Technological Characteristics and Adoption of Cross-Network Mobile Money Transfer Service by SMES in Murang'a Municipality

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Abstract: *Mobile service operators in Kenya rolled out cross-network mobile money transfer services in the year 2018 intending to increase the penetration of mobile financial services in the country due to reduced costs and increased financial flexibility. The operators anticipated it to be of great benefit to Small business traders owing to the recent increase in the number of participants who utilize mobile money transfer facilities in their routine business functions, processes, and activities. However, the uptake of the service has remained low as M-Pesa continues to dominate the mobile money market where its share stands at 81.6% as of 30th September 2018. The objective of this study, therefore, was to assess technological characteristics influencing the adoption decisions of cross-network mobile money transfer service by SME traders in Murang'a municipality using descriptive survey design. Primary data was obtained through questionnaires from a sample size of 250 participants using purposeful sampling design. The analysis of data was done to obtain useful information for communication by using descriptive statistics. The results found out that the adoption rate of cross-network mobile money transfer service was very low as only 36 % of the respondents had adopted the service at the time of the survey. The rest of the respondents (64%) had not adopted the service due to unawareness, lack of agent interoperability, loyalty and exclusive trust in M-Pesa, network challenges, and limited access by customers to other mobile operator's retail outlets. All the respondents agreed that technological characteristics influenced their decision to adopt the service. The study also established that the adoption of cross-network mobile money transfer service had escalated the performance of the businesses as revealed by a majority of respondents (71%). The study recommends that SMEs traders adopt cross-network mobile money transfer because of its positive impact on business performance. To increase the rate of adoption of the service, the study recommends that policymakers introduce interoperability at the agent level and conduct aggressive marketing to attract more customers. To increase financial inclusivity in the country the study recommends that the service providers raise transaction limits of mobile money to attract more users in Kenya. There is also a need to review transaction costs downwards.*
Keywords: *Interoperability, Mobile Money Transactions, Mobile money agent, M-payments, SMEs*

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I. Introduction

Mobile money sector is revolutionizing the financial sector in Kenya due to its efficiency and accessibility to both the rural and urban populations unlike banks which mostly caters to the people in urban centers. The service has become more attractive to many users than mainstream banks and other formal financial institutions (Marc &Steffen 2016). Throughout the world, the mobile money sector has seen continued growth and expansion because it has improved ways to do business as most people are currently transacting using the service as opposed to relying entirely on formal banking systems (Desai, 2012).

Kenya has four main mobile network operators namely Safaricom, Airtel, Telecom, and Equitel which have accelerated accessibility of mobile financial services within the population. These mobile operators offer mobile money services to their subscribers through their official names which are Equitel (Equitel), M-Pesa (Safