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Why Mobile Money Users Keep Increasing? Investigating the Continuance Usage of Mobile Money Services in Tanzania

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WHY MOBILE MONEY USERS KEEP INCREASING? INVESTIGATING THE CONTINUANCE USAGE OF MOBILE MONEY SERVICES IN TANZANIA

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ABSTRACT

This study examined factors that affect continuance usage of mobile money services in Tanzania. The Theory of Planned Behavior was adopted as a theoretical foundation of the study. The theory was further extended by including the constructs of perceived cost, perceived trust and satisfaction as determinants of mobile money service continuance usage behaviour. A total of 309 valid and reliable responses collected using questionnaires were used for data analysis. The data were analysed using Structural Equation Modeling (SEM) approach. The findings depict that perceived trust, attitude and perceived behavioral control have significant influence on continuance behavioral intention while perceived trust, satisfaction and continuance behavioral intention have significant influence on continuance usage behavior. The study provides a number of useful implications for scholars and policy makers which could be used to enhance and provide sustainable mobile money services to users.

KEYWORDS: Continuance, Mobile-Money, adoption, Tanzania

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BACKGROUND

Mobile money services is the key contributor for the rapid increase of financial inclusion among the Tanzania citizens (DiCastri & Gidvan, 2014). Mobile money services enables people with different occupations and activities in life to send, receive and pay different bills using mobile phones. The key players in Tanzania mobile money services provision are M-Pesa, Tigo-Pesa and Airtel Money (TCRA, 2016). The total amount of money transacted through mobile money services has exceeded 2.1 Billion dollars (4.7 Trillion Tanzania Shillings) in 2015 indicating its massive usage among the Tanzanians (IMF, 2016). Furthermore, the literature indicates that mobile money is the most preferred method used by many Tanzanians to send money (DiCastri & Gidvan, 2014).

Accordingly, there is steady increase in mobile money services users in Tanzania despite different challenges such as inadequate user support, insufficient service awareness, high transaction cost, fear for money safety, unfriendly interface design (Bångens & Söderberg, 2011; Chogo & Sedoyeka, 2014; Nyaga, 2016; Senso & Venkatakrishna, 2013; Tossy, 2014). For example, the number of mobile money services has increased exponentially since its inception in 2008, in 2014 there were 31.8 million registered mobile money accounts and at least 35% of household have at least one mobile money account user (DiCastri & Gidvan, 2014). The key reasons for the adoption of mobile money being affordability, usability and convenience (DiCastri & Gidvan, 2014). The reasons for adoption of mobile money services in Tanzania are quite similar to other Sub- Saharan Africa (SSA) countries such as Kenya (Njega, 2009) and Uganda (Ndiwalana, Morawczynski, & Popov, 2010). Although mobile payment services have been used in Tanzania for eight (8) years now, very little effort have been invested to examine factors that could motivate continuance usage behaviour of mobile money services. A study conducted by Intermedia (2013) reported that, some of the urban mobile money users are less frequently using their mobile money account than when they first signed up. Therefore, there is a need to understand the key factors that could encourage continuance usage of mobile money services.

Bhattacherjee (2001) argued that success of any technology depends on its continuance usage rather than its initial adoption. This is because ineffective usage of technology will lead to wastage of efforts in developing the required technology. Thus, the need arises to examine and understand key factors that motivates people to continue using mobile money services. To investigate factors contributing to continuance usage of mobile money services, the study extends the theory of planned behaviour (TPB) by including perceived costs, perceived trust and satisfaction. The three constructs have been added to reflect the key reasons for people to continue using mobile money services.

LITERATURE REVIEW

Literature review was conducted using a structured literature review approach in which relevant literature on mobile money services, information systems adoption and continuance theories were identified, grouped and critically assessed. Criteria for including or excluding the literature in the study were determined beforehand. This approach was chosen over other approaches since it offers a rigorous, robust, comprehensive and reliable strategy for literature review to address the research problem (Petrosino, Boruch, Soydan, Duggan, & Sanchez-Meca, 2001).

Mobile Money in Tanzania

Mobile money is considered as the greater innovation in mobile financial ecosystem (GSMA, 2016). This is because mobile money removes friction in payments as well as improves customer satisfaction by providing real-time transactions (GSMA, 2016). Tanzania being one of the earliest countries to launch mobile money is 2008, has witnessed a massive growth of mobile money technology in the East African region. This growth of mobile money has been greatly attributed by growth of information communication infrastructures as well as wide mobile phone penetration in urban and rural areas (USAID, 2013). Statistics show that 35% of the households own at least mobile money account as compared to 2% of the household members who own conversional bank account. Due to the potential provided by mobile money services, it is clear that there is a big potential for growth of mobile money market in Tanzania and other developing countries.

Mobile money services have been widely researched in Tanzania. For instance, Chogo and Sedoyeka (2015) conducted a study to investigate factors which affect the adoption of mobile money in Tanzania. The results show that adoption of mobile money services is affected by poor agent support, lack of awareness, high cost of transaction, and fear on lack of security and unfriendly design of mobile money systems interface. Senso and Venkatakrishnan (2011) investigated challenges of mobile money transfer in Singida region. They found that poor network coverage and lack of enough capital among the mobile money services provides were identified as the key challenges to spread of mobile money services. Furthermore, a study conducted by Economides and Jeziorski (2015) revealed that mobile money services have significantly reduced crime related risks. This is because most of the people are using mobile money in various activities instead of working long distance with cash money and they are not storing physical cash at home.

Although previous studies discussed in this section provide insights on mobile money services provision, none of them have emperically investigated the continuance behavior of users when using mobile money services. Regarding to the

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importance of expanding mobile money market as well as improving the service to the users, investigating continuance usage behavior of mobile money's users is very important.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) is one of the most popular theories used to examine adoption behavior of technology. TPB is the extension of the Theory of Reasoned Action (TRA) which shows that behavior intention is influenced by Attitude and Subjective Norms. However, TRA does not take into account the issues of availability of resources in making decisions. Therefore, TPB was developed by extending TRA through adding perceived behavioral control construct on the model. This extension makes TPB to consider all self-controlled factors and external factors in studying adoption behavior of adopters.

TPB has been widely used in studying behavior intention and actual usage behavior on adoption of mobile money (Dahlberg & Oorni, 2007; Maitai & Omwenga, 2016; Makokha, Ramachandran, & Karthikeya, 2014; Mulwa, 2012; Sayid, Echchabi, & Aziz, 2012; Tobbin & Kuwornu, 2011). It is one of the well-established theories with over 1,200 research bibliographies suggesting that it is well supported empirically among the researchers in explaining human behaviours (Al-Lozi & Papazafeiropoulou, 2012; Sommer, 2011). It is mostly used to examine behaviours in situations where users of technology might lack control of their behaviours (which is most certain in mobile money usage, because of rapid change of technology) due to lack of necessary resources and skills (Azzah, 2015), an aspect which has been overlooked by other theories such as Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM) and Innovation Diffusion Theory (IDT). Lack of necessary resources and skills may thwart individual's desire to use or continue using a technology or participating in a particular behaviour (Ajzen, 2011). Further, given the fact that, good usage environment provided by mobile money service providers is a key to continue usage for users, then TPB is considered as an ideal theory in this study because it contains perceived behavioral control construct which takes into account factors that are beyond users' control. However, limited studies have employed TPB in examining continuance usage behavior of mobile money services.

Furthermore, the theory was extended by including three constructs which are perceived cost, satisfaction and perceived trust. These are considered as the main key elements in examining continuous usage behavior of technology.

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RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

This study adopt TPB model in studying the continuance intention of mobile money in Tanzania. TPB is further extended by including satisfaction, perceived trust and perceived cost. These are considered to be most influential factors in determining continuance intention of mobile technologies (Deng, Lu, Wei, & Zhang, 2010). Satisfaction could be defined as psychological state related to and resulting from the cognitively appraisal of the expectation-performance discrepancy (Wu, Tsai, Chen, & Wu, 2006). Satisfaction is considered as key enabler which can retain long terms consumers (Bhattacherjee, 2001; Wu et al., 2006). On the other hand, despite the advantages of mobile money, challenges such as money theft and disclose of account information are considered to demotivate users from continuance usage of mobile money services (Hoehle, Huff, & Goode, 2011). Therefore, to understand the influence of trust is very crucial in continuance usage of mobile money services. In addition, the cost associated with using mobile money is also a big debate among the mobile money users (GSMA, 2016). Provided that, the factor that monetary and non-monetary cost may deteriorate the usage behaviour of technology, it is wise to include perceived cost construct in the current study. Figure 1 shows the proposed conceptual model which could be used to explain continuance usage behavior.

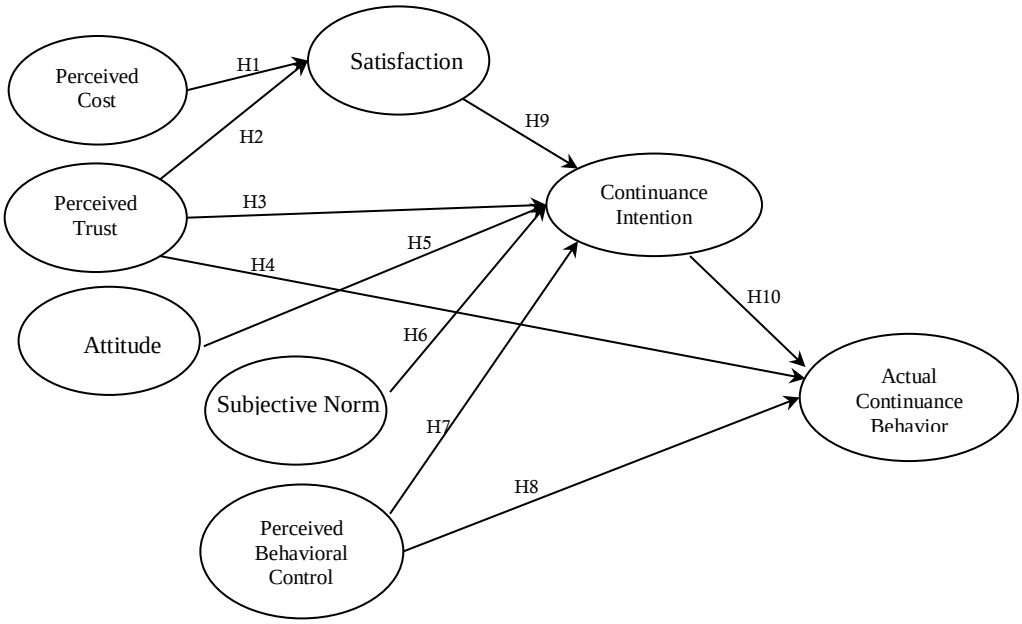

Figure 1: Proposed Research Model

High perceived cost may reduce the possibility of individuals to use mobile technology services (Wu & Wang, 2005). For instance, when cost associated with using mobile money services (such as sending and withdrawal charges) is considered to be very high, the users will be dissatisfied and may withdraw from using the services (Fu, Jung, & Chung, 2013). Furthermore, frustrating experiences, fraud, unavailability of services on time, transfer of money to unintended receiver may dissatisfy the consumers, consequently their intention to use the services may decrease (Wang, Zhou, & Zhang, 2014; Wu & Wang, 2005). Likewise negative significant influence of perceived cost on satisfaction was found in the work of Berger and Janoff-Bulman (2006) and Fu et al. (2013). Based on this fact, this study depicts that:

> *H1: Perceived cost has negative effect on individual's mobile money services satisfaction.*

Previous studies have pointed out that trust plays a key role in developing loyal and satisfaction to the customer (Balasubramanian, Konana, & Menon, 2003; Ratnasingham, 1998). In fact, user's perceived trust on ICT related service boost-up user's satisfaction level towards that service (Hoehle et al., 2011). This means that, if the user's perceived trust towards an ICT service or technology is very high, satisfaction levels also tends to increase (Flavián & Guinalíu, 2006; Hoehle et al., 2011). Similarly, relationships between perceived trust and satisfaction is shown in Kim, Ferrin, and Rao (2009); and Festinger (1962) studies. In connection with the relationships between user's perceived trust and continued intention to use ICT related services, previous studies found that trust has a direct influence on the intention of users to continue using technology (Deng et al., 2010; Flavián & Guinalíu, 2006). Based on this facts, this study hypothesize that:

> *H2: Trust will have a direct positive effect on mobile money satisfaction*
>
> *H3: Trust will have a direct positive effect on continuance intention to use mobile money services*
>
> *H4: Trust will have a direct positive effect on continuance usage of mobile money services.*

Attitude is considered as an extent to which an individual is favourable or unfavourable towards a given technology or service (Praveena & Thomas, 2014). When an individual develops a positive attitude towards a given technology or service, likelihood to use the said technology or service tends to decrease (C.-H.

Ho, 2010). Several studies have empirically examined the relationships between attitude and continuance behavior and concluded that attitude has positive effects on continuance intention (C.-H. Ho, 2010; Praveena & Thomas, 2014; Thiruselvi, Yusliza, Ramayah, & Nur Zahitah, 2013). On the same note, it is expected that if mobile money users have positive attitude towards mobile money services, likelihood to continue using mobile money among them will increase as well. Therefore, this study hypothesize that:

> *H5: Attitude will have positive effect on continuance intention to usage mobile money services.*

Subjective norm refers to individual's perception that people who are important to him/her think that he/she should or should not engage in a certain behavior (Hasbullah et al., 2016). Previous studies have shown that social pressure from family members, friends, colleagues indeed have positive effects on adoption of technology or services (Hasbullah et al., 2016). Furthermore, advice from different group of people have been empirically proved to influence continuance usage of technology (Chen, Chen, & Chen, 2009; Chen, Yen, & Hwang, 2012; Lee, 2010). In the context of the current study, mobile money users may choose to continue using the technology because of the social pressure received from different groups. Therefore, this study postulates that the effect of word-of-mouth from different people will tend to influence continuance usage of mobile money services positively. Hence, the following hypothesis:

> *H6: Subjective norm will have positive effect on continuance intention to use mobile money services.*

Perceived behavior control is defined as individual's perception of ease or difficulty in performing certainbehavior (Ajzen, 1991). If the user has higher control of the perceived behavior, then performing a certain behavior becomes ease (Zhong, Luo, & Zhang, 2015). A number of studies have examined the influence of perceived behavior control on continuance behavior and concluded that there is positive effects between the variables (M.-C. Lee, 2010; Zhong et al., 2015). In this study, increased behavioural control (for instance through acquiring skills to harness the services) will enable mobile money users to find the services easy to use. Subsequently, individual's likelihood to continue using mobile money services will increase. Therefore, this study depicts that:

> *H7: Perceived behavior control will have positive effect on continuance intention to usage mobile money services.*

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H8: Perceived behavior control will have positive effect on actual continuance behavior of using mobile money services.

Satisfaction refers to user's affective reaction towards a service or technology (Al-Gahtani & King, 1999). It is the key driver of continuance intention to use a service or technology (Ho, 2010; Limayem & Cheung, 2008; Roca, Chiu, & Martínez, 2006). A satisfied user is more likely to continue to use ICT related service as long as the service provided continue to meet needs of the user (Bhattacherjee, 2001). Previous studies have empirically confirmed that satisfaction has direct and positive effects on continuance intention to use ICT related services (Ho, 2010; Hong, Thong, & Tam, 2005; Lee, 2010; Wu et al., 2006; Yin, Cheng, & Zhu, 2011). Based on these facts, this study predicts that:

H9: User's degree of satisfaction with mobile money services will influence his/her continuance intention to use the service.

Behavior intention has been theorized to influence actual usage behavior in technology adoption (Ajzen, 1991). Empirical studies have been conducted to examine the influence of behavioral intention on actual usage behavioral and proved to have positive relationship (Bhattacherjee, Perols, & Sanford, 2008; Lehrer, Constantiou, & Hess, 2011). Furthermore, increasing level of individual's intention to use technology or service has direct and positive impact on his/her continue usage behavior. Literature in IS depicts that a user may continue to use a service or technology as long as his/her intention will continue to be high (Al-Debei, Al-Lozi, & Papazafeiropoulou, 2013; Y. Sun & Mouakket, 2015). Thus, this study postulates that:

H10: Continuance intention will have positive effect on actual continuance behavior of using mobile money services.

RESEARCH METHODOLOGY

Questionnaire and Measurement Items

The survey study was conducted in Tanzania to collect data used in this study. The survey was only conducted in Dar es Salaam region, statistics show that 75% of Dar es Salaam household members use mobile money (Intermedia, 2013). The survey questionnaire had three sections which are introduction, demographic details and measurement items which measure perceptions of respondents with regard to perceived costs, perceived trust, satisfaction, social norms, and attitude, perceived behavior control, continued intention and continued usage of mobile money services. All measurement items were adopted from previous IS studies and

customized to suite the current study's context (see appendix 1 for the measurement items).Measurement items for perceived costs were adopted from Sun, Cao and You (2010), Wu and Wang (2005), perceived trust from Lee and Benbasat (2004), Zhao, Lu, Zhang and Chau (2012), attitude from Ajzen (1991), Sun and Mouakket (2015), social norms from Dholakia, Bagozzi and Pearo (2004), perceived behavioural control from Baker, Al-Gahtani and Hubona (2007), Ho and Ko (2008) and satisfaction from Bhattacherjee (2001), Chiu, Hsu, Sun, Lin and Sun (2005), Liao, Palvia and Chen (2009), continuance behavioural intention from Chiu et al.(2005) and Liao et al. (2009) and continuance behaviour from Lee and Benbasat (2004) and Sun & Mouakket (2015).All measurement items were measured by using a 5-Likert scale ranging from strongly disagree (1) to strongly agree (5). The questionnaire was translated into Swahili language to enable respondents who are not fluent in English to respond to the questionnaire. Three hundred and nine valid and reliable questionnaires were collected and used in the data analysis.

Data Collection and Respondents

Convenient and Snowball sampling techniques were employed to select respondents used in this study. These sampling approaches were chosen due to difficulty of accessing the sampling frame (Katz, 2006). Researchers conveniently visited mobile money service centres to distribute questionnaires to mobile money users who were willing to participate in the study (Teddlie & Yu, 2007). Using snowball approach, mobile money users in offices, universities and shops were requested to link researchers to other mobile money service users who were willing to participate in the study (Atkinson & Flint, 2001; Katz, 2006). The methods used for data collection were also employed in a study of similar nature to the current study (Tobbin & Kuwornu, 2011). Demographic information of respondents is reported in Table 1.

Variable/ Construct	Frequency	Percentage (%)
Gender		
Female	123	39.8
Male	186	60.2
Age		
18-35	207	67
36-59	89	28.8
60 and Above	13	4.2
Experience		
Less than 1 Year	25	8.1
1-3 Years	73	23.6
Above 3	211	68.3

Table 1: Demographic information of respondents

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DATA ANALYSIS AND RESULTS

Data screening were conducted using SPSS missing value module to identify and address all issues related to missing values. Missing data were analysed using Missing Completely at Random (MCAR) test (Little, 1988). The test yielded non-significant results (χ^2= 541.799, df = 790, p = 1.00). This result suggests that data values are missing at random. Missing data was replaced using expectation-maximization approach. Structural Equation Modelling (SEM) was used to analyse the quality of the measurement items and test the study research hypotheses. SEM was adopted due to number of reasons, firstly it takes care of measurement errors in variables which results into more reliable results (Iacobucci, 2010). A two-step approach which involve assessment of the measurement model followed by assessment of structural model suggested by (Anderson & Gerbing, 1988) was employed to perform structural equation modelling.

Assessment of Model Fit and Quality of Measurement Items

Data were first analysed to verify if the model fit correspond the acceptable threshold values suggested by Bentler and Bonett (1980), Byrne (2009), Hair Jr, Black, Babin, and Anderson (2010), Hu and Bentler (1999) (see Table 2). The initial model did not produce acceptable threshold values; therefore it was modified several times following the guidelines suggested by Hair, Black, Anderson, and Tatham (2006). The final adjusted model produced the following model fit results χ^2/df=1.546, RAMSEA =0.042, CFI=0.906, IFI=0.960 and TLI=0.951, which suggests that measurement model has provided a good fit with the data.

Model Fit	Good Fit	Source
χ^2/df	< 3	(Bentler & Bonett, 1980)
RAMSEA	< 0.08	(Hair Jr et al., 2010)
CFI	>0.9	(Byrne, 2009)
IFI	>0.9	(Hu & Bentler, 1999)
TLI	>0.9	(Byrne, 2009)

Table 2: Model Fit indices thresholds

Quality of the measurement items is important in order to achieve reliable, valid and trustful results. Assessment of the quality of the measurement items was achieved by analysing four psychometric properties of the collected data: internal consistency, convergent validity, discriminant validity and unidimensionality. Composite reliability (CR) results for each construct indicates that CR values for

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each construct was above 0.7 suggesting that items used to measure each construct are consistent (Fornell & Larcker, 1981; Gefen, Straub, & Boudreau, 2000). Fornell and Larcker (1981) suggest that if AVE score is above 0.5 for each construct, then data collected have achieved acceptable convergent validity. Our results indicate that AVE scores are above 0.5 meaning that data used in this study have achieved the condition for convergent validity. With regard to discriminant validity, the square root of AVE for each construct was larger than other values in its row and column (see the bolded diagonal scores) suggesting that data discriminant validity was achieved (Gefen, 2005). Overall, the results showed the measurements items used were psychometrically adequate for this study. Results of reliability, convergent and discriminant validity are reported in Table 3.

	CR	AVE	TR	CIB	ATT	PBC	PC	STF	SN	CB
TR	0.820	0.696	**0.834**							
CIB	0.828	0.548	0.371	**0.740**						
ATT	0.812	0.591	0.135	0.218	**0.769**					
PBC	0.907	0.710	0.570	0.255	0.057	**0.843**				
PC	0.776	0.634	0.099	0.227	0.257	0.015	**0.796**			
STF	0.814	0.596	0.161	0.233	0.191	0.107	-0.115	**0.772**		
SN	0.785	0.550	0.360	0.164	0.057	0.612	0.193	0.034	**0.742**	
CB	0.846	0.530	0.498	0.372	0.118	0.693	0.272	0.188	0.467	**0.728**

Table 3: Construct Reliability and Validity

Assessment of Structural Model

The structural model was assessed by model fit indices. Based on model fit indices suggested by (Hu & Bentler, 1999), the study's structural model achieved the acceptable threshold values as follows: χ^2/df =1.652, RAMSEA =0.046, CFI=0.951, IFI=0.951 and TLI=0.943. The results of the model fit suggest that our model is structurally sound and therefore provides empirical support for theoretical model. Analysis of paths between the constructs indicated that seven (7) out of ten (10) hypotheses were supported (see Table 3). Specifically, hypotheses H2, which predicted perceived trust would have influence on mobile payment services satisfaction, H3 which predicted that perceived trust would influence individual's intention to continue using mobile payment services, H4 which predicted that perceived trust would influence individuals to continue using the mobile payment services were supported. Furthermore, H5 which suggested individual's attitude towards mobile payment services could influence his or her intention to continue using the services, H7 which predicted perceived behavioural control could influence the intention of individuals to continue using the mobile payment services were also supported.

The hypothesised influence of individual mobile payment services satisfaction towards its continued usage (H9) and continuance intention towards continued mobile payment usage were supported by data (H10). Contrary to expectation of

this study, H1 which suggested that individual's perception of mobile payment services would have influence on service satisfaction, H6 which predicted that social norms such advice from friends, relatives etc. could motivate the intention of individual to continue using mobile payment services and H8 which predicted that perceived behavioural control would have positive impact on individual's continuance intention to use mobile services were not supported. Overall, the final research model accounted for 22% of the variance in continuance intention to use mobile payment services and 50% of the variance in continuance usage of mobile payment services. This information suggests that the amount variance explained by the study's variables is substantial (Cohen, 1988). Results of hypotheses testing are reported in Table 4.

Hypotheses/Paths				Estimate	S.E.	P	Remarks
H1	Perceived costs	→	Satisfaction	-.1518	.0887	.0869	Not supported
H2	Perceived trust	→	Satisfaction	.2036	.0753	.0068	Supported
H3	Perceived trust	→	Continuance intention	2116	.0719	.0033	Supported
H4	Perceived trust	→	Continuance behaviour	.1864	.0757	.0138	Supported
H5	Attitude	→	Continuance intention	.1513	.0683	.0268	Supported
H6	Social Norms	→	Continuance intention	.0066	.0842	.9377	Not Supported
H7	Perceived control	→	Continuance intention	.6571	.0795	***	Supported
H8	Perceived control	→	Continuance behaviour	-.0917	.0939	.3290	Not supported
H9	Satisfaction	→	Continuance intention	.0985	.0487	.0432	Supported
H10	Continuance intention	→	Continuance behaviour	.2057	.0719	.0042	Supported

Table 4: Results of Hypotheses Testing

DISCUSSIONS

This study has integrated TPB constructs with perceived costs, perceived trust and satisfaction constructs to enrich our understanding of continuance behaviours towards mobile money services usage.

The study postulated that satisfaction towards mobile money services are determined by user's perceived trust and costs. However, contrary to our expectations, the study found that only perceived trust could influence user's satisfaction towards mobile money services. This implies that user's mobile money services satisfaction depends on trust rather than costs of the services. It may also imply that the amount charged by the mobile money service providers is reasonable and appreciated by the users (Berger & Janoff-Bulman, 2006). A close look on the direction of the relationship indicates that perceived costs has indeed a negative influence on satisfaction, however the strength of the relationship was not strong

enough to cause significant effect on satisfaction. Significance influence of perceived trust on satisfaction is related to previous studies on mobile money and mobile payment services (Bricci, Fragata, & Antunes, 2016; Kim, Ferrin, & Rao, 2009; Zboja & Voorhees, 2006).

