Research Report on Mobile Banking Adoption in Cambodia

By: Norng Sokha

Centre for Research and Thesis Writing
ACLEDA INSTITUTE OF BUSINESS

Phnom Penh, July 05, 2021

I. Introduction

Mobile banking, one of the modern and advanced means of electronic banking services, has been commonly used today (Alsamydai et al., 2014). Moreover, mobile banking has been encouraged by the central bank of Cambodia since 2016. According to Ouk Sarat, Director of the Payment System Department at the National Bank of Cambodia (NBC), "mobile banking could bring more people into the formal banking segment" (Phnom Penh Post 2016).

As cited in (Association of Banks in Cambodia 2020), there are 134 key players in Cambodia's banking sectors, namely 47 commercial banks, 15 specialized banks, four representative offices of foreign commercial banks, and 68 microfinance institutions. Mobile banking services have been provided by 20 banks and financial institutions (National Bank of Cambodia 2018). Mobile banking services have been increasingly offered by more than 30 banking and financial institutions in 2021, based on a manual count of mobile banking apps on GooglePlay. In 2021, Bakong, a peer-to-peer fund transfer service available to retail customers of local banks, financial institutions, and payment services providers, consists of 21 partners providing mobile banking services (Bakong n.d.). A study on mobile banking adoption in Cambodia in 2020 shows that ACLEDA ToanChet (recently called ACLEDA Mobile) and ABA Mobile App are the top two players in the mobile banking industries in Cambodia (Em, Norng & Thab 2021).

Even though mobile banking adoption has increased rapidly, the usage faces several challenges such as security guarantee, fair competition, limited Internet access, and a lack of customers' confidence, expressed concern by Ouk Sarat (Phnom Penh Post 2016). Besides, there is a lack of independent study on the factors influencing customers' intention to adopt mobile banking in Cambodia. Therefore, this report aims to illustrate the summative data of customers' opinions on adopting mobile banking services in Cambodia.

II. Literature survey on mobile banking adoption

2.1. Definition of mobile banking

Mobile banking, as cited in (York, Norng & Sem 2021), is defined as "the financial transaction application to be downloaded in the mobile phone which enable customers to use banking services anywhere and anytime based on wireless handsets" (Chitungo & Munongo 2013). Therefore, in Cambodia, mobile banking such as ACLEDA mobile refers to a FinTech Application running on a smartphone, which enables customers to do banking transactions anywhere, anytime (GooglePlay n.d.); in other words, it is the banking service offered via the smartphone.

2.2. Theory related to the intention to adopt mobile banking

A bundle of existing pieces of literature, especially theoretical backgrounds, have been employed in the study of mobile banking adoption worldwide, namely the Technology Acceptance Model (TAM), Diffusion of Innovation Theory (DIT), Theory of Planned Behavior (TPB), and Decomposed Theory of Planned Behavior (DTPB). However, this report describes two theoretical backgrounds such as TAM and DTPB.

2.2.1. Technology Acceptance Model (TAM)

Perhaps, the most influencing theory on mobile banking adoption is the TAM. By adopting the Theory of Reasoned Action and its concrete extension of TPB, TAM focuses on users' acceptance of information systems or technologies. TAM model is used to study computer usage behavior (Davis 1989). The TAM model assumes that the main factors influencing intention to use technology are perceived usefulness and perceived ease of use. As cited in (Lai 2017), "Perceived Usefulness (PU) is defined as the potential user's subjective likelihood that the use of a certain system, which then will improve his/her action and Perceived Ease of Use (PEU) refers to the degree to which the potential user expects the target system to be effortless" (Davis 1989). TAM has been modified, and an attitude towards using a system is found to be significant in the existing model. The attitude is influenced by perceived ease of use through perceived usefulness, and it has a direct effect on behavior intention; and then individuals will use the system (Davis, Bagozzi & Warshaw 1989).

TAM has been applied to determine factors influencing mobile payment by (Yan, Norng & Thab 2021) and mobile banking in Cambodia by c. Firstly, it has been employed by extending two more variables, such as perceived trust and perceived compatibility, in the study of the mobile payment system of ABA (Yang et al. 2021). The study collected data from 204 respondents, a sample of ABA mobile users, and found that attitudes, perceived trust, and perceived compatibility influenced directly the intention to use mobile payment of ABA App; moreover, perceived usefulness and perceived ease of use influenced indirectly on the intention through attitude towards mobile payment of ABA App.

Secondly, TAM has been employed by integrating trust as an independent variable to analyze the factors influencing mobile banking adoption in Cambodia (Em et al. 2021)). The study also collected data from 204 respondents, a sample of mobile banking users in Phnom Penh City, and found that perceived usefulness, perceived ease of use, and trust influenced the intention to adopt mobile banking through attitudes.

2.2.2. Decomposed Theory of Planned Behavior (DTPB)

Taylor & Todd (1995) proposes Decomposed Theory of Planned Behavior by applying the Structural Equation Model between Diffusion of Innovation Theory (Rogers 2003), Theory of Reasoned Action (Fishbein & Ajzen 1975), Theory of Planned Behavior (Ajzen 1985), and Technology Acceptance Model (Davis et al. 1989).

Behavior intention on technology adoption is explained by the individual's beliefs, including attitude, subjective norms, and perceived behavior control. Three constructs, namely perceived usefulness, perceived ease of use, and compatibility, have been included in the attitude variable. Another two constructs such as peer influence and superior influence have been included in the subjective norm variable. Last but not least, the three constructs such as self-efficacy, resource facilitating condition, and technology facilitating condition have been composed into perceived behavior control variable.

DTPB has been employed to study the factors inspiring customers to use the mobile banking app of ACLEDA ToanChet, currently called ACLEDA Mobile (York et al. 2021). The study collected data from 204 respondents, a sample of ACLEDA ToanChet users, and found that perceived usefulness and compatibility influenced the intention to adopt mobile banking through attitudes; moreover, facilitating conditions influenced intention to adopt mobile banking perceived behavioral control.

III. Results

3.1 Demographic Factors of the respondents

Table 1: Key Characteristics of the Respondents

Item	Category (n=204)	Percentage
Gender	Female	59.04%
	Male	40.96%
Age Gap	18-25	51.97%
	26-30	34.38%
	31-40	12.90%
	Over 40	0.75%
Educational Background	High School	4.09%
	Undergraduate Degree	71.71%
	Graduate Degree	23.53%
	Others	0.66%
Occupational Status	Company Employee	50.27%
	Government Officer	3.46%
	Business Owner	6.00%
	Currently Unemployed	30.29%
	Lecturer/Professor	4.65%
	Self-employed	2.08%
	Others	3.25%
Mobile Banking Usage Frequency	Everyday	27.70%
	Twice a week	11.25%
	At least once a week	42.65%
	Twice a month	3.20%
	At least once a month	8.09%
	At least once in six months	1.23%
	At least once a year	1.72%
	Other	4.17%
Mobile Banking Adoption (Em et al. 2021)	ACLEDA Mobile	49.00%
	ABA Mobile	38.70%
	Wing Money Mobile Banking	6.40%
	Canadia Mobile Banking	2.90%
	PPCBank Mobile	0.50%
	Sathapana Mobile	0.50%
	Others	2.00%

Table 1 shows that females dominate mobile banking adoption, comprised of 59.04% compared to male users; and 51.97% are from those in the 15 to 25 age group, followed by 34.38% are from 26 to 30 years of age. Regarding the educational background, most of the adopters are undergraduates standing at 71.71%, followed by a graduate degree at 23.53%. Moreover, 50.27% of them are employed with a company, and 30.29 of them are currently unemployed. The table also illustrates that 42.65% of the respondents use mobile banking at least once a week, and 27.7% of them use the service every day. Last but not least, according to (Em et al. 2021), two mobile banking apps are the most popular, namely ACLEDA Unity ToanChet (ACLEDA Mobile) and ABA Mobile, which the respondents prefer at 49% and 38.7%, respectively.
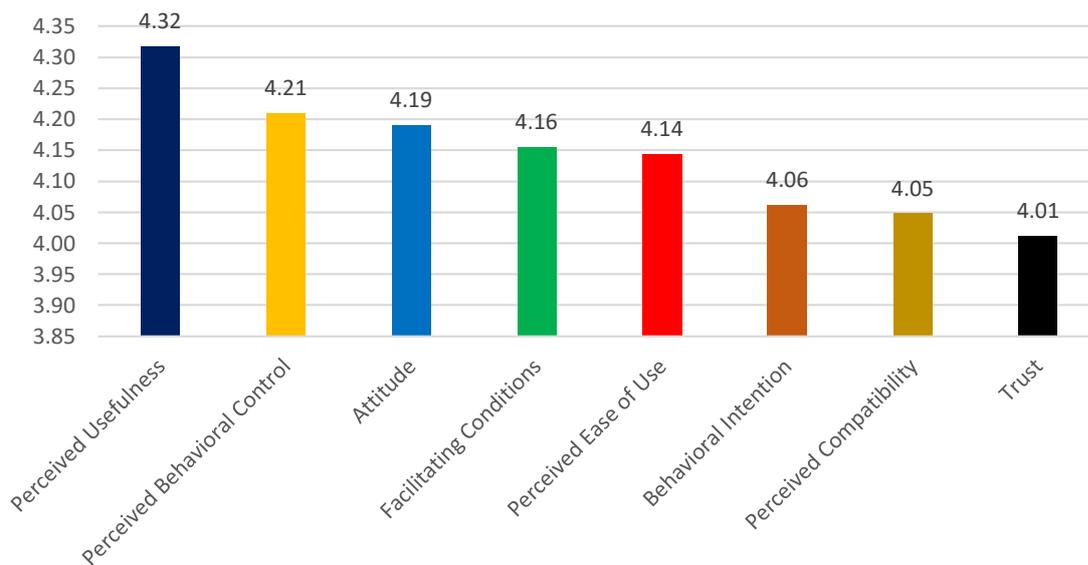
3.2 Key Findings

Figure: Factors Inspiring Mobile Banking Adoption

The figure shows the factors influencing mobile banking adoption. According to the figure, perceived usefulness and perceived behavioral control have the highest scores with the mean of 4.32 and 4.21, which is followed by attitude, facilitating condition, perceived ease of use, behavioral intention, and perceived compatibility with the means score of 4.19, 4.16, 4.14, 4.06, and 4.05 respectively. In contrast, trust has the lowest score with a mean of 4.01.

Table 2: Level of Agreement

Variables	Mean	SD	Level of Agreement
Perceived Usefulness	4.32	0.57940	Strongly Agree
Perceived Behavioral Control	4.21	0.55644	Strongly Agree
Attitude	4.19	0.58808	Agree
Facilitating Conditions	4.16	0.54815	Agree
Perceived Ease of Use	4.14	0.58586	Agree
Behavioral Intention	4.06	0.63519	Agree
Perceived Compatibility	4.05	0.64334	Agree
Trust	4.01	0.64033	Agree

Based on a five-point scale of (Armstrong 1987), the constructs with mean that fell between:
- -4.20—5.00 were regarded as Strongly Agree
- -3.40—4.19 were regarded as Agree
- -2.60—3.39 were regarded as Neutral or Neither Agree Nor Disagree
- -1.80—2.59 were regarded as Disagree
- -1.00—1.79 were regarded as Strongly Disagree

In Table 2, perceived usefulness and perceived behavioral control are classified in the category of "Strongly Agree"; and the other variables such as attitude, facilitating conditions, perceived ease of use, behavioral intention, perceived compatibility, and trust are classified in the category of "Agree".

IV. Conclusion

This report has summarized three different papers, namely the adoption of the Technology Acceptance Model (TAM) on the study of mobile banking app by Em et al. (2021) and the study of ABA Mobile Payment by Yang et al. (2021); and the adoption of Decomposed Theory of Planned Behavior (DTPB) on the study of ACLEDA Unity ToanChet by York et al. (2021).

According to the key findings of the report, the respondents strongly agree that mobile banking usage is useful and controllable. Furthermore, they are willing to use mobile banking because they have a positive attitude towards it. Likewise, they think that mobile banking is easy to use, fits well with their lifestyles, and is full of support services. Last but not least, they agree that mobile banking usage is fairly trustworthy.

