



Factors Affecting the Use of Online and Internet Banking in Cambodia

Dymo Sun^a & Somsit Duang-Ek- Anong^{b*}

^a *Innovative Technology Management, Graduation School of Business and Advanced Technology Management, Assumption University, Bangkok, 10240 Thailand.*

^b *Technology Education Management, Graduate School of Business and Advanced Technology Management, Assumption University, Bangkok, 10240 Thailand.*

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Abstract

Online and internet banking are the services that can be electronically performed at home or organization via a telecommunication network or the web site. Online and internet banking is increasingly adopted by Cambodian people. Therefore, this paper aims to investigate the factors affecting the use of online and internet banking in Cambodia by selecting the top three commercial banks and three microfinance deposit taking institutions as a case study. The study is useful for the banking and financial institutions, and marketing practitioner to understand the customers' usage behavior. Quantitative research method is adopted and applied multi-stage sampling technique of probability and non-probability sampling methods for data collection. A data of 600 samples was collected from target respondents who aged 18 or above and have experience in using online and internet banking services. The data was analyzed by using Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) to ensure the model fitness, consistency and causal relationship between variables. The measurement model from CFA has proven the model fitness and consistency in the variables. The result of structural model from SEM indicates that perceived usefulness and ease of use had significant effect on intention to use while government support did not have an effect. Quality of information, perceived security, and customer service and support significantly affected trust, except for perceived privacy. Finally, intention to use and trust explained actual use. Users' decision on using online and internet banking is based on the information content, customer care services, information protection, advantages, and convenience to use but not relevant to government support and privacy.

Introduction

Online banking and internet banking are the most updated type of delivery channel for retail banking

services. Online banking is a type of service permitting customers to request information and carry out services at home or organization (Aladwani, 2001). Similarly,

internet banking also enables users to electronically conduct many types of transactions through the website operated by bank (Tan & Teo, 2000). The online and internet banking give benefits to both banks and their clients. Internet banking provides opportunities for banks to lower their cost of operations in terms of employing fewer staff and having fewer physical branches and offering their clients a variety of services at low price. In turn, the banks could earn higher profit, while their clients' convenience also increases. (Cheng, Lam, & Yeung, 2006; Nath, Schrick, & Parzinger, 2001).

Traditional commercial banks had always expanded market share by establishing sub-branch outlets surrounding key areas to reach potential customer groups. However, this approach increased the operating costs and subsequently, lowered profitability. In this context, online and internet banking can help traditional banks to actively increase high-quality customers, have fewer physical branches, and increase profit margins. Also, online and internet banking can help the bank develop new ideas and new methods to build customer relationship management and further open new banking services, which can result to an increase in banks' competitive advantage. With the rapid progress of science and technology, non-financial institutions have offered investment and financing services to customers and eroded the existence of traditional commercial banks in the market (Sang, Guo, & Ge, 2017).

Since banking business depended on traditional branch, the banks always sought different approaches to provide services to their customers. Many banks had to find the best way to obtain a prominent place in the market of electronic commerce. The internet banking became a simple delivery channel with low cost, more flexibility, and low security risk. In the current world, the banks dominated corporate and retail banking sector. Due to the rise of internet banking, customers are able to carry out their banking transactions online either through personal software or web access. The well-designed online banking gives customers the perception of an actual visit to the bank, direct interaction with bank clerks, and conducting business deals (SCN Education, 2013). Also, with electronic technology, the customers are able to access banks' services from home or office. The banks use this electronic technology to receive instructions, transmit information, transact and settle business. The range, price, and quality of electronic services contributed to banks' competitiveness in approaching customers (Broderick & Vachirapornpuk,

2002).

During the Cambodian civil war from 1975-1979, the economic infrastructure and banking system were destroyed. Cambodia has made a great effort to transform a planned economy to a free market economy, and gradually reformed the banking system to support the economic growth. Cambodian banking system has remarkably grown recently from the innovations and variations of products and services offered by the banking and other financial institutions. Under competitive environment, all service providers have innovated their products and services into electronic forms, which are increasingly adopted by the customers. The mobile and internet banking services became more popular for Cambodian people, particularly among the young generation and people in the social middle-class living in urban areas. The banks and financial institutions have continuously diversified their financial services, including debit and credit cards, money transfers services, and electronic payments. The deposit mobilized by banking institutions has remarkably raised by 15.1% and the total assets of microfinance institutions increased by 32.8% to USD 8.8 billion which are supported by shareholders' equity rose by 27.8% to USD 1.7 billion compared to 2018. Like the banking sector, microfinance provided variety of financial services such as lending, deposits, remittance, mobile banking, and ATMs (The National Bank of Cambodia, 2019).

At the same time, some challenges have also been found and impeded the expansion of this sector. These challenges include customer's limited confidence, customer's concern on data privacy and security, and intruder risk (Soeng, Cuyvers, & Soeung, 2019). Therefore, the study about factors underlying the acceptance of online and internet banking in Cambodia is essential. Two research theories of Technology Acceptance Model (TAM), Unified Technology Acceptance and Use of Technology (UTAUT) and previous empirical research were adopted for conceptual framework development. The factors studied hence include quality information, perceived security, perceived privacy, customer service and support, perceived usefulness, perceived ease of use, government support, trust, and intention to use as independent variables, and actual use as dependent variable.

Information quality is a measure of information generated by the system (Jennex, Olfman, Panthawi, & Park, 1998; Maes & Poels, 2006). Abdennebi & Debabi (2017); Silic & Ruf (2018) mentioned that information

quality is the most significant factor in determining the usage of system and users' satisfaction toward the adoption. Palazuelos, Herrero Crespo, & Montoya del Corte (2020) also found that quality or useful information positively affects the level of trust. The higher quality of information perceived by customers, the greater level of trust earned (Sánchez-Torres, Canada, Sandoval & Alzate, 2018). Customers would widely use online and internet banking when they perceived that the information obtained has quality and credibility (Erkan & Evans, 2016).

Perceived security is the probability which users perceived that the service provider could not store their information securely and unauthorized person could also view, and manipulate during transiting (Flavián & Guinaliú, 2006). According to the empirical studies of Afshan & Sharif (2016); Singh & Srivastava (2018), trust can be positively enhanced by the secure functionality and services provided by the banking. Also, Sánchez-Torres, Canada, Sandoval, & Alzate (2018) affirmed that perceived security is a strong determinant that impacted on building trust in internet banking. Perceived security lowers user's perceived risk and build up users' trust, which in turn reflected to a higher rate of internet banking adoption (Shankar & Kumari, 2016).

Perceived privacy is the perception of users relating to their ability to control and monitor the information about themselves (Goodwin, 1991). It is the guarantee that users' personal information gathered from electronic transactions is well protected from any disclosure without prior permission (Normalini & Ramayah, 2017). Perceived privacy has a significant effect on trust (Brasit, & Nursyamsi, 2017; Kaabachi, Ben Mrad & Petrescu, 2017; Zhang, Lu, & Kizildag, 2018). User's trust on the service providers or the service itself can comfort their privacy concerns (Malaquias & Hwang, 2016).

Customer service and support is the ability of service provider to advise on issues related to purchased goods or services or the purchase process, including the ability to handle concerns or customers complaints (Joseph & Stone, 2003). Hidayat, Saifullah, & Ishak (2016) stated that customer service and support positively influenced online customer trust. The quick response time and resolution provided by the customer service support would tend to enhance the customers' trust on service providers (Quach, Thaichon, & Jebarajakirthy, 2016; Shankar & Jebarajakirthy, 2019) Also, Mohd Thas Thaker, Amin, Mohd Thas Thaker, &

Allah Pitchay (2019) affirmed that customer service and support is a key predictor of consumer trust.

Usefulness refers to the subjective probability that users can improve the completion of an assigned task when he or she used the technology (Jahangir & Begum, 2008). Chaouali, Ben Yahia, Lunardo, & Triki (2019); Chawla & Joshi (2019); Sutanonpaiboon & Mastor (2010) stated that, in the context of internet banking and mobile wallet context, perceived usefulness positively impacts on intention to use. Perceived usefulness is a key predictor of the intention to use in internet banking or electronic payment services (Alshurideh, Al Kurdi, Masa'deh, & Salloum, 2021; Shankar & Jebarajakirthy, 2019). When users perceived that online banking is useful or able to fulfill their expectation and needs, he or she is more likely to adopt (Malaquias & Hwang, 2019).

Perceived ease of use is the extent to which interaction with the system is clear, understandable, easily functioned on what is needed and easy to use (Guriting & Ndubisi, 2006). According to Alshurideh, Al Kurdi, Masa'deh, & Salloum, (2021); Suhartanto, Dean, Ismail & Sundari (2020), in the context of online and internet banking, perceived ease of use positively influences the intention to use internet banking service. Also, Raza, Shah and Ali (2019) affirmed that if users found it is easy and efficient to access browser and conduct their transaction online, they are more likely to use online services.

Government support refers to the policies and legislations developed by government authorities to enhance the use of electronic banking. These policies and legislations include less expensive internet service policies, consumer protection, web security policies, etc. (Sánchez-Torres, Canada, Sandoval, & Alzate, 2018). Charag, Fazili & Bashir (2020) mentioned that government support has significant impact on the intention to use online banking transactions. Also, for the context of internet banking, Reni & Hayati (2016) confirmed that government support had a positive effect on internet banking service usage. Government support certainly connected with the intention to use online banking. In addition, government support became a main driving force to use internet banking because it assured that the internet-banking operations would be conducted in orderly and well-managed way (Lajuni, Wing, Yusman, Hiram & Alfera, 2017).

Trust is the extent to which users believe that the online banking system is secured and there are no privacy threats when using online banking (Chong, Ooi,

Lin, & Tan, 2010). The users build trust when they perceive that the online banking system are secured, reliable, and able to mitigate risk from uncertainty (Zhang, Chen, Liu, & Zhu, 2018). Tarhini, Alalwan, Shammout, & Al-Badi (2019) who studied the use of mobile commerce, stated that trust has an effect on intention to use. Also, Namahoot & Laohavichien (2018); Omonedo & Bocij (2017) affirmed that trust or confidence strongly and significantly affects the readiness and intention to use internet banking. It implies that users consider trust as an important element in their perceived use (Namahoot & Laohavichien, 2018). The experienced users intended to continue using or have a relationship with last-service provider from whom they transacted based on mutual trust (Sharma & Sharma, 2019). Furthermore, Sánchez-Torres, Canada, Sandoval, & Alzate (2018) mentioned that perceived trustworthiness is a factor which strongly affects the users' actual use of e-banking. Similarly, Zhang, Chen, Liu, & Zhu (2018) mentioned that trust is a significant antecedent on internet banking adoption. Also, Lee & Kim (2020) affirmed that trust has a role in affecting the usage behavior in internet banking. Moreover, Kaabachi, Ben Mrad, & Petrescu, (2017) indicated that trust has a connection with the usage of online service. The higher users' trust, the higher users' commitment in using online service.

Intention to use is an individual's possibility which he or she would perform some behaviors (Chatzoglou, Sarigiannidis, Vraimaki, & Diamantidis, 2009). Sánchez-Torres, Canada, Sandoval, & Alzate (2018) mentioned that the intention to use had a strong effect on actual use in e-banking. Actual use refers to actual usage of e-banking by customers (Sánchez-Torres, Canada, Sandoval, & Alzate, 2018). Also, Farah, Hasni, & Abbas (2018) stated that intention to use positively influence actual use behavior in internet banking. Farzin, Sadeghi, Yahyayi Kharkeshi, Ruholahpur & Fattahi (2021) confirmed that users will intend to use if they believe that mobile banking met their needs such as improving their lifestyle and work performance.

Proposed hypotheses from the literature review are as following:

H1: Quality of information has a significant effect on the perceived trustworthiness of online and internet banking.

H2: Perceived security has a significant effect on the perceived trustworthiness of online and internet banking.

H3: Perceived privacy has a significant effect on the perceived trustworthiness of online and internet banking.

H4: Customer service and support has a significant effect on the perceived trustworthiness of online and internet banking.

H5: Perceived usefulness has a significant effect on the intention to use online and internet banking.

H6: Perceived ease of use has a significant effect on the intention to use online and internet banking.

H7: Government support has a significant effect on the intention to use online and internet banking.

H8: Trustworthiness of online and internet banking has a significant effect on the intention to use online and internet banking.

H9: Trustworthiness of online and internet banking has a significant effect on the actual use of online and internet banking in Cambodia.

H10: Intention to use online and internet banking has a significant effect on the actual use of online and internet banking in Cambodia.

Objectives

1. To investigate the significance of quality of information, perceived security, perceived privacy, and customer service and support on trust in online and internet banking in Cambodia.

2. To investigate the significance of perceived usefulness, perceived ease of use, and government support on intention to use online and internet banking in Cambodia.

3. To investigate the significance of trust and intention to use on actual use of online and internet banking in Cambodia.

Conceptual framework

Conceptual framework in this study as shown in Figure 1 is developed from Technology Acceptance Model (TAM), Unified Technology Acceptance and Use of Technology (UTAUT) and previous empirical researches. TAM is a model which precisely explains how the users can accept and use a technology. TAM emphasizes on two significant independent variables of perceived usefulness and perceived ease of use that influence user's adoption of technology (Venkatesh & Morris, 2000). UTAUT explains how the users intends to adopt technology. UTAUT strongly emphasizes on the social influence, performance expectancy, and effort expectancy that are direct determinants of intention to

use and facilitating conditions, and further a direct determinant of usage behavior (Venkatesh, Morris, Davis, & Davis, 2003). The conceptual framework of this study presents all the relevant variables used to explain the users' actual usage of online and internet banking in Cambodia. It consists of one dependent variable which is actual use and nine independent variables which are trust, intention to use, government support, perceived usefulness, perceived ease of use, quality of information, perceived security, perceived privacy, and customer service and support. This conceptual framework aims at investigating ten relationships between these variables.

attitudes, knowledge, buying behavior, or preferences (Armstrong, Adam, Denize, & Kotler, 2014). The researcher selected users who had experienced with online and internet banking application operated by three commercial banks and three microfinance deposit taking institutions in Cambodia. To collect data, the researcher first met the management of these institutions to explain the purpose of the study and the need for information. The researcher also sought their assistance to disseminate the questionnaires to the customers. Then, these institutions distributed the questionnaires and collected the responses from the respondents.

The developed questionnaire included three parts.

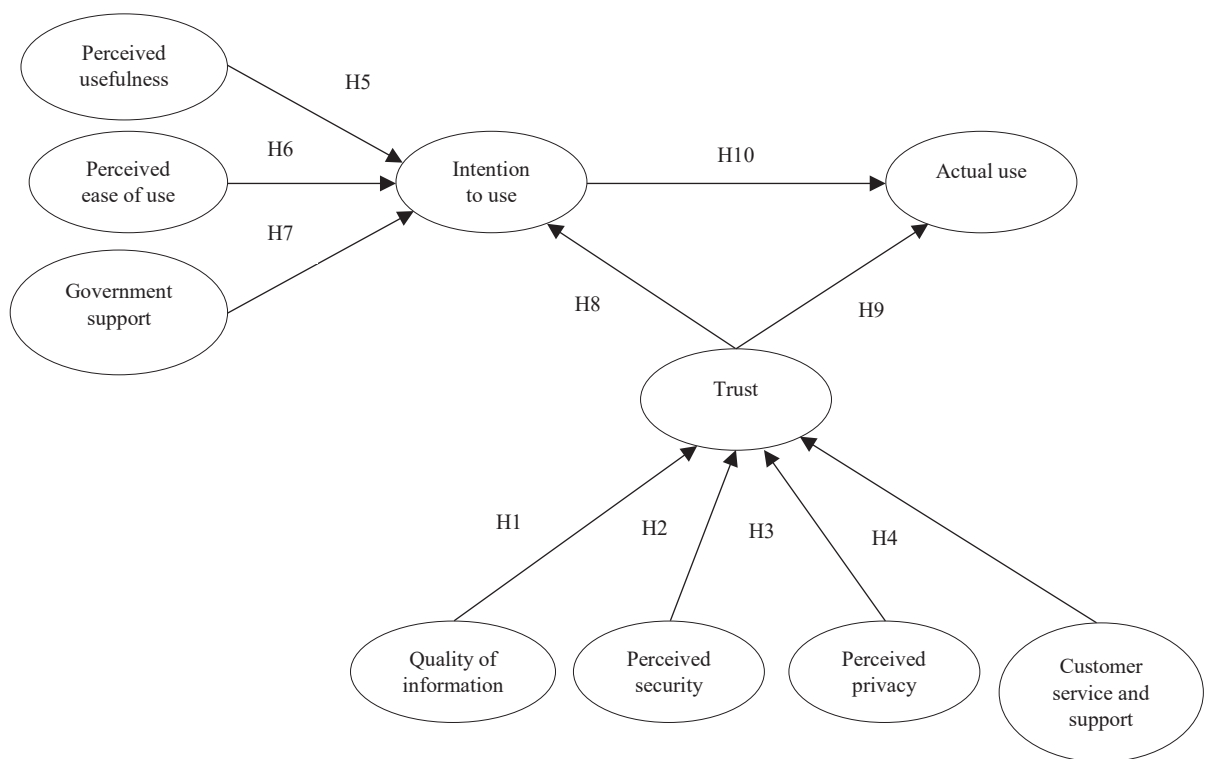


Figure 1 Conceptual framework

Research methodology

This study adopted quantitative method in which the researcher is able to test, summarizes many characteristics, collects formal structured data, and achieves reliability and validity of used measures. The data is gathered from survey technique of questionnaire as it is affirmed to be the best approach to collect descriptive information directly, concerning people's

The first part consisted of screening questions to identify targeted respondents. The second part consisted of questions of individual variables. The five-point Likert scale was applied to measure each variable, ranging from strongly disagree (1) to strongly agree (5). The last part consisted of questions on the demographic factor of the respondents such as gender, age, education level, occupation, and income.

1. Population and sample Size

The population of this study consisted of Cambodian male and female users, aged 18 or above and had experience in using online and internet banking services. Weston & Gore (2006) suggested that the minimum sample size of 403 cases is acceptable for structural equation modeling. Also, Jackson (2001) found that sample size ranging from 400 to 800 is appropriate for model fit. Whereas the minimum sample size recommended by A-priori Sample Size Calculator for Structural Equation Models (SEM) is at least 475 (Soper, 2015). The parameters used for determination were 10 latent variables and 35 observed variables at the probability level of 0.05. Hence, the researcher collected 600 samples to ensure the minimum requirement and representation of population.

2. Sampling technique

The researcher applied multi-stage sampling approach by combining probability and non-probability sampling method of judgmental method, stratified sampling method, and snowball sampling method to reach target respondents. Babbie (2015) mentions that purposive or judgmental sampling is one of nonprobability sampling method in which the researcher selected samples based on their knowledge of a population, its elements, and the objective of the study. It is popularly used by research because it is an inexpensive technique and takes a little time to gather data (Davis & Cosenza, 2005). For stratified sampling, a method that divides the entire population into smaller categories or strata to complete the sampling process. Then, the researcher chose the subjects from each categories or strata (Acharya, Prakash, Saxena, & Nigam, 2013). Gray (2019) states that with the snowball sampling technique, the researcher identifies a small number of the subjects who and then, continue to identify others in the population.

Hence, the researcher firstly used judgmental method to select the users who had experience with online and internet banking application operated by three commercial banks and three microfinance deposit taking institutions. Secondly, the researcher used stratified sampling method to select 600 sample sizes out of population size of 504,154 by proportionately dividing among the selected institutions to ensure that every stratum is sufficiently represented as shown in Table 1. Finally, after the sample size was determined, the researcher used snowball sampling method to ask the assistance of these institutions to distribute the

questionnaires and collect the responses from users.

Table 1 Selected sample size from three commercial banks and three microfinance deposit taking institutions

Institutions	Total population	Percentage (%)	Sample size
ACLEDA bank PLC	412,173	68	408
CIMB bank PLC	357	2	12
Foreign trade bank of cambodia	25,962	8	48
AMRET microfinance institution	40,736	10	60
PRASAC microfinance institution	19,204	7	42
LOLC (Cambodia) PLC	5,722	5	30
Total	504,154	100	600

3. Pilot test

Copper & Schindler (2014) stated that a pilot test was important for the researcher to find the error of the research instrument (questionnaire) before distributing the questionnaire to target population. Copper & Schindler (2014) also suggested that size of pilot test should be around 25 to 100 samples. Therefore, this research selected 50 respondents who had close characteristics with the target population to respond to the questionnaires. Also, the researcher tested the reliability of each variable to ensure that questionnaires were suitable for large number of respondents. Cronbach's Alpha analysis was used for this test. The researcher distributed questionnaire to respondents then, calculate the collected data by using IBM SPSS Program version 23. The result indicated that Cronbach's Alpha value of each variable ranged from 0.684 to 0.923, from moderate to excellence which met the standard for reliability testing (Hair, Money, Samouel, & Babin, 2003) as shown in Table 2.

4. Preliminary data analysis

Pre-test of data before conducting an analysis was conducted to identify any outlier or error of the data. Since SEM was utilized to test hypotheses, the data is required to have a normal distribution (Hair, Hult, Ringle, Sarstedt, & Thiele, 2017). The study has applied skewness and kurtosis to test the normality of data. The normality of data was confirmed with the value of skewness and kurtosis between -2 and +2, which are considered acceptable to prove the normal univariate distribution (George & Mallery, 2010).

Result

1. Demographic factors

A total of 600 structured questionnaires were distributed and valid for data analysis in this study. The result of survey revealed that out of 600 responses, 52.2% were female and 47.8% were male. The majority of

respondents were 26-33 years old (38.7%) followed by 34-41 years old, 18-25 years old (11.8%), 42-49 years old (9.5%), 50-57 years old (3%), and 58 years old and above (0.3%). In terms of education, the bachelor's degree contributed 74.5% of total responses and the rest were 14.5% for master's degree, 10.7% for high school graduate and below, 0.3% for higher than master's degree. For respondent's occupation, private company employee contributed at 66.7% was a large segment of responses followed by business owner (12.7%), government officer (8%), other (5%), housewife (3.3%), student (3.2%), retired (0.5%). In terms of monthly income, the majority of respondents earned monthly income USD 1,000 or less (73%) followed by USD 1,001-3,000 (16.3%), USD 3,001-5,000 (4.5%), USD 5,001-7,000 (2.5%), 7,001-10,000 (2%), over USD 10,000 (1.2%).

2. Confirmatory factor analysis (CFA)

Confirmatory factor analysis (CFA) is used to test the quality of all constructs of measurement model in this study by evaluating Composite Reliability (CR), Average Variance Extracted (AVE), and discriminant validity. Allen, Titsworth, & Hunt (2008) mentioned that CFA is a procedure to identify a measurement model or indicators or latent variables or factors. In addition, Alkhadim, Gidado, & Painting (2018) suggested that CFA had to be conducted for all latent variables prior to modeling the interrelationship in Structural Equation Modeling. Hair, Hult, Ringle, Sarstedt, & Thiele (2017) proposed that the acceptable value of CR at 0.70 and Fornell & Larcker (1981) recommended the value of AVE at the value above 0.40. The AVE value of each variable in this study ranged from 0.51 to 0.78 as shown in Table 2. It indicates that the measurement model has reliability and convergent validity.

Table 2 Confirmatory factor analysis (CFA), Composite reliability (CR), and Average variance Extracted (AVE) Results

Variables	Source of questionnaire (Measurement Indicator)	No. of items	Cronbach's alpha	Factor loading	CR	AVE
Perceived usefulness (PU)	Lee (2009)	4	0.804	0.729-0.904	0.880	0.688
Perceived ease of use (PEOU)	Khalil, Nor, Sutanonpaiboon, & Mastor (2010)	5	0.887	0.563-0.972	0.881	0.537
Government support (GS)	Sánchez-Torres, Canada, Sandoval, & Alzate (2018)	3	0.714	0.795-0.897	0.885	0.720
Intention to use (IU)	Sánchez-Torres, Canada, Sandoval, & Alzate (2018)	3	0.841	0.736-0.802	0.812	0.591
Quality Information (QI)	Sánchez-Torres, Canada, Sandoval, & Alzate (2018)	3	0.684	0.648-0.704	0.721	0.463
Perceived security (PS)	Sánchez-Torres, Canada, Sandoval, & Alzate (2018)	3	0.791	0.696-0.771	0.790	0.557
Perceived privacy (PP)	Sánchez-Torres, Canada, Sandoval, & Alzate (2018)	3	0.900	0.784-0.924	0.895	0.740
Customer service and support (CSS)	Shankar & Jebarajakirthi (2019)	5	0.787	0.631-0.756	0.643	0.503
Trust (TS)	Khalil, Nor, Sutanonpaiboon, & Hamimah Mastor (2010)	4	0.923	0.778-0.820	0.901	0.645
Actual use (AU)	Oertzen & Odekerken-Schröder (2019); Vejacked & Štofa (2017)	3	0.698	0.819-0.936	0.915	0.783

Note: Composite reliability (CR); and Average variance extracted (AVE)

Fornell and Larcker criterion approach is used to evaluate the discriminant validity in this study. This approach suggested to calculate the square root of AVE to evaluate discriminant validity (Fornell & Larcker, 1981). The discriminant validity is created when the AVE is higher than squared correlation (Farrell, 2010). The result of this study indicated that the value of square root of AVE is greater than squared correlation between two variables. Hence, the discriminant validity is created as showed in Table 3.

Table 3 Discriminant validity

	PU	PEOU	GS	IU	QI	PS	PP	CSS	TS	PB
PU	0.83									
PEOU	0.52	0.73								
GS	0.54	0.52	0.85							
IU	0.66	0.60	0.56	0.77						
QI	0.54	0.44	0.39	0.40	0.68					
PS	0.58	0.54	0.61	0.57	0.60	0.75				
PP	-0.23	-0.12	-0.09	-0.27	-0.14	-0.12	0.86			
CSS	0.45	0.41	0.39	0.38	0.50	0.54	0.00	0.71		
TS	0.52	0.63	0.62	0.72	0.47	0.66	-0.11	0.47	0.80	
AU	0.38	0.34	0.39	0.62	0.20	0.37	-0.12	0.00	0.45	0.88

Note: The square root of each construct's AVE is on the diagonal.

Moreover, in this study, the researcher also applied Goodness of Fit (GoF) measures to confirm the model fit by evaluating Chi-Square (CMIN), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Normed Fit Index (NFI), Root Mean Square Error of Approximation (RMSEA), Root Mean Square Residual (RMR). Results in Table 4 identified that Chi-Square (CMIN)=2.850, Goodness of Fit Index (GFI) = 0.864, Adjusted Goodness of Fit Index (AGFI) = 0.0832, Comparative Fit Index (CFI) = 0.933, Tucker

Lewis Index (TLI) = 0.922, Normed Fit Index (NFI) = 0.902, Root Mean Square Error of Approximation (RMSEA) = 0.056, Root Mean Square Residual (RMR) = 0.051. The results reflected a good fit between measurement model and data.

Table 4 Goodness of fit

Goodness-of-Fit Indices	Criterion	Confirmatory Factor Analysis (CFA)	Structural Equation Model (SEM)
Chi-Square (CMIN)	<3 (Hair, Black, BabinAnderson, & Tatham 2006)	2.850	2.879
Goodness of fit index (GFI)	≥0.85 (Kline, 2015; Medsker, Williams& Holahan 1994)	0.864	0.876
Adjusted goodness of fit index (AGFI)	≥0.80 (Filippini, Forza, & Vinelli, 1998)	0.832	0.840
Comparative fit index (CFI)	>0.90 (Byrne, 2013; Hair, Page, & Brunsveld, 2019)	0.933	0.935
Tucker lewis index (TLI)	>0.90 (Vandenberg & Scarpello, 1994)	0.922	0.921
Normed fit index (NFI)	>0.90 (Bentler & Bonett, 1980)	0.902	0.904
Root mean square error of	<0.08 (MacCallum, Browne, & Sugawara, 1996)	0.056	0.056
Approximation (RMSEA)	≤0.09 (Hu & Bentler, 1999)	0.051	0.093

3. Structural equation model (SEM)

Structural equation modeling (SEM) is a general model of statistical models such as variance analysis, covariance analysis, factor analysis (Bowen & Guo, 2011). It was used in the behavioral aspect to investigate the relationships between latent variables and observed. The result of SEM will indicate the fit model (Moshagen, 2012). To identify good fit of model, Jaccard & Wan (1996) suggested to test at least, Chi-Square, GFI, AGFI, TLI, and RMSEA. Hair, Black, Babin, Anderson, & Tatham (2006) suggested that Chi-Square (χ^2/df) = 2.879 should be lower than 3. For GFI, Kline (2015); Medsker, Williams, & Holahan (1994) recommended that it should be greater than 0.85. As suggested by Filippini, Forza, & Vinelli (1998), AGFI should be greater than 0.80. Byrne (2013); Hair, Page, & Brunsveld (2019) recommended that CFI should be greater than 0.90 and Vandenberg and Scarpello (1994) recommended that TLI should be greater than 0.9. NFI should be greater than 0.90 as recommended Bentler & Bonett (1980). RMSEA should be lower than 0.08 as suggested by MacCallum, Browne, & Sugawara (1996). recommended that the

value of RMR should be lower than 0.09.

According to Table 4, the value of indices was greater than these thresholds as suggested by previous researchers. Therefore, the proposed conceptual model of this study was accepted.

4. Research hypothesis testing

The hypothesis testing revealed that H1, H2, H4, H5, H6, H8, H9, H10 are supported, while H3 and H7 are not supported.

H1: The standardized path coefficients between quality of information and trust was 1.035 (t-value = 9.143*). Quality of information had a significant positive effect on trust. Therefore, H1 was supported. The result was consistent with previous studies conducted by Erkan & Evans (2016), Palazuelos, Herrero Crespo, & Montoya del Corte (2020); Sánchez-Torres, Canada, Sandoval, & Alzate (2018). It reflected that user was able to find information containing accuracy, completeness, relevance, currency, and dynamic content from banks and microfinance deposit taking institutions who were the service provider for online and internet banking services. The user perceived service providers provided high quality information they needed for banking transactions.

H2: The standardized path coefficients between perceived security and trust was 1.016 (t-value = 8.183*). Perceived security had a significant effect on trust. Hence, H2 was supported. The result was in line with previous studies conducted by Afshan & Sharif (2016); Shankar & Kumari (2016); Singh & Srivastava (2018). It explained that users would decide to transact with the service providers that he or she perceived the security concerns are well addressed. With trust, the user can gain confidence in the ability and online and internet banking services that the service provider offer.

H3: The standardized path coefficients between perceived privacy and trust was -0.10 (t-value = -0.526). Perceived privacy had no effect on trust Thus, H3 was not supported. Perceived privacy was user's perception of their information or transaction being well controlled and prevented from any unauthorized use. However, online and internet banking users may have concerns that their information was not strictly controlled by service providers and could be hacked or disclosed without prior permission. It was accepted that service provider made their effort to improve system security and make users aware to use their information properly. This result contradicted with previous studies by Kaabachi, Ben Mrad, & Petrescu (2017); Brasit, & Nursyamsi (2017),

however consistent with the previous study by Sánchez-Torres, Canada, Sandoval, & Alzate (2018). It can be explained that the users remain distrustful on the handling of information privacy by online and internet banking service providers. A study by Carlos Roca, José García, & José de la Vega (2009) has explained that users may be more familiarized with security technologies than privacy, hence their trust level is more likely to be enhanced from perceived security.

H4: The standardized path coefficients between customer service and support and trust was 0.113 (t-value = 3.411*). Customer service and support significantly affected trust. Thus, H4 was supported. The result supported previous studies conducted by Quach, Thaichon, & Jebarajakirthy (2016); Hidayat, Saifullah, & Ishak (2016); Shankar & Jebarajakirthy (2019). This finding indicated that users perceived that with high service level of customer service team in response time and technical complaint handling, they gained confidence and willing to use online and internet banking service.

H5: The standardized path coefficients between perceived usefulness and intention to use was 0.391 (t-value = 8.597*). Perceived usefulness had a significant effect on intention to use. Thus, H5 was supported. The result was similar with previous studies conducted by Alshurideh, Al Kurdi, Masa'deh, & Salloum (2021); Chawla & Joshi (2019), Phyu & Vongurai (2020); Chaouali, Ben Yahia, Lunardo, & Triki (2019). This finding showed that the perception of users regarding online and internet banking can be increased from the benefits received when they performed banking transactions for different purposes. Subsequently, the positive perception of users would influence their intention to adopt online and internet banking.

H6: The standardized path coefficients between perceived ease of use and intention to use was 0.149 (t-value = 3.344*). Perceived ease of use significantly affect intention to use. Therefore, H7 was supported. This result was consistent with previous studies of Alshurideh, Al Kurdi, Masa'deh, & Salloum (2021); Benjangjaru & Vongurai (2018); Raza, Shah, & Ali (2019). The perceived ease of use was the determinant affecting the intention to use toward the adoption in using online and internet banking. User intended to use online and internet banking services when they were convenient to perform banking transactions through a platform offered by service providers.

H7: The standardized path coefficients between government support and intention was -0.005 (t-value =

-0.170). Government support had no effect on intention to use. Thus, H7 was not supported. It revealed that government support was not a determinant that explained intention to use. User had a perception that their intention to use online and internet banking was irrelevant to government support. This result was contrary to a previous study conducted by Charag, Fazili, & Bashir (2020), however consistent with the previous study by Sánchez-Torres, Canada, Sandoval, & Alzate (2018). Although the government has established policies and regulations to reform the Cambodian banking system, it may be perceived by users as ineffective or insufficient to drive their decision to use the online and internet banking services.

H8: The standardized path coefficients between trust and intention to use was 0.302 (t-value = 5.835*). Trust had significant effect on intention to use. Thus, H8 was supported. This result was similar to past studies of Namahoot & Laohavichien (2018); Omonedo & Bocij (2017); Tarhini, Alalwan, Shammout, & Al-Badi (2019). It indicated that users gave importance on features of information quality, security, and customer service and support that built users' confidence in online and internet banking. First, users were able to obtain accurate, complete, relevance, currency, and dynamic information. Second, users had confidence that their personal information were well protected. Users accepted that service providers had quickly responded and addressed their needs and complaints.

H9: The standardized path coefficients between trust and actual use was 0.221 (t-value = 2.427*). Trust had significant effect on actual use. This result was consistent with previous studies conducted by Kaabachi, Ben Mrad, & Petrescu (2017); Lee & Kim (2020). It revealed that trust had a significant role in bolstering the use of online and internet banking. Users decided to use these services after they had self-confidence that these services generated more benefit for them and maintained all their personal and private information in confidentiality.

H10: The standardized path coefficients between intention to use and actual use was 0.843 (t-value = 6.880*). Intention to use significantly affected actual use. Thus, H10 was supported. This result was similar to previous studies conducted by Farah, Hasni, & Abbas (2018); Vejacka & Štofa (2017). It indicated that perceived usefulness, perceived ease of use, and trust increase users' intention to use. Subsequently, it had downstream effect on user's actual use decision. It

reflected that both intentions to use and trust were important determinants in decision to use online and internet banking. Therefore, this finding confirmed that banking convenience, benefits, ability to address concern, and provision of good quality of information were the key features that supported users' actual use of online and internet banking in Cambodia.

The result of all hypotheses test is summarized in Table 5 below.

Table 5 Hypotheses result

Hypotheses	Path	Standardized path coefficients	T-value >1.98	Results
H1	QI → TS	1.035	9.143*	Support
H2	PS → TS	1.016	8.183*	Support
H3	PP → TS	-0.100	-0.526	Not Support
H4	CSS → TS	0.113	3.411*	Support
H5	PU → IU	0.391	8.597*	Support
H6	PEOU → IU	0.149	3.344*	Support
H7	GS → IU	-0.005	-0.170	Not Support
H8	TS → IU	0.302	5.835*	Support
H9	TS → AU	0.221	2.427*	Support
H10	IU → AU	0.843	6.880*	Support

Note: *Significant at p-value, $p < 0.05$.

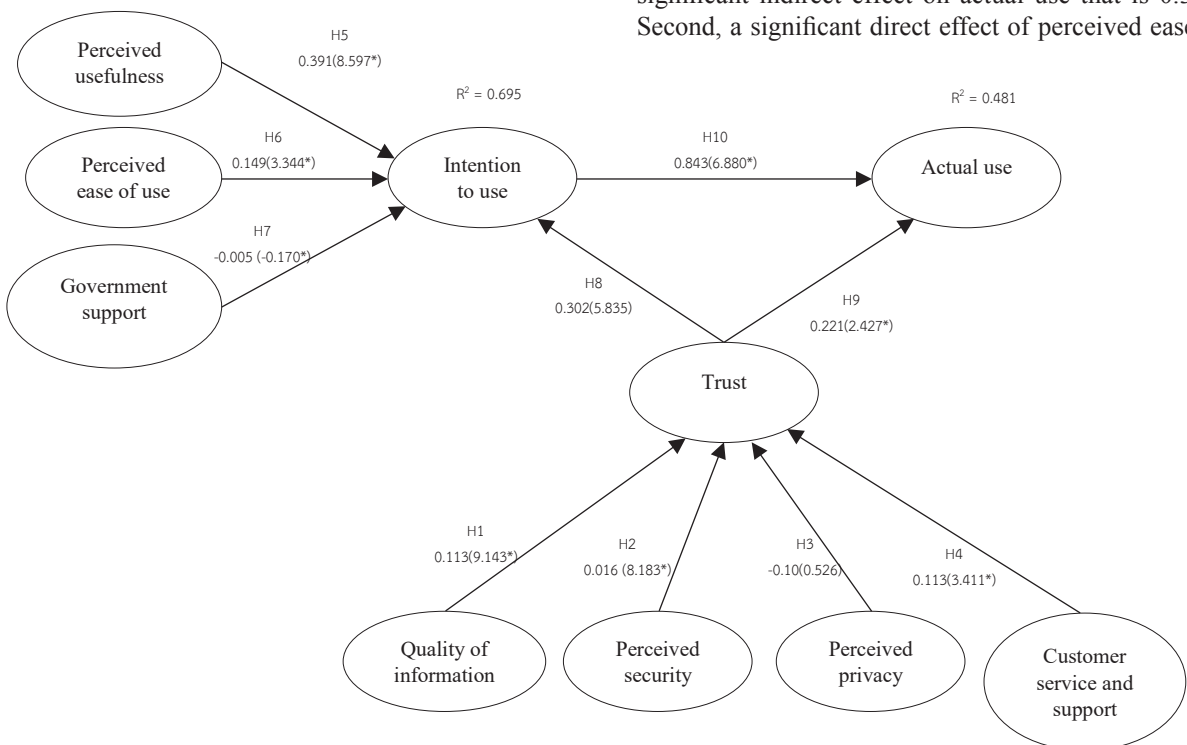


Figure 2 The results of structural model

Note: *Significant at p-value, $p < 0.05$.

5. Direct, indirect and total effect of relationships

5.1 Trust

Out of four variables, there are three variables that have significant effect on trust. First, a significant direct effect of quality of information on trust is 1.035. Quality information also has significant indirect on intention to use and actual use that are 0.313 and 0.493, respectively. Second, a significant direct effect of perceived security on trust is 1.016. Perceived security also has significant indirect on intention to use and actual use that are 0.307 and 0.484, respectively. Lastly, a significant direct effect of customer service and support is 0.113. Customer service and support also has significant indirect effect on intention to use and actual use that are 0.34 and 0.54, respectively. In terms of total effect, quality of information, perceived security, and customer service and support are the important variables that significantly affect trust.

5.2 Intention to use

Out of three variables, there are two variables that significantly affected intention to use. First, a significant direct effect of perceived usefulness on intention to use is 0.391. Perceived usefulness also has significant indirect effect on actual use that is 0.329. Second, a significant direct effect of perceived ease of

use on intention to use is 0.149. Perceived ease of use also has a significant indirect effect on actual use that is 0.126. In terms of total effect, both perceived usefulness and perceived ease of use are important variables that significantly affect intention to use.

5.3 Actual use

There are two variables that have significant effect on actual use. First, the significant direct effect of trust on actual use is 0.221. Second, the significant direct effect of intention to use on actual use is 0.843. In terms of total effect, both trust and intention to use are the important variables that significantly affect actual use.

Discussion

This study purpose was to investigate the factors affecting the use of online and internet banking in Cambodia. The conceptual framework was basically developed from accepted research theories and previous empirical studies. The perceived usefulness, perceived ease of use, government support, quality of information, perceived security, perceived privacy, customer service and support, trust, and intention to users were selected to explain users' actual use. All of the variables were combined to draw a conceptual framework and hypotheses. A total of 600 structured questionnaires were distributed to users, aged from 18 years old and above, and had experience in online and internet banking. All measuring variables and proposed model for this study were validated by using Confirmatory Factor Analysis (CFA) and the Structural Equation Model (SEM) based on data collected.

The findings confirmed relationships that are usually applied in the Business to Customer environment which includes online and internet banking service. Athanasopoulou (2009) measured factors of actual usage in retail business context which contains trust, commitment and satisfaction. Trust had a significant effect on actual use. This reflected the good relationship with a customer occurs when the service providers are able build trust among them. Moreover, the findings of this study were relevant to relationship marketing that was developed by Berry (1983). Despite rapid changes in technology and consumer behavior, relationship marketing is still used to enhance the relationship between the firms and its customers and promote customers' adoption. As this study showed the direct relationship of perceived usefulness and perceived ease of use with intention to use towards actual use of technology, the

findings will extend the insight of importance of relationship marketing in promoting the use of online and internet banking service.

The result indicates that out of ten hypotheses, eight are supported and two are not supported. It can be described that actual use of online and internet banking are explained by two significant determinants: trust and intention to use. It was recognized that except for perceived privacy, all quality of information, perceived security, customer service and support were the antecedents of trust. That is, users highly valued good quality of information, best customer care service, and good protection of personal information for their decision. It is also noted that privacy protection was a remaining challenge to build users' trust and recognition. Users have concerns on their personal information and want it to be well controlled by service provider from any disclosure without prior permission. However, in this study users may give importance more on perceived security as the termed security may cover privacy. Also, privacy itself is not easily recognized unlike the security of encryption keys and certificates.

Moreover, perceived usefulness and perceived ease of use are antecedents of intention to use when they considered that online and internet banking service are convenient to use and gave them more advantages. Also, this study identified that government support did not affect intention to use. In fact, it was seen that the government had developed and implemented series of legal instruments and policies to promote online and internet banking. But users may consider that it was insufficient or ineffective or they may consider that online and internet banking was part of private sector and their decision to use these services was not relevant with the legal instruments and policies.

Suggestion

According to the above discussion, this study reveals several factors and challenges affecting the actual use of online and internet banking in Cambodia. The increase of users' intention and trust are the key features in boosting the use of online and internet banking in Cambodia. Therefore, this study offers suggestions for banks and microfinance deposit taking institutions as service provider and government as policy maker.

For banks and microfinance deposit taking institutions, security is the significant determinant in building trust and promoting actual use. Users are

concerned with the security and safety of their personal and financial information while performing online and internet banking transaction. Banks and microfinance deposit taking institutions should ensure that no third parties or intruders who are able to access users' personal information shared over online and internet banking platforms. Transaction alerts should be timely notified to users on any login or banking transactions via registered contact. Banks and microfinance deposit taking institutions should also raise users' awareness and recognize the enforced security policy to build confidence so that users can protect themselves from any negligence in disclosing information. Trust can also be enhanced from quality of information and customer service and support. Hence, information delivered to users should be up-to-date, accurate and relevant to content with quick response to users. Banks and microfinance deposit taking institutions should make further efforts to keep users informed of the benefits from using online and internet banking through their advertising activities. Banks and microfinance deposit taking institutions should also ensure that users find the online and internet banking easy to use. For instance, they can develop a simple system interface that is easy for users to understand and use.

For government, this study identified the government support had no effect on intention to use. The government support regarding online and internet banking may not be effective or sufficient to enhance users' attention. Therefore, government should make further efforts to review and develop new policies to ensure that online and internet banking service is widely used in the marketing, while policies are strictly enforced. Government should also promote public awareness on laws, regulations, and policies relevant to the use of online and internet banking through other necessary means such as workshops, seminars, and leaflets.

Limitation and further study

This study intended to identify the factors that supported the use of online and internet banking in Cambodia. Based on previous empirical research, there are a number of factors that have an effect on the usage of online and internet banking service such as enjoyment (Suh & Han, 2002), reliability, website design (Shankar & Jebarajakirthy, 2019), and facilitating conditions (Farah, Hasni, & Abbas, 2018). However, this study only concentrated on nine determinants that influences the users' behavior in using online and internet banking, and no mediating factor of control variables such as age,

income level, user's residential area. Therefore, future research should expand the number of factors to be studied to explore other determinants or mediators that are relevant and irrelevant to the usage behavior of online and internet banking users.

Moreover, there are more than 24 banks and microfinance institutions in Cambodia providing online and internet banking services to their customers (The National Bank of Cambodia, 2019). However, due to the resource constraints, only six institutions were used in this study. Therefore, there is concern that collected data may not represents the whole banking sector and may affect the result of the study because users from different institutions may have different perceptions. Hence, the number of online and internet banking service providers in the scope of research can be increased for future study.

References

- Abdennebi, H. B., & Debabi, M. (2017). *Intention of adoption of mobile commerce from consumer perspective*. Springer.
- Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialities*, 4(2), 330-333.
- Afshan, S., & Sharif, A. (2016). Acceptance of mobile banking framework in Pakistan. *Telematics and Informatics*, 33(2), 370-387.
- Aladwani, A. M. (2001). Online banking: a field study of drivers, development challenges, and expectations. *International Journal of Information Management*, 21(3), 213-225.
- Alkhadim, M., Gidado, K., & Painting, N. (2018). Perceived Crowd Safety in Large Space Buildings: The Confirmatory Factor Analysis of Perceived Risk Variables. *Journal of Engineering Project and Production Management*, 8(1), 22-39.
- Allen, M., Titsworth, S., & Hunt, S. K. (2008). *Quantitative research in communication*. Thousand Oaks, CA: Sage.
- Alshurideh, M. T., Al Kurdi, B., Masa'deh, R., & Salloum, S. A. (2021). The moderation effect of gender on accepting electronic payment technology: a study on United Arab Emirates consumers. *Review of International Business and Strategy*, 31(3), 375-396.
- Armstrong, G., Adam, S., Denize, S., & Kotler, P. (2014). *Principles of marketing*. Melbourne, Vic: Pearson Australia.
- Athanasopoulou, P. (2009). Relationship quality: a critical literature review and research agenda. *European Journal of marketing*, 43(5/6), 583-610.
- Babbie, E. R. (2015). *The basics of social research*. Toronto, ON: Nelson Education.
- Benjangjaru, B., & Vongurai, R. (2018). Behavioral intention of Bangkokians to adopt mobile payment services by type of users. *AU-GSB e-Journal*, 11(1), 34-46.

- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.
- Berry, L. L. (1983). Relationship marketing in emerging perspectives on services marketing. In L. L. Berry, G. L. Shostack & G. D. Upah, (Eds). *Emerging Perspectives of Services Marketing*, American Marketing Association (pp. 25-28). Chicago, IL: American Marketing Association.
- Bowen, N. K., & Guo, S. (2011). *Structural equation modeling*. Oxford, England: Oxford University Press.
- Brasit, N., & Nursyamsi, I. (2017). An Analysis on Factors that Influence Customers' Intention to Use Internet Banking in Jayapura City. *Scientific Research Journal*, 8(5), 29-37.
- 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. (2013). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). New York, NY: Routledge.
- Carlos Roca, J., José García, J., & José de la Vega, J. (2009). The importance of perceived trust, security and privacy in online trading systems. *Information Management & Computer Security*, 17(2), 96-113.
- Chaouali, W., Ben Yahia, I., Lunardo, R., & Triki, A. (2019). Reconsidering the "what is beautiful is good" effect: When and how design aesthetics affect intentions towards mobile banking applications. *International Journal of Bank Marketing*, 37(7), 1525-1546.
- Charag, A. H., Fazili, A. I., & Bashir, I. (2020). Determinants of consumer's readiness to adopt Islamic banking in Kashmir. *Journal of Islamic Marketing*, 11(5), 1125-1154.
- Chatzoglou, P. D., Sarigiannidis, L., Vraimaki, E., & Diamantidis, A. (2009). Investigating greek employees' intention to use web-based training. *Computers & Education*, 53(3), 877-889.
- Chawla, D., & Joshi, H. (2019). Consumer attitude and intention to adopt mobile wallet in India – An empirical study. *International Journal of Bank Marketing*, 37(7), 1590-1618.
- Cheng, T., Lam, D., & Yeung, A. (2006). Adoption of internet banking: an empirical study in Hong Kong. *Decision Support Systems*, 42(3), 1558-1572.
- Chong, A. Y. L., Ooi, K. B., Lin, B., & Tan, B. (2010). Online banking adoption: an empirical analysis. *International Journal of Bank Marketing*, 28(4), 267-287.
- Copper, D. R., & Schindler, P. S. (2014). *Business research methods*. New York, NY: McGraw-Hill.
- Davis, D., & Cosenza, R. M. (2005). *Business research for decision making*. Belmont, CA: Wadsworth Publishing.
- Erkan, I., & Evans, C. (2016). The influence of eWOM in social media on consumers' purchase intentions: An extended approach to information adoption. *Computers in Human Behavior*, 61, 47-55.
- Farah, M. F., Hasni, M. J. S., & Abbas, A. K. (2018). Mobile-banking adoption: empirical evidence from the banking sector in Pakistan. *International Journal of Bank Marketing*, 36(7), 1386-1413.
- Farrell, A. M. (2010). Insufficient discriminant validity: A comment on Bove, Pervan, Beatty, and Shiu (2009). *Journal of Business Research*, 63(3), 324-327.
- Farzin, M., Sadeghi, M., Yahyayi Kharkeshi, F., Ruholahpur, H., & Fattahi, M. (2021). Extending UTAUT2 in M-banking adoption and actual use behavior: Does WOM communication matter?. *Asian Journal of Economics and Banking*, 5(2), 136-157.
- Filippini, R., Forza, C., & Vinelli, A. (1998). Sequences of operational improvements: some empirical evidence. *International Journal of Operations & Production Management*, 18(2), 195-207.
- Flavián, C., & Guinaliu, M. (2006). Consumer trust, perceived security and privacy policy: Three basic elements of loyalty to a web site. *Industrial Management & Data Systems*, 106(5), 601-620.
- Fornell, C. G., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- George, D., & Mallery, P. (2010). *SPSS for Windows step by step. A simple study guide and reference*. Boston: Pearson Education.
- Goodwin, C. (1991). Privacy: Recognition of a Consumer Right. *Journal of Public Policy & Marketing*, 10(1), 149-166.
- Gray, D. E. (2019). *Doing research in the business world* (2nd ed.). Thousand Oaks, CA: Sage.
- Guriting, P., & Ndubisi, N. O. (2006). Borneo online banking: evaluating customer perceptions and behavioural intention. *Management Research News*, 29(1/2), 6-15.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis* (6th ed.). Upper Saddle River: Pearson Prentice hall.
- Hair, J. F., Hult, G., Ringle, C., Sarstedt, M., & Thiele, K. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, 45(5), 616-632.
- Hair, J. F., Money, A. H., Samouel, P., & Babin, B. (2003). *Essentials of business research methods*. New Jersey: Wiley.
- Hair, J. F., Page, M. & Brunsveld, N. (2019). *Essentials of business research methods* (4th ed.). New York, NY: Routledge.
- Hidayat, A., Saifullah, M., & Ishak, A. (2016). Determinants of satisfaction, trust, and loyalty of Indonesian e-commerce customer. *International Journal of Economics and Management*, 10(1), 151-166.
- 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.
- Jaccard, J., & Wan, C. K. (1996). *LISREL approaches to interaction effects in multiple regression*. Thousand Oaks, CA: Sage.
- Jackson, D. L. (2001). Sample size and number of parameter estimates in maximum likelihood confirmatory factor analysis: A Monte Carlo investigation. *Structural Equation Modeling: A Multidisciplinary Journal*, 8(2), 205-223.

- Jahangir, N., & Begum, N. (2008). The role of perceived usefulness, perceived ease of use, security and privacy, and customer attitude to engender customer adaptation in the context of electronic banking. *African Journal of Business Management*, 2(1), 32-40.
- Jennex, M., Olfman, L., Panthawi, P., & Park, Y. T. (1998). *An organizational memory information systems success model: an extension of DeLone and McLean's I/S success model. Proceedings of the Thirty-First Hawaii International Conference on System Sciences held in Kohala Coast, USA, 9 January 1998*. Manhattan, NY: Institute of Electrical and Electronics Engineers.
- Joseph, M., & Stone, G. (2003). An empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector. *International Journal of Retail & Distribution Management*, 31(4), 190-202.
- Kaabachi, S., Ben Mrad, S., & Petrescu, M. (2017). Consumer initial trust toward internet-only banks in France. *International Journal of Bank Marketing*, 35(6), 903-924.
- Khalil, M.N., Sutanonpaiboon, J., & Mamimah Mastor, N. (2010). Malay, Chinese, and internet banking. *Chinese Management Studies*, 4(2), 141-153.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.
- Lajuni, N., Wing, W., Yusman, Y., Hiram, T., & Alfera, J. (2017). Intention to use Islamic banking products and its determinants. *International Journal of Economics Financial Issues*, 7(1), 329-333.
- Lee, J.-M., & Kim, H.J. (2020). Determinants of adoption and continuance intentions toward Internet-only banks. *International Journal of Bank Marketing*, 38(4), 843-865.
- Lee, M. (2009). Factors influencing the adoption of Internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Research and Applications*, 8(3), 130-141.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), 130-149.
- Maes, A., & Poels, G. (2006). Evaluating quality of conceptual models based on user perceptions. *Proceedings of the 25th International Conference on Conceptual Modeling, Tucson, USA, 6-8 November 2006*. New York, NY: Springer.
- Malaquias, R. F., & Hwang, Y. (2016). An empirical study on trust in mobile banking: a developing country perspective. *Computers in Human Behavior*, 54, 453-461.
- Malaquias, R. F., & Hwang, Y. (2019). Mobile banking use: a comparative study with Brazilian and US participants. *International Journal of Information Management*, 44, 132-140.
- Medsker, G. J., Williams, L. J., & Holahan, P. J. (1994). A review of current practices for evaluating causal models in organizational behavior and human resources management research. *Journal of Management*, 20(2), 439-464.
- Mohd Thas Thaker, M. A. B., Amin, M. F. B., Mohd Thas Thaker, H. B., & Allah Pitchay, A. B. (2019). What keeps Islamic mobile banking customers loyal?. *Journal of Islamic Marketing*, 10(2), 525-542.
- Moshagen, M. (2012). The model size effect in SEM: Inflated goodness-of-fit statistics are due to the size of the covariance matrix. *Structural Equation Modeling*, 19(1), 86-98.
- Namahoot, K. S., & Laohavichien, T. (2015). Quality management and trust of internet banking in Thailand. *International Journal of Scientific & Technology Research*, 4(9), 257-262.
- Namahoot, K. S., & Laohavichien, T. (2018). Assessing the intentions to use internet banking: The role of perceived risk and trust as mediating factors. *International Journal of Bank Marketing*, 36(2), 256-276.
- Nath, R., Schrick, P., & Parzinger, M. (2001). Bankers' Perspectives on Internet Banking. *e-Service Journal*, 1(1), 21-36.
- Normalini, M., & Ramayah, T. (2017). Trust in internet banking in Malaysia and the moderating influence of perceived effectiveness of biometrics technology on perceived privacy and security. *Journal of Management Sciences*, 4(1), 3-26.
- Oertzen, A. S. & Odekerken-Schröder, G. (2019). Achieving continued usage in online banking: a post-adoption study. *International Journal of Bank Marketing*, 37(6), 1394-1418.
- Omonedo, P., & Bocij, P. (2017). Potential impact of perceived security, trust, cost and social influence on M-Commerce adoption in a developing economy. *World*, 7(1), 147-160.
- Palazuelos, E., Herrero Crespo, Á., & Montoya del Corte, J. (2020). Auditing and credit granting to SMEs: an integrative perceptual model. *Managerial Auditing Journal*, 35(1), 152-174.
- Phyu, K. K., & Vongurai, R. (2020). Impacts on adaptation intention towards using accounting software in terms of technology advancement at work in Myanmar. *AU-GSB e-Journal*, 12(2), 98-111.
- Quach, T. N., Thaichon, P., & Jebarajakirthy, C. (2016). Internet service providers' service quality and its effect on customer loyalty of different usage patterns. *Journal of Retailing and Consumer Services*, 29(2), 104-113.
- Raza, S. A., Shah, N., & Ali, M. (2019). Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model. *Journal of Islamic Marketing*, 10(1), 357-376.
- Reni, A., & Hayati, N. (2016). Application of Theory Reasoned Action In Intention to Use Islamic Banking In Indonesia. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah*, 8(1), 137-148.
- Sánchez-Torres, J. A., Canada, F. J. A., Sandoval, A. V., & Alzate, J. A. S. (2018). E-banking in Colombia: factors favouring its acceptance, online trust and government support. *International Journal of Bank Marketing*, 36(1), 170-183.

- Sang, W., Guo, J., & Ge, M. (2017). Development of Internet Banking in Cambodia. *AiritiLibrary*, (26), 70-83.
- SCN Education. (2013). *Electronic banking: The ultimate guide to business and technology of online banking*. New York, NY: Springer.
- Shankar, A., & Jebarajakirthy, C. (2019). The influence of e-banking service quality on customer loyalty : A moderated mediation approach. *International Journal of Bank Marketing*, 37(5), 1119-1142.
- Shankar, A., & Kumari, P. (2016). Factors affecting mobile banking adoption behavior in India. *The Journal of Internet Banking and Commerce*, 21(1), 1-24.
- Sharma, S. K., & Sharma, M. (2019). Examining the role of trust and quality dimensions in the actual usage of mobile banking services: an empirical investigation. *International Journal of Information Management*, 44, 65-75.
- Silic, M., & Ruf, C. (2018). The effects of the elaboration likelihood model on initial trust formation in financial advisory services. *International Journal of Bank Marketing*, 36(3), 572-590.
- Singh, S., & Srivastava, R. K. (2018). Predicting the intention to use mobile banking in India. *International Journal of Bank Marketing*, 36(2), 357-378.
- Soeng, R., Cuyvers, L., & Soeung, M. (2019). E-commerce development and internet banking adoption in Cambodia. In L. Chen & F. Kimura (Eds.), *Developing the digital economy in ASEAN*. Oxfordshire, UK: Routledge
- Soper, D. S. (2015). A-priori sample size calculator for structural equation models [Software]. Retrieved November 12, 2021, from <http://www.danielsoper.com/statcalc>
- Suh, B., & Han, I. (2002). Effect of trust on customer acceptance of Internet banking. *Electronic Commerce Research and Applications*, 1(3-4), 247-263.
- Suhartanto, D., Dean, D., Ismail, T. A. T., & Sundari, R. (2020). Mobile banking adoption in Islamic banks: Integrating TAM model and religiosity-intention model. *Journal of Islamic Marketing*, 11(6), 1405-1418.
- Sutanonpaiboon, J., & Mastor, N. H. (2010). Malay, Chinese, and internet banking. *Chinese Management Studies*, 4(2), 141-153.
- Tan, M., & Teo, T. S. (2000). Factors influencing the adoption of internet banking. *International Journal of Electronic Commerce*, 1(3).
- Tarhini, A., Alalwan, A. A., Shammout, A. B., & Al-Badi, A. (2019). An analysis of the factors affecting mobile commerce adoption in developing countries: Towards an integrated model. *Review of International Business and Strategy*, 29(3), 157-179.
- The National Bank of Cambodia. (2019). *Annual supervision report 2019*. Retrieved November 1, 2021, from https://www.nbc.org.kh/download_files/supervision/sup_an_rep_eng/Annual_Report_2019_English_Final.pdf.
- Vandenberg, R. J., & Scarpello, V. (1994). A longitudinal assessment of the determinant relationship between employee commitments to the occupation and the organization. *Journal of Organizational Behavior*, 15(6), 535-547.
- Vejacka, M., & Štofa, T. (2017). Influence of security and trust on electronic banking adoption in Slovakia. *Ekonomie a Management*, 20(4), 135-150.
- Venkatesh, V., & Morris, M. G. (2000). Why don't men ever stop to ask for directions? gender, social influence, and their role in technology acceptance and usage behavior. *MIS Quarterly*, 24(1), 115-139.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Weston, R., & Gore, P. A. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34(5), 719-751.
- Zhang, T., Lu, C., & Kizildag, M. (2018). Banking “on-the-go”: examining consumers’ adoption of mobile banking services. *International Journal of Quality and Service Sciences*, 10(3), 279-295.
- Zhang, Y., Chen, X., Liu, X., & Zhu, N. (2018). Exploring trust transfer between internet enterprises and their affiliated internet-only banks: an adoption study of internet-only banks in China. *Chinese Management Studies*, 12(1), 56-78.