TEST Engineering & Management

January - February 2020
ISSN: 0193 - 4120 Page No. 884 - 890

Factors Affecting the Intention to Adopt MMT: An Empirical Study among M-Pesa Customers in Kenya

Khadidga Ayed Mohammed, P.Pathmanaban A/L C.M. Pappayah
Email address: pathmanaban@apu.edu.my*

Article Info
Volume 82
Page Number: 884 - 890
Publication Issue:
January-February 2020

Abstract
The intention to adopt mobile money transfer technology has diminutive the telecommunications costs in many parts of the developing world from exorbitant levels to virtually identical amounts, particularly in Kenya. The goal of running this study is to examine the factors in terms of Performance expectancy (PE), Effort expectancy (EE), Social influence (SI) on the intention to adopt mobile money transfer among M-Pesa customers in Kenya. The data collected by using the questionnaires via Google Form and using the SPSS to analyze the data collected.

The hypotheses were tested to evaluate the various variable on the intention to adopt mobile money transfer and explore the relationships of every variable. outcomes revealed that two of the independent variablesare(effort expectancy and social influence)which were positively influences customers' intentions to adopt mobile money transfer. where the third independent variable was (performance expectancy), was a negatively influences customers' intentions to adopt mobile money transfer.

Keywords: *Intention to adopt mobile money transfer, Performance expectancy, Effort expectancy, Social influence.*

Article History
Article Received: *14 March 2019*
Revised: *27 May 2019*
Accepted: *16 October 2019*
Publication: *04 January 2020*

1.0 Introduction

Mobile money transfer has breached the social and cultural boundaries in money transfers. Whereby through this service, customers are able to credit in their accounts with local authorized dealers, then they can transfer money to another person's phone or cashback, or use the money to pay bills or pay loans among other services (Acker, et al., 2018). The use of mobile money transfer has grown tremendously which carries out a dramatically positive impact on financial transactions in Kenya. As referred by Soko Directory (2019)the value of mobile money transactions in 2018 was amounting to 44% of the GDP, and that clarifies the significance of the mobile money transfer (MMT) significance which considered a basic part of the economic growth in Kenya. Where in 2018 the number of mobile money transfersubscribers attained to 31.6 million which is approx.61% of the number of Kenyan populations 51,393,010(The Star Online 2019; TheWorldBank2019).Moreover, in 2018 the active user base of M-Pesa has grown hugely and variously which is 1.04 million active users in 2007 to 33.4 million active users(MEDICI, 2019).On the other hand, one of the important factors that contributed to the increase in the use of mobile money transfer (MMT) was the number of mobile cellular subscribers that grew significantly from 24,968,891 million in 2010 to 42,815,109 million in 2017 (Theworldbank, 2019).Hence, from the above statistics mentioned we can realize that over the past seven years (from 2010 to 2018) the number of MMT and M-Pesa users has increased significantly with the number of the population and mobile cellular subscribers during a short period of time, which deem a great support to increase the number of mobile money transfer. A few numbers of scholars examining the factors affecting the intention to adopt mobile money transfer in Africa by using qualitative methods. Hence, that is why this study aims to study factors affecting the intention to adopt the MMT among M-Pesa customers in Kenya by using a quantitative method.

2.0 Literature review and hypotheses

2.1 Intention to adopt Mobile Money Transfer

Referring to Tobbin (2008), and Mbiti and Weil (2014) sight mobile money transfer is the process of sending money from one person to another via phone activation which can be glorified in the end with cash

January - February 2020
ISSN: 0193 - 4120 Page No. 884 - 890

transactions by a financial and commercial institution. Researchersproposed most of the studies on MMT fallbetween two major research areas relative to mobile technology which is mobile money transfer and mobile payment.In March 2007, Safaricom consider as Kenya's massive mobile operator, revolutionized the way Kenyans manage money by offering M-Pesa, it was the first service can be delivered via SMS texting through using a primary mobile phone, that users can send and withdraw money electronically (World Bank, 2019).As reported by Stella Dawson (2017) the actual exchange of funds, deposit and withdrawal which takes place through a network of agents that primarily function as an ATM. M-Pesa agents include convenience stores, gas stations, post offices, and even traditional bank branches. In 2012, M-Pesa released a service that allow users to open interest-bearing savings accounts and receive short-term loans,moreoverin 2017, Safaricom set up platforms that authorize the smallholder farmers by using mobile phones to reach suppliers for ordering the fertilizers, seeds and animal feed(Arezki et al.2018). During 12 years, M-PESA has expanded rapidly and become the greatest successful mobile-based on the mobile money transfer service in the world. Recently, around 30 million Africans in more than 10 countries and, above 80% of Kenyans are using M-PESA (Brand South Africa,2017).