Furthermore, the study found that trust has significant positive impact on both intention to continue and actual continued usage of mobile money service among the users. This finding confirms the role played by the trust construct as an important element in any money-related transactions or business. Apart from creating satisfaction, trust can also boost both continuance intention and continuance towards mobile money services. The influence of trust on continuance intention and continuance towards mobile money services is in agreement with previous studies (Sledgianowski & Kulviwat, 2009; Zboja & Voorhees, 2006; Zhou, 2013). In general trust, play a key role in motivating users to use mobile payment related systems. This role is also highlighted in previous studies which were conducted in sub- Saharan Africa (SSA) such as (Comninos, Esselaar, Ndiwalana, & Stork, 2009; Garg & Choeu, 2015; Kabanda & Brown, 2015; Lwoga & Lwoga, 2017; Morawczynski, 2008). Thus findings of this study in respect with this construct replicates previous findings and solidify the need to develop trustworthy systems for the successful adoption and post adoption of mobile payment related systems.

With regard to attitude, our findings support the theoretical assertions that attitude has direct and positive influence on continuance intention. Right attitude with regard to mobile money services could therefore boost user's continuance intention towards the service. This finding corroborates previous findings in mobile money services (Kim, Mirusmonov, & Lee, 2013). This study also found that social pressure such as advice from friends; relatives and others, could not influence continuance intention to use mobile money services. Possibly, social pressure could only influence initial intention to use the services. Nonetheless, the effect of social pressure diminishes as time goes by, making it ineffective to impact continued usage of the mobile money services. Further, since using mobile money service is not mandatory in the society and there exist other ways to harness money related services; the influence of social pressure could no longer continue to exert the same influence before the initial adoption of the services (Islam, 2013). This finding is consistent with previous results in mobile money services adoption studies such as Jenkins and Ophoff (2016). Also this finding replicates findings from previous IS studies such as Hsu, Yen, Chiu, and Chang (2006) and Venkatesh, Morris, Davis, and Davis (2003).

It appears that perceived behavioural control could only influence intention to continue using mobile money services and not the actual continued usage. The influence of perceived control on continued intention to use mobile money services

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is also supported by (Al-Debei et al., 2013). Plausible explanation with regard to non- significance of perceived behavioural control on continuance usage could be due to the fact that, a large portion of respondents are experienced users of mobile money services (see Table 1). Experienced users have enough skills which were gathered over the years of using mobile money services, thus they do not need much skills to continue using the services. This finding is consistent with (Ajzen, 1991), argument, that in situation where control to use the system is high, the construct of perceived behavioural control could not predict actual behavior. We found that when users are satisfied with money services, their intention to continue using the services could be prolonged. This finding indicates the importance of creating enabling business environment and provision of quality services to satisfy the users. This finding is consistent with both previous mobile money services findings such as Dlodlo (2015) and Yuan, Liu, Yao and Liu (2016) and IS findings such as Chen, Ryan and Hayashi (2004); Chen, Yen and Hwang (2012); Hong, Thong and Tam (2006); Sumaedi, Mahatma, Bakti and Yarmen (2012). Lastly, similar to many other previous studies such as Al-Debei et al. (2013), this study found that continuance intention is positively related to actual continuance of mobile money services.

IMPLICATIONS

Given the exponential growth enjoyed by mobile money service providers, this study offers a number of managerial and theoretical implications. Trust is crucial for increasing and maintaining customer satisfaction, and motivating continued intention and actual continued use of mobile money services. This finding suggests that loss of trust could be fatal to the mobile money service providers. Mobile money service providers should therefore strive to provide truth worthy services to its customers. We recommend that, mobile money service providers should not ignore the importance of providing quality services to satisfy the users. Our results indicate that, the higher the satisfaction, the higher continued usage intention of the mobile money services.

Furthermore, we suggest mobile money service providers to cultivate the right attitude among the users and enhancing control when using the services through skills development programs and support services. By doing so, the intention to continue using the services will be prolonged. Although, our finding indicates perceived control was not important for the actual continued usage of mobile money services, perceived control is still important for the initial adoption of the mobile money services. Thus, mobile money service providers should also plan for the skills enhancement programs for the new users to enable them to smoothly use the services. As indicated in our findings, continued usage intention could lead to actual continued usage of mobile money services. Concerted efforts should also be

directed to heighten up continuance intention to encourage mobile money users to continue using the services.

This study extended and empirically tested the theory of planned behaviours (TPB). Specifically, the study has introduced three new variables, perceived cost, perceived trust and satisfaction, which improve our understanding of the impact of these factors on both continuance intention and actual continued usage of mobile money services. Literature in IS continued usage paid little attention on the relationship between continuance intention and actual continuance usage with assumption that the intention could lead to actual usage, which is not always the case (Hsu & Huang, 2010). This study is an attempt to fill this gap.

While previous studies have been conducted on mobile banking and mobile payment services (Zhou, 2011, 2013, 2014), to our best knowledge this study could be the first to empirically examined continuance usage of mobile money services which is popular means of transacting money related services in sub-Saharan Africa.

CONCLUSIONS, LIMITATIONS AND DIRECTION FOR FUTURE STUDIES

Promoting the factors for mobile money service usage is crucial for its continuance usage. Using the extended theory of planned behaviour as a theoretical lens, the study found that the following factors: attitude, perceived trust, perceived behavioural control and satisfaction could affect continuance intention of mobile money services. In addition, the study found that perceived trust and continuance intention could motivate mobile money service users to migrate from continuance intention to continuance behaviour (i.e. actual continuance usage of mobile money services). Further, perceived trust could influence user's satisfaction towards mobile money services. To retain mobile money users, mobile money service providers should strategize ways and mechanisms that could promote the above factors.

Similar to any other study, this study has limitations which should be taken into account when using its findings. First, the use of convenient and snowball sampling approaches during data collection could have affected external validity due to lack of randomness in our sample and generalisation of results. Future studies may use probability sampling approach to improve the external validity. Due to limitation in accessing the sampling frame, future studies may add rigor by employing mixed methods approach to data collection and analysis in order to provide a comprehensive and a balanced perspective on the findings (Morse & Chung, 2003).

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In order to examine causal relationships between constructs of the study, future studies may apply longitudinal approach instead of cross- sectional approach used in this study. Examination of causal relationships between the constructs could shed more knowledge beyond the inter-relationships which was investigated in this study.

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APPENDIX 1: MEASUREMENT ITEMS

Constructs and Measurement items	
Satisfaction	
STF1	I am satisfied with the performance of the mobile money services.
STF2	My decision to use mobile money services was a wise one.
STF3	I am pleased with the experience of using the mobile money services.
STF4	Mobile money service one of the best mobile services I have chosen
STF5	Overall, I am very satisfied with mobile money services.
STF6	The adoption of the mobile money services has fulfilled my expectations.
STF7	The experience that I have had with the mobile money services have been satisfactory
Attitude	
ATT1	I have positive opinion in mobile money services.
ATT2	I think continuance usage of mobile money services is good for me
ATT3	I think continuance usage of mobile money services is appropriate for me
Social Norms	
SN1	People who influence my behavior think I should continue using mobile money services.
SN2	People who are important to me think I should continue using mobile money services.
SN3	People whose opinions I value prefer I should continue using mobile money services
SN4	People around me will be helpful in continuing using mobile money services
Trust	
TRS1	Mobile money service provider (s) is/are trustworthy.
TRS2	Mobile money service provider (s) keeps its promise.
TRS3	Mobile money service provider keeps customers' interests in mind
TRS4	I can count on mobile money service provider (s) to protect my privacy
Perceived Costs	
PC1	There are financial barriers when using mobile money services (e.g., paying for the handset)
PC2	I think access to mobile money vendors is very expensive
PC3	I think transaction fee of using mobile money is very expensive
Perceived Behavioural Control	
PBC1	I am able to use mobile money services without help
PBC2	Using mobile money services would be entirely within my control

Constructs and Measurement items	
PBC3	I have the resources, knowledge, and ability to use mobile money services
PBC4	Given the resources, opportunities and knowledge it takes to use mobile money services, it would be easier to use mobile money rather than any other means available
Continuance Behavioural Intention	
CBI 1	I intend to continue using the mobile money services in the future.
CBI 2	I will continue using mobile money services in the future.
CBI 3	I will regularly use mobile money services in the future.
CBI 4	I want to continue using mobile money services rather than discontinue its use.
CBI 5	My intentions are to continue using mobile money services rather than any alternative means
CBI 6	I intend to continue using mobile money services in the future
CBI 7	I intend to continue using mobile money services.
CBI 8	Next time I am willing to use the mobile money services.
CBI 9	I will recommend other people to continue using mobile money services.
Continuance Usage Behaviour	
CB1	I am considering discontinuing from using mobile money services.
CB2	I use the mobile money services intensively
CB3	I use the mobile money services frequently
CB4	Overall, I use the mobile money services a lot.

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