand

Mobile banking refers to “a channel that enables customer interaction with a bank to carry out banking-related transactions, anytime and anywhere at a less physical and monetary cost, through using mobile devices, such as mobile phones” (Mostafa, 2020). Unlike Internet banking, it is a software application run on a mobile device, namely a mobile application, provided by banks. Transactions through mobile banking include balance inquiry, fund transfer, bill payment, investment, insurance, applying loans and credit card, and other banking services provided by each financial institution.

According to the Digital 2020 report, Thailand is the top ranked country for internet users engaging in mobile banking, followed by Sweden, and South Korea (Leesa-Nguansuk, 2020). Among Thailand’s internet users, 74% of them access banking services via mobile phones, which is ahead of the global rate of 41% and higher than China, at 61%, according to the annual Global Digital Report 2019 from social media management platform Hootsuite and digital marketing agency We Are Social (Fang, 2019). Bank transfers for payments are the most popular transaction in the country (Iwamoto, 2019). Additionally, 65% of Thai internet users aged 16 to 64 indicated that they use mobile banking service at least once a month (Leesa-Nguansuk, 2020).

## 2.3 Conceptual Framework and Research Hypotheses

Based on a literature review, the author proposes the following conceptual framework (Figure 1) and research hypotheses to empirically test the effect of SST service quality on customer relationship development i.e. customer trust and commitment in the context of mobile banking in Thailand.

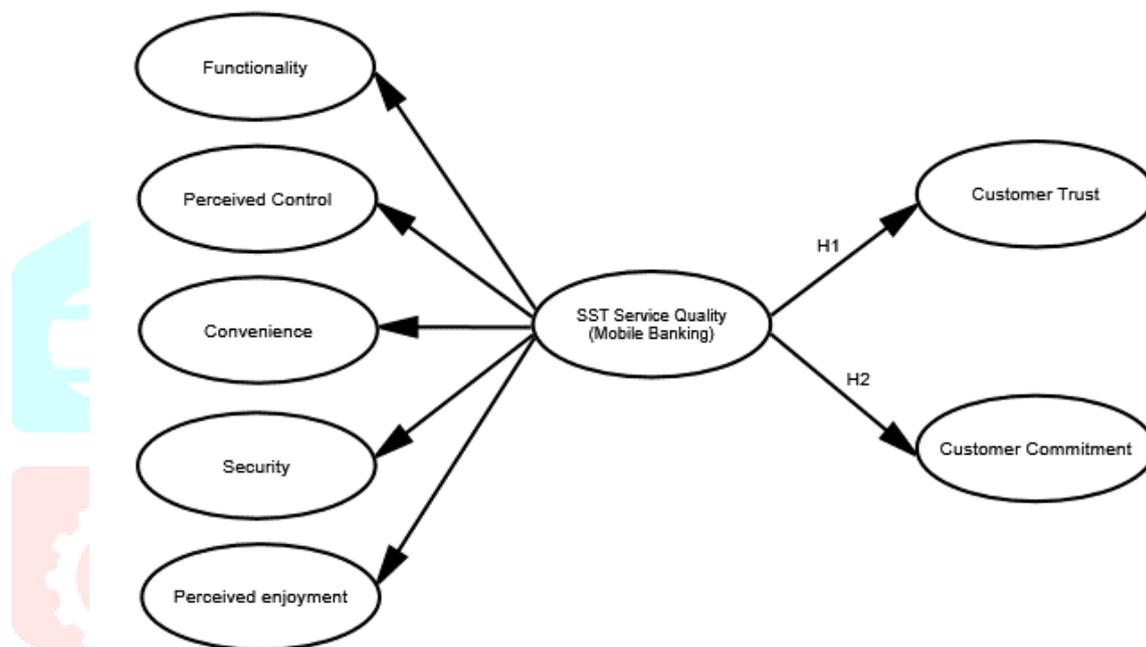


Figure 1: A Conceptual Framework

### 2.5.1 Research Hypotheses

#### SST Service Quality and Customer Trust

In general, customer trust is established through the consistency of perceived service quality, the fulfillment of customer requirement, and the firm’s intention to serve the customers at their best interest (Choi and La, 2013). Previous studies also indicated that service quality has a significant positive effect on customer trust (Chenet et al., 2010, Eisingerich and Bell, 2007). In the technological environment, it is expected that a high level of service quality embracing functionality, perceived control and security is a condition for long-term relationships, especially trust to establish between the bank and customer. As a result, this study proposes that SST service quality could influence customer trust.

**H1:** SST service quality is positively related to customer trust.

#### SST Service Quality and Customer Commitment

Commitment is a customer long-term relationship orientation which is based on an expectation of higher benefits by remaining in the relationship (Chenet et al., 2010). Offering strong communication channels with customers regarding their financial transactions can enhance relationship commitment (Al-Hawari, 2011, Sharma and Patterson, 1999). According to Lang and Colgate (2003), due to the nature of online banking, the relationships between the bank and the customer have become closer. In addition, technological services represent a positive experience for the customers and provide perceived value to induce customers to have the intention of continuing the relationship with their bank (Zhu et al., 2002). Consequently, the following hypothesis is proposed.

**H2:** SST service quality is positively related to customer commitment.

## I. RESEARCH METHODOLOGY

This study applies the quantitative survey to test the research framework and hypotheses. Population, sample, data collection, research instrument, measurement of constructs, and data analysis are described as follows.

### 3.1 Research Instrument and Measurement of Constructs

Questionnaire is the research instrument used in this survey. There are three parts in the questionnaire: Part 1 – respondents' demographic data, Part 2 – mobile banking usage experience of a bank chosen by respondents in the past 3 months, and Part 3 - respondents' evaluation of SST service quality, trust and commitment to the chosen bank. All measures of the proposed constructs are adapted from existing literature (Table 1). Items are by means of five-point Likert scale from 1 to 5 rating from strongly disagree (1) to strongly agree (5). According to Hair, Black, Babin, and Anderson (2010), three to five items for a construct as shown in Table 1 are recommended.

Table 1: The Measurement of Constructs

Constructs		Measurement Scales	Sources
SST Service Quality	Functionality (FN)	FN1 I can get my service done with the bank's mobile banking in a short time.	Boon-itt (2016), Lin and Hsieh (2011)
		FN2 The service process of the bank's mobile banking is clear.	
		FN3 I can get my service done smoothly with the bank's mobile banking.	
	Perceived Control (PC)	PC1 I know what to expect in following steps.	Ding et al. (2011)
		PC2 I know how long it takes to complete the transaction.	
		PC3 I know what information will be provided in each page.	
	Convenience (CV)	CV1 It is easy and convenient to reach the bank's mobile banking.	Al-Hawari (2011); Ding <i>et al.</i> (2011); Jun and Palacios (2016); Lin and Hsieh (2011)
		CV2 All my banking needs are included in the electronic banking menu options.	
		CV3 Mobile banking services have a user-friendly system.	
		CV4 It is convenient to navigate or change the transaction.	
	Security (SC)	SC1 I feel safe in my transactions with the bank's mobile banking.	Al-Hawari (2011); Lin and Hsieh (2011)
		SC2 The confidentiality of customer data is ensured.	
		SC3 I feel secure that my private information will not go to another party.	
	Perceived enjoyment (PE)	PE1 Using mobile banking is fun.	Mostafa (2020)
		PE2 Using mobile banking is positive.	
PE3 Using mobile banking is exciting.			
Customer Trust (CT)	CT1 I can trust the chosen bank completely.	Al-Hawari (2011); Chenet <i>et al.</i> (2010)	
	CT 2 The chosen bank is trustworthy.		
	CT3 The chosen bank can always be trusted.		
Customer Commitment (CC)	CC1 I intend to maintain the relationship with the chosen bank indefinitely.	Al-Hawari (2011); Chenet <i>et al.</i> (2010)	
	CC2 I am very proud to have the chosen bank as a financial service provider.		
	CC3 I am committed to a long term relationship with the chosen bank		

### 3.2 Population, Sample and Data Collection

The target population of the study is the customers who use mobile banking services in Thailand. As suggested by Bentler and Chou (1987), the sample size is determined based on a ratio of 10 samples to 1 measurable item. Therefore, given the total 22 observable items, the sample size in the current study is 220 customers. The sampling method is convenient sampling. A screening question regarding mobile banking usage experience in the previous three months was asked to ensure that the respondents met the study requirement. Some questionnaires were distributed at shopping malls. However, due to the COVID-19 outbreak, online surveys were also conducted in Facebook, Twitter, and Line community. Participation in this study is voluntary. If respondents agree to participate in the study, it implies the consent by action. Over the period, 235 questionnaires were returned. A total of 9 responses were discarded because the respondents did not have mobile banking usage experiences in the past three months. Therefore, the final data used for the analysis was 226.

Regarding the respondents' profiles, their average age is 34.15 years. Most of them are female (62.8%), employees (34.1%) and complete a bachelor's degree (55.8%). The majority of the respondents (29.6%) has monthly income between 10,000 and 20,000 baht. Top three banks that respondents have mobile banking usage experiences with in the past three months are Kasikorn Bank (29.2%), Siam Commercial Bank (24.8%) and Krung Thai Bank (23.5%). Bank transfers for personal payments are the most popular transaction (87.6%), followed by bank transfers for e-commerce (82.3%), balance inquiry (66.8%), and bill payments (56.2%).

## IV. RESULTS AND ANALYSIS

### 4.1 Measurement Model Assessment

This study employs Confirmatory Factor Analysis (CFA) to test the measurement model. To assess a model fit, multiple fit indices including  $\chi^2/\text{degree of freedom (df)}$ , Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA) are examined. Initially, CFA results of SST service quality revealed that perceived enjoyment had the lowest factor loading (0.37). Since its value was below 0.50 (Hair et al., 2010), this factor was deleted from the measurement model. Accordingly, SST service quality with 4 factors and 13 items was used for subsequent analysis. Fit for the final measurement model of all constructs was

acceptable ( $\chi^2/df = 2.02$ , GFI = 0.89, CFI = 0.97, RMSEA = 0.07). Table 2 showed the measurement validity and reliability. Convergent validity was established as all standardized factor loadings were statistically significant and the average variances extracted (AVE) of all constructs were greater than 0.50 (Hair et al., 2010). Reliability was measured using Cronbach's alpha and composite reliability (CR). The results from Table 2 indicate that reliability scores for all the constructs are above the cut-off values of 0.70 (Hair et al., 2010).

Table 2: Measurement Validity and Reliability

Constructs	Factor Loading	t-value	AVE	CR	Cronbach's Alpha
Functionality (FN)			0.75	0.90	0.90
FN1	0.86	17.49			
FN2	0.88	17.88			
FN3	0.86	16.91			
Perceived Control (PC)			0.68	0.86	0.88
PC1	0.88	15.34			
PC2	0.81	15.22			
PC3	0.79	14.57			
Security (SC)			0.80	0.92	0.92
SC1	0.81	17.57			
SC2	0.95	17.67			
SC3	0.92	17.12			
Convenience (CV)			0.66	0.89	0.88
CV1	0.83	14.90			
CV2	0.78	13.56			
CV3	0.83	14.88			
CV4	0.82	14.89			
Customer Trust (CT)			0.84	0.94	0.94
CT1	0.88	22.17			
CT2	0.92	20.72			
CT3	0.94	22.17			
Customer Commitment (CC)			0.75	0.90	0.90
CC1	0.86	15.92			
CC2	0.85	17.03			
CC3	0.90	17.44			

Note. Model fit indices:  $\chi^2/df = 2.02$ , GFI = 0.89, CFI = 0.97, RMSEA = 0.07

#### 4.2 Structural Model Assessment

Structural Equation Modeling (SEM) is used to verify research hypotheses via AMOS. The overall fit of the SEM model was satisfactory ( $\chi^2/df = 1.68$ , GFI = 0.90, CFI = 0.98, RMSEA = 0.06). As shown in Figure 2 and Table 3, research hypotheses were statistically supported.