4.1 Implications for Mobile Banking Adoption

This report contributes significantly to banking sectors on mobile banking adoption. The increase of mobile banking service providers can be the result of transforming Cambodia into a digital economy. The report shows that respondents have a positive opinion and are willing to adopt mobile banking services because of usefulness, ease of use, compatibility, and facilitating conditions. Bank and microfinance institutions can integrate these factors into their promotion tools, and they have to update their mobile banking apps constantly so that they can strengthen customer service support and build customer trustworthiness.

4.2 Limitations and Further Research

The result of this report cannot be generalized to all categories of mobile banking adopters since it focuses on the target respondents living in Phnom Penh only; furthermore, the sample size of 204 is not large enough to strongly infer the entire target population. Another limitation is that the study has not touched deep insight into the attitude and intention to adopt mobile banking yet. The report suggests the next researchers enlarge the sample size and employ a qualitative method so that mobile banking adoption can be fully conceptualized.

References

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action control* (pp. 11–39). Springer.

Alsamydai, M. J., Yassen, S. G., Alnaimi, H. M., Dajani, D. M., & Al-Qirem, I. A. (2014). The factors influencing customer usage of mobile banking services in Jordan. *International Journal of Business Management and Research*, *4*(2), 63–78.

Armstrong, R. L. (1987). The Midpoint on a Five-Point Likert-Type Scale. *Perceptual and Motor Skills*, *64*(2), 359–362. https://doi.org/10.2466/pms.1987.64.2.359

AssociationsBanksinCambodia. (2020). *ABC Directory Booklet 2020*. https://www.abc.org.kh/sites/default/files/content-files/Directory Book.pdf

Bakong. (n.d.). *Our Banking Partners. Retrieved from National Bank of Cambodia on March 19, 2021.* National Bank of Cambodia. https://bakong.nbc.org.kh/

Chitungo, S. K., & Munongo, S. (2013). Extending the technology acceptance model to mobile banking adoption in rural Zimbabwe. *Journal of Business Administration and Education*, *3*(1).

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, *13*(3), 319–339. https://doi.org/10.2307/249008

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, *35*(8), 982–1003. https://doi.org/10.1287/mnsc.35.8.982

Em, S., Norng, S., & Thab, C. (2021). The Analysis of Technology Acceptance Model on the Study of Consumer Attitudes toward the Intention to Adopt Mobile Banking App in Cambodia. *AIB Research Series*, *Volume 1*, 74–86. http://acleda-aib.edu.kh/tc/eng/business-news-20210302.pdf

GooglePlay. (n.d.). *ACLEDA Mobile. Retrieved from GooglePlay on March 18, 2021.* https://play.google.com/store/apps/details?id=com.domain.acledabankqr&hl=en

Lai, P. C. (2017). The literature review of technology adoption models and theories for the novelty technology. *JISTEM-Journal of Information Systems and Technology Management*, *14*(1), 21–38.

Martin Fishbein and Icek Ajzen. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Addison-Wesley. https://people.umass.edu/aizen/f&a1975.html

NationalBankofCambodia. (2018). *Annual Supervision Report 2018*. https://www.nbc.org.kh/download_files/supervision/sup_an_rep_eng/Sup-ann2018-eng.pdf

PhnomPenhPost. (2016). *Push for mobile banking growth. Retieved from Phnom Penh Post on March 19, 2021.* https://www.phnompenhpost.com/business/push-mobile-banking-growth

Rogers, E. M. (2003). *Diffusion of Innovations. Fifth edition. Free Press: New York.*

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage.pdf.crdownload.pdf. In *Information Systems Research* (Vol. 6, Issue 2, pp. 144–176). https://doi.org/10.1287/isre.6.2.144

Yang, S., Norng, S., & Thab, C. (2021). Consumer's Attitudes toward the Intention to Adopt Mobile Payment System: A Study on Mobile Application of ABA Bankin Cambodia. *AIB Research Series*, *1*, 1–19. http://acleda-aib.edu.kh/tc/eng/business-news-20210302.pdf

York, T., Norng, S., & Sem, L. (2021). Factors Inspiring Customers to Use Mobile Banking App: The Adoption of Decomposed Theory of Planned Behavior (DTPB) Model on the Study of ACLEDA Unity ToanChet App. *AIB Research Series*, *1*, 117–131. http://acleda-aib.edu.kh/tc/eng/business-news-20210302.pdf