2.3 Performance Expectancy (PE)

Performance Expectancy (PE) has stated as "the degree which an individual believes by using a new system will lead to the achievement of desired performance goals" (Kupfer et al.,2016; Venkatesh et al., 2003). According to Brown et al. (2011), performance expectancy will save time for the users by using mobile payment that would give advantages to consumers that will allow them to attain their achievements quickly.Cao & Niu (2019) examined the relationship among the ubiquity and Alipay user intention to adopt is just mediated via the performance expectancy, the findings show that there is high significant influence. Regarding to the above discussion, the following hypothesis is proposed:

H1: Performance expectancy positively influences customers' intentions to adopt mobile money transfer.

2.4 Effort Expectancy (EE)

Effort expectancy (EE) is defined as easy to use means when the users feel the new technology does not need much effort, then they will embrace the new technology. People believe that online banking and non-banking is a needless effort which has potential to adopt it (Chaouali et al., 2016). Thus, previous studies have pointed out that effort expectancy has a significant impact on behavioural intention to adopt mobile money transfer services (Martins et al., 2014; Rahi, Ghani and Ngah, 2018; Riffai et al., 2012).Regarding to the above discussion, the following hypothesis is proposed:

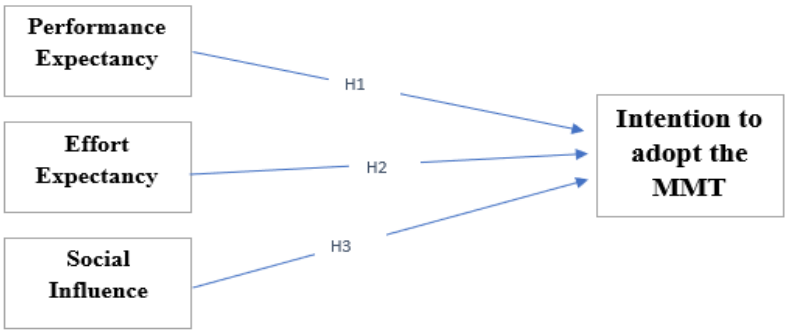
H2: Effort Expectancy positively influences customers' intentions to adopt mobile money transfer.

2.5 Social influence (SI)

Social influence pointed out to the level to which people realized that significant others, for instance, when family and friends, thought should use a technology (Martin & Herrero, 2012). Zhou et al. (2010) stated that social influence was a significant impact on the intention to adoptmobile money transfer services. Regarding to the above discussion, the following hypothesis is proposed:

H3: Social influence positively influences customers' intentions to adopt mobile money transfer.

2.6 Research framework



Published by: The Mattingley Publishing Co., Inc.

TEST Engineering & Management

January - February 2020
ISSN: 0193 - 4120 Page No. 884 - 890

3.0Methodology

The aim of this research is to determine the correlation between performance expectancy, effort expectancy, social influence and intention to adopt the MMT among M-Pesa customers in Kenya. The fundamental data was compiled by google Form to 120 participants. The M-Pesa customers were be the purposed group of respondents and the outcomes acquired will be received as individual responses rather than as a summary outcome. As shown in table 1.0 summed up the scale elements used and the source of the references. The questionnaire is with three divisions. The first division was about gathering all the information which is relative to participants' backgrounds, such as gender, age, education background, income monthly, and uses of mobile money transfer, and the third division was sundry of questions regarded to the dependent variable and independent variables, which wereevaluated byusing a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Thus, the data gathered were analysed by using SPSS through the descriptive analysis, normality test, reliability test, and correlation test performed.

Table 1.0: Scale items and reference sources

Variables	**Number of items**	**Reference Sources**
DV.Intention to adopt the mobile money transfer	5	(Mahfuz et al.,2015),(King'ori, 2015),(Baariu,2015).
IV1.Performance expectancy	5	(Humaid and Ibrahim,2019), (Foon and Fah,2011)(Cao and Niu,2019).
IV2.Effort expectancy	5	(Humaid and Ibrahim,2019), (Foon and Fah,2011), (Cao and Niu,2019).
IV3.Social Influence	5	(Humaid and Ibrahim,2019), (Foon and Fah,2011)(Cao and Niu,2019).

Furthermore, a reliability test was conducted to test the reliability of the answers got from the questionnaire. Cronbach's alpha should be above 0.7 for all variables examined so that the data is accepted as reliable. If Alpha values are below 0.7 are not accepted which means is the data collected not reliable (Zikmund et al, 2013). Regarded to the outcomes found it, so the value of Cronbach's alpha for all the factors involving the dependent and independent variables was from 0.970 until 0.984, thus indicating the variables are very reliable.

4.0Analysis

The participants in this study were 120 customers in Kenya. According to the result obtained, the gender of the responders was reported that 40% of males and 60% of females in this sample. Moreover, from the perspective of participants age, the most of the participants are those between 30-39 years old with a percent of 46.7%, and the respondents between 20-29 years old presenting 28.3% is the second-greatest group of participants, this pursued by those are between 40- 49 years old which is 20% percent, so the greatest group those who are more than 50 years old is the lowest which is presenting 5% percent only, based on the outcomes, referring that majority of the participants are those who are between 30 to 39 years old. Where the education background of the participants was 33.6% of masters who be shared in the survey, and 14.1% of customers are bachelor's degree, where solely 6.8% of customers and followed by PhD level. Besides, the results for monthly income pointed out that majority of the participants who are having the elevated monthly incomewhich is ranging Kshs5,000 to Kshs10,000 with 36.7%,and the second monthly income level indicates by 27.5% for those whose earning with a similar monthly income between less than Kshs5,000 and ranging Kshs11,000 to Kshs15,000 with 27.5%, and the last one clarifies those who are gaining more than Kshs15,000 are the least which is presenting 8.3 only. Further, most of the customers who are using mobile transfer services presenting 97.5 %, and pursed by 2.5% of customers are not using mobile transfer services. Also, most of the customers who are very often using mobile transfer services presenting 57.5% and followed by 38.3% of customers who are using mobile transfer services occasionally, where the last one with 4.2% of the

January - February 2020
ISSN: 0193 - 4120 Page No. 884 - 890

customers do not use the mobile transfer service. In addition, most of the customers who are using mobile transfer services ranging 3-6 months in this study by 41.7%. Next with who are ranging 6-12 months presenting 29.2%, thirdly those who use mobile money transfer services for more than one year which is 15.8% percent, and the lowest part for those who are using mobile transport services fewer than 3 months which is the lowest presenting 13.3% percent solely.Referring to the findings shows in table2.0 below clarifies the descriptive analysis on the mean of, performance expectancy, effort expectancy, social influence and intention to adopt mobile money transfer.

Table 2.0: Descriptive statistics of all variables

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PE	120	1	5	3.438	0.986
EEL	120	1	5	3.430	0.990
SIP	120	1	5	3.418	0.981
AOM	120	1	5	3.426	0.982
Valid N (listwise)	120				

Table 3.0: Correlation analysis

Independent variables	**Pearson correlation (r)**	**Sig .(2-tailed)**
Performance expectancy	0.887	0.000
Social influence	0.963	0.000
Effort expectancy	0.965	0.000

***Correlation is significant at the 0.01 level (2-tailed)*
Dependent variable: intention to adopt the mobile money transfer

Correlation analysis is known as the correlation coefficient which is a method used to examine the strength of the relationship among the variables(Pallant, 2011). Where the 'r' value has to range from -1 and 1, if r=1, it points out to the presence a strong positive relationship among the variables, if r=0, it points out no relationship and when r=-1, it points out to the presence a negative relationship among the variables (Hinton et al., 2014).Based on the result shown Table 3.0 above. All the predictive variables are positively correlated with the dependent variable (intention to adopt the mobile money transfer).The strongest relationship is among the intention to adopt the mobile money transfer and EE (0.965), pursued by SI (0.963)and PE (0.887). The relationship between team performance.

Table 4.0: Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.448	.287		1.560	.121
	PE	-.377	.055	.-.378	-6.902	.000
	EEL	.498	.045	.502	11.094	.000
	SIP	.856	.071	.855	12.051	.000

a. Dependent Variable: AOM

January - February 2020
ISSN: 0193 - 4120 Page No. 884 - 890

5.0 Research result and discussions

The outcomes of this study found that two of the predictive variables which are effort expectancy, social influence were positively influenced customers' intentions to adopt mobile money transfer. except performance expectancy was negatively influenced customers' intentions to adopt mobile money transfer. The first hypothesis of this research supposed the performance expectancy positively influences customers' intentions to adopt mobile money transfer, regarded to the findings of the regression analysis as shown in table4.0 the performance expectancy has negatively influenced customers' intention to adopt the mobile money transfer. The result of this research was against the study by Kuria Waitara (2016) performance expectancy had a significant impact on the intention to adopt the mobile money transfer service. As well as, an empirical study by Cao & Niu (2019) examined the relationship among the ubiquity and Alipay user intention to adopt is just mediated via the performance expectancy,the findings show that there is high significant influence.The second hypothesis of this research supposed that effort expectancy positively influences customers' intentions to adopt mobile money transfer.Regarding the findings shown in table4.0, the effort expectancy has positively influenced customers' intention to adopt the mobile money transfer. So, the result of this research was compatible with Im et al. (2010) was an important finding that effort expectancy has a higher effect on the intention to adopt in the USA instead of Korea. furthermore, various authors on the relevant filed of attention have confirmed the effect of effort expectancy on the customer's decision to utilize the online payment ducts, (Alalwan, Dwivedi, & Williams, 2016). The third hypothesis of this research supposed the social influence positively influences customers' intentions to adopt mobile money transfer. Based on the findings shown in table4.0, social influence positively influences customers' intentions to adopt mobile money transfer. The result of this research was compatible with Zhou et al. (2010) stated that social influence was a significant impact on the intention to adopt. Besides, Taylor et al. (2011) also gave evidence that youngsters' mature intention to use mobile money transfer service was significantly influenced by peers instead of the family members based on one study carried on at the American Midwest universities.

6.0Conclusion

In a nutshell, this research provides value implications to academic practitioners as well as scholars in the sector of mobile money transfer. Only a few empirical researches have been investigated on the intention to adopt the mobile money transfer service from the perspective of consumers' perceived values. This research contributes to developing the literature investigating the factors affecting the intention to adopt mobile money transfer among M-Pesa customers in Kenya.

References

1. Acker, A. and Murthy, D., 2018, July. Venmo: Understanding mobile payments as social media. In Proceedings of the 9th International Conference on Social Media and Society (pp. 5-12). ACM.
2. Alalwan, A. A., Dwivedi, Y., Rana, N. P., & Williams, M. D. (2016). Consumer adoption of mobile banking in Jordan: Examining the role of usefulness, ease of use, perceived risk and self-efficacy. Journal of Enterprise Information Management, 29(1), 154-178.
3. Arezki, R., Mottaghi, L., Barone, A., Fan, R.Y., Harb, A.A., Karasapan, O.M. and Matsunaga, H., 2018. Middle East and North Africa Economic Monitor: A New Economy for Middle East and North Africa.
4. Baariu, K., 2015. Factors Influencing Subscriber Adoption of Mobile Payments: A Case of Safaricom's Lipa na Mpesa Service in Embu Town, Kenya. International Journal of Business and Social Sciences, 2(3), pp.40-45.
5. Brand South Africa. (2017). M-Pesa at 10: How Africa become the leader in mobile money | Brand South Africa. [online] Available at: https://www.brandsouthafrica.com/investments-immigration/africa-gateway/m-pesa-10-africa-become-leader-mobile-money [Accessed 5 Jul. 2019].
6. Cao, Q. and Niu, X., 2019. Integrating context-awareness and UTAUT to explain Alipay user adoption. International Journal of Industrial Ergonomics, 69, pp.9-13.
7. Chen, K.Y. and Chang, M.L., 2013. User acceptance of 'near field communication'mobile phone service: an investigation based on the 'unified theory of acceptance and use of technology'model. The Service Industries Journal, 33(6), pp.609-623.
8. Chaouali, W., Yahia, I.B. and Souiden, N. (2016), "The interplay of counter-conformity motivation, social influence, and trust in customers' intention to adopt internet banking