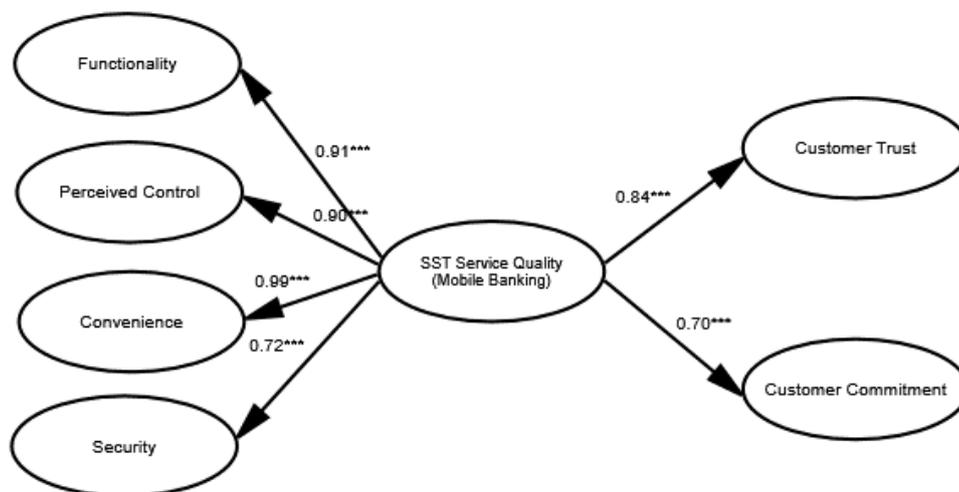


Figure 2: Structural Model Results

Notes: \*\*\* P-value = .000; Model fit indices:  $\chi^2/df = 1.68$ , GFI = 0.90, CFI = 0.98, RMSEA = 0.06

The results indicate that SST service quality had a significant large effect on customer trust ( $\beta = 0.84$ , P-value = 0.00), supporting H1. The findings are consistent with previous studies (Chenet et al., 2010, Eisingerich and Bell, 2007) showing that service quality has a positive impact on customer trust. Additionally, SST service quality had a large impact on customer commitment ( $\beta = 0.70$ , P-value = 0.00), which supports H2. Self-service technology represents a positive experience for the customers and encourage customers to endure the relationship with their bank (Zhu et al., 2002). In other words, the relationships between the bank and the customer have become closer via online banking (Lang and Colgate, 2003). Therefore, a high level of SST service quality comprising convenience, functionality, perceived control and security is a foundation for long-term relationships, especially trust and commitment to establish between the bank and customer.

Table 2: Hypothesized Model Results

Hypotheses	Path Coefficient	P-value	S.E.
H1: SST Service Quality -> Customer Trust (+)	0.84	.000	0.07
H2: SST Service Quality -> Customer Commitment (+)	0.70	.000	0.08

Note. Model fit indices:  $\chi^2/df = 1.68$ , GFI = 0.90, CFI = 0.98, RMSEA = 0.06

## V. CONCLUSION, CONTRIBUTIONS, LIMITATIONS AND RECOMMENDATIONS OF THE STUDY

### 5.1 Conclusions of the Study

The purpose of the study is to explore the role of SST service quality in enhancing customer relationships. Specifically, based on the commitment-trust theory of relationship marketing (Morgan and Hunt, 1994), the study aims to examine the effect of SST service quality on customer trust and customer commitment in the context of mobile banking in Thailand. SEM findings indicated that SST service quality has a large positive effect on both customer trust ( $\beta = 0.84$ ) and customer commitment ( $\beta = 0.70$ ), two major relationship quality constructs. The results of this research emphasize the important role SST service quality i.e. mobile banking service quality plays in customer-bank relationships. In this regard, functionality, convenience, perceived control, and security jointly result in customer trust and commitment. Consequently, improvements in these factors will increase satisfactory relationships with customers.

### 5.2 Contributions of the Study

#### 5.2.1 Theoretical Contributions

While most literature in services marketing has focused on traditional face-to-face interaction service quality and relational outcomes, this study has extended the understanding of technology-driven service quality to relationship marketing body of knowledge. Notably, the study findings reveal that the commitment-trust theory of relationship marketing proposed by Morgan and Hunt (1994) can be applied in digital transformation market by technology. Further, it empirically investigates the proposed framework in one of the developing countries such as Thailand. Since Thai customers increasingly engage in mobile banking service, a rigorous investigation into this type of SST is required.

#### 5.2.2 Practical Contributions

The understandings of SST service quality can create opportunities for service providers to become more responsive and effective in customer service, enhance mutual value between parties, and develop and retain customers (Al-Hawari, 2011). Even in the digital era, the retention of existing customers by improving relationships is still the key marketing objective for practitioners. Specifically, it is necessary for bankers to provide higher quality services of mobile banking to develop ongoing relationships with their customers. The findings indicate that functionality had the highest average score ( $\bar{x} = 4.23$ ), followed by convenience ( $\bar{x} = 4.04$ ), perceived control ( $\bar{x} = 3.99$ ), and security ( $\bar{x} = 3.79$ ) respectively. Functionality including responsiveness and reliability, can reflect the usefulness of mobile banking usage (Lin and Hsieh, 2011). Customers need to get their service done with the mobile banking in a short time. The service processes should be clear and smooth. The findings also reveal that customers emphasize the convenience of mobile banking. For example, they required that they can reach the bank's mobile banking and change the transaction easily. Additionally, mobile banking services should have a user-friendly system and all necessary banking transactions should be included in the menu options. Perceived control such as information provided regarding the process and length of time in completing a transaction is also an important factor to customers as it decreases their uncertainty. Finally, bankers should take privacy concern of the customers into account as well. Therefore, service firms should prioritize SST service quality components in the implementation of relationship marketing to enhance customer trust and commitment.

### 5.3 Limitations and Future Research

Since this study examines only mobile banking services, other types of SSTs such as kiosks and interactive voice responses (Lin and Hsieh, 2011) can be investigated in future research. Also, to gain a better understanding of the influence of SST service quality on customer relationships, a qualitative study such as in-depth interviews can be conducted. According to Chenet et al. (2010), a strong relationship generates customer satisfaction, positive attitudes toward the firm, and word of mouth recommendations. Future studies might consider these constructs in exploring relational outcomes of SST service quality. Finally, cross-culture study should be taken into consideration in future studies to generalize research findings.