January - February 2020
ISSN: 0193 - 4120 Page No. 884 - 890

services: the case of an emerging country", Journal of Retailing and Consumer Services, Vol. 28, pp. 209-218.
9. Data.worldbank.org. (2019). Kenya | Data. [online] Available at: https://data.worldbank.org/country/kenya [Accessed 5 Jul. 2019].
10. Data.worldbank.org. (2019). Mobile cellular subscriptions | Data. [online] Available at: https://data.worldbank.org/indicator/IT.CEL.SETS?end=2017&locations=KE&start=2010&view=chart [Accessed 4 Jul. 2019].
11. Dawson, S., (2017). Why Does M-PESA Lift Kenyans Out of Poverty?. [online] Available at: https://www.cgap.org/blog/why-does-m-pesa-lift-kenyans-out-poverty [Accessed 5Jul. 2019].
12. Foon, Y.S. and Fah, B.C.Y., 2011. Internet banking adoption in Kuala Lumpur: an application of UTAUT model. International Journal of Business and Management, 6(4), p.161.
13. Hinton, P., McMurray, I. and Brownlow, C. (2014). SPSS explained. 2nd ed. NY: Routledge
14. Humaid, A.B. and Ibrahim, Y.M., 2019. The Examination of Factors Influencing Saudi Small Businesses¡¯ Social Media Adoption, by Using UTAUT Model. International Journal of Business Administration, 10(2), pp.96-114.
15. Im, I., Hong, S. & Kang, M.S. 2010. An international comparison of technology adoption. Information & Management 48(1): 1–8.
16. King'ori, G.W., 2015. Competitive advantage of M-Pesa, is it sustainable? (Doctoral dissertation, Strathmore University).
17. Kupfer, A., Ableitner, L., Schöb, S. and Tiefenbeck, V., 2016. Technology Adoption vs. Continuous Usage Intention: do Decision Criteria Change when Using a Technology?
18. Kuria Waitara, J. 2016. Modeling Adoption and Usage of Mobile Money Transfer Services in Kenya Using Structural Equations. American Journal of Theoretical and Applied Statistics 4(6): 513.
19. Mahfuz, I., Saha, M.S.P. and Fahim, M.M., 2015. Adoption of mobile money transfer services in Bangladesh: A structural equation modeling approach. Journal of Marketing and Consumer Research, 15, pp.5-16.
20. Martins, C., Oliveira, T. and Popovič, A., 2014. Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. International Journal of Information Management, 34(1), pp.1-13
21. Mbiti, I.; Weil, D.N. Mobile Banking: The Impact of M-PESA in Kenya; Working Paper No. 17129; National Bureau of Economic Research: Cambridge, MA, USA, 2014.
22. MEDICI. (2019). MEDICI | M-Pesa: Mobile Phone-Based Money Transfer – Global Presence. [online] Available at: https://gomedici.com/m-pesa-mobile-phone-based-money-transfer-global-presence [Accessed 4 Jul. 2019].
23. Pallant, J. (2011). SPSS Survival Manual: A Step by StepGuide to Data Analysis Using the SPSS Program, FourthEdition. Crows Nest, Australia: George Allen & Unwin
24. Rahi, S., Ghani, M., Alnaser, F. and Ngah, A., 2018. Investigating the role of unified theory of acceptance and use of technology (UTAUT) in internet banking adoption context. Management Science Letters, 8(3), pp.173-186.
25. Riffai, M.M.M.A., Grant, K. and Edgar, D., 2012. Big TAM in Oman: Exploring the promise of on-line banking, its adoption by customers and the challenges of banking in Oman. International journal of information management, 32(3), pp.239-250.
26. San Martín, H. and Herrero, Á., 2012. Influence of the user's psychological factors on the online purchase intention in rural tourism: Integrating innovativeness to the UTAUT framework. Tourism Management, 33(2), pp.341-350.
27. Soko Directory. (2019). Half of Kenya's GDP Moved through Mobile Phones in 2018: The Power of Mobile Money Transaction in Kenya. [online] Available at: https://sokodirectory.com/2019/01/half-of-kenyas-gdp-moved-through-mobile-phones-in-2018/ [Accessed 5 Jul. 2019].
28. Taylor, D.G., Voelker, T.A. and Pentina, I. (2011), "Mobile application adoption by young adults: a social network perspective", International Journal of Mobile Marketing, Vol. 6 No. 2, pp. 60-70.
29. The Star Online. (2019). M-Pesa helps drive up Kenyans' access to financial services: study. [online] Available at:

January - February 2020
ISSN: 0193 - 4120 Page No. 884 - 890

https://www.thestar.com.my/tech/tech-news/2019/04/04/m-pesa-helps-drive-up-kenyans-access-to-financial-services-study [Accessed 5 Jul. 2019].

30. Tobbin, P. Modelling consumer adoption of mobile money transfer service: A consumer behaviour analysis, Aalbury. Denmark; 2008.
31. Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D., 2003. User acceptance of information technology: Toward a unified view. MIS quarterly, pp.425-478.
32. Venkatesh, V., Thong, J.Y., Chan, F.K., Hu, P.J.H. and Brown, S.A. (2011), "Extending the two-stage information systems continuance model: incorporating UTAUT predictors and the role of context", Information Systems Journal, Vol. 21 No. 6, pp. 527-555.
33. Zhou, T., Lu, Y. and Wang, B., 2010. Integrating TTF and UTAUT to explain mobile banking user adoption. Computers in human behavior, 26(4), pp.760-767.
34. Zikmund, W., Babin, B., Carr, J. and Griffin, M. (2013). Business research methods. 9th ed. Mason, OH: South-Western Cengage Learnin.

Published by: The Mattingley Publishing Co., Inc.