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## REFERENCES

- [1] Afzal, H., Khan, M. A., Rehman, K., Ali, I. and Wajahat, S. (2010). Consumer's trust in the brand: Can it be built through brand reputation, brand competence and brand predictability. *International Business Research*, 3 (1), 43-51.
- [2] Al-Hawari, M. A. (2011). Automated service quality as a predictor of customers' commitment: A practical study within the UAE retail banking context. *Asia Pacific Journal of Marketing and Logistics*, 23 (3), 346-366.
- [3] Amoako, G. F., Neequaye, E. K., Kutu-Adu, S. G., Caesar, L. D., and Ofori, K. S. (2019). Relationship marketing and customer satisfaction in the Ghanaian hospitality industry: An empirical examination of trust and commitment. *Journal of Hospitality and Tourism Insights*, 2(4), 326-340.
- [4] Bentler, P.M., and Chou, C.P. (1987). Practical issues in structural equation modeling. *Sociological Methods and Research*, 16, 78-117.
- [5] Bitner, M. J., Brown, S. W., and Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 138-150.
- [6] Brown, J. R., Crosno, J. L., and Tong, P.Y. (2019). Is the theory of trust and commitment in marketing relationships incomplete? *Industrial Marketing Management*, 77, 155-169.
- [7] Boon-itt, S. 2016. Managing self-service technology service quality to enhance e-satisfaction. *International Journal of Quality and Service Sciences*, 7(4), 373-391.
- [8] Chenet, P., Dagger, T. S., and O'Sullivan, D. (2010). Service quality, trust, commitment And service differentiation in business relationships. *Journal of Services Marketing*, 24(5), 336-346.
- [10] Choi, B., and La, S. (2013). The impact of corporate social responsibility (CSR) and customer trust on the restoration of loyalty after service failure and recovery. *Journal of Services Marketing*, 27(3), 223-233
- [11] Ding, D. X., Hu, P. J., and Sheng, O. R. L. (2011). E-SELFQUAL: A scale for measuring online self-service quality. *Journal of Business Research*, 64(5), 508-515.
- [12] Duncan, E., and Elliott, G. (2004). Efficiency, customer service and financial performance among Australian financial institutions. *The International Journal of Bank Marketing*, 22 (5), 319-42.
- [13] Eisingerich, A. B., and Bell, S. J. (2007). Maintaining customer relationships in high Credence services. *Journal of Services Marketing*, 21(4), 253-262.
- [14] Fang, Z. (2019, February 13). Thailand leads mobile banking penetration. *Thailand Business News*. <https://www.thailand-business-news.com/banking/71234-thailand-leads-mobile-banking-penetration.html>
- [15] Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., and Tatham, R. L. (2010). *Multivariate data analysis*. Pearson Education, Inc.
- [16] Iqbal, M. S., Hassan, M. U., and Habibah, U. (2018). Impact of self-service technology (SST) service quality on customer loyalty and behavioral intention: The mediating role of customer satisfaction. *Cogent Business and Management*, 5, 1-23.
- [17] Iwamoto, K. (2019, February 12). Southeast Asia eclipses China as world's mobile economy hot spot. *Nikkei Asian Review*. Retrieved from <https://asia.nikkei.com/Business/Business-trends/Southeast-Asia-eclipses-China-as-world-s-mobile-economy-hot-spot>
- [18] Johnston, J., and Kong, X. (2011). The customer experience: A road-map for improvement. *Managing Service Quality*, 21(1), 5-24.
- [19] Jun, M., and Palacios, S. (2016). Examining the key dimensions of mobile banking service quality: An exploratory study. *International Journal of Bank Marketing*, 34(3), 307-326.
- [20] Ladhari R. (2008). Alternative measures of service quality: A review. *Managing Service Quality*, 18(1), 65-86.
- [21] Ladhari R. (2009). A review of twenty years of SERVQUAL research. *International Journal of Quality and Service Sciences*, 1(2), 172-198.
- [22] Lang, B., and Colgate, M. (2003). Relationship quality, on-line banking and the information technology gap. *International Journal of Bank Marketing*, 21(1), 29-37.
- [23] Leesa-Nguansuk, (2020, February 3). Thais lead in mobile banking, gaming. *Bangkok Post*. Retrieved from <https://www.bangkokpost.com/business/1849719/thais-lead-in-mobile-banking-gaming?fbclid=IwAR31WeUmxrXE8WMVqscsZyh7bWW0Sxk13eIxmThQ3vHbGkeK6Z58CNh8RYg>
- [24] Lin, J. C., and Hsieh, P. (2007). The influence of technology readiness on satisfaction and behavioral intentions toward self-service technologies. *Computers in Human Behavior*, 23, 1597-1615.
- [25] Lin, J. C., and Hsieh, P. (2011). Assessing the self-service technology encounter: Development and validation of SSTQUAL scale. *Journal of Retailing*, 87(2), 194-206.
- [26] Lo, F., and Campos, N. (2018). Blending Internet-of-Things (IoT) solutions into relationship marketing strategies. *Technological Forecasting and Social Change*, 137, 10-18.
- [27] MacMillan, K., Money, K., Money, A., and Downing, S. (2005). Relationship marketing in the not-for-profit sector: An extension and application of the commitment-trust theory. *Journal of Business Research*, 58, 806-818.
- [28] Meuter, M. L., Ostrom, A. L., Roundtree, R. I. and Bitner, M. J. (2000). Self-service technologies: Understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*, 64(3), 50-64.
- [29] Moorman, C., Deshpande, R. and Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of Marketing*, 57(1), 81-101.
- [30] Moorman, C., Zaltman, G., & Deshpande, R. (1992). Relationships between providers and users of market research: The dynamics of trust within and between organizations. *Journal of Marketing Research*, 29, 314-29.
- [31] Morgan, R. M., and Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-38.
- [32] Mostafa, R. B. (2020). Mobile banking service quality: A new avenue for customer value co-creation. *International Journal of Bank Marketing*. DOI 10.1108/IJBM-11-2019-0421.
- [33] Mukherjee, A., and Nath, P. (2007). Role of electronic trust in online retailing: A re-examination of the commitment-trust theory. *European Journal of Marketing*, 41(9/10), 1173-1202.
- [34] Parasuraman, A., Zeithaml, V. A., and Berry, L.L. (1988). SERVQUAL: A multiple item scale for measuring customer perceptions of service quality. *Journal of Retailing*, 63(1), 12-37.
- [35] Sharma, N., and Patterson, P. (1999). The impact of communication effectiveness and service quality on relationship commitment in consumer, professional services. *The Journal of Services Marketing*, 13(2), 151-70.

- [36] Solangi, B., Talpur, U., Shaikh, S. S., Mushatque, T., and Channa, M. A. (2019). Relationship marketing as an orientation to customer retention: Evidence from Banks of Pakistan. *International Business Research*, 12(7), 133-140.
- [37] Zhu, F.X. Jr, Wymer, W., and Chen, I. (2002). IT-based services and service quality in consumer banking. *International Journal of Service Industry Management*, 13(1), 69-90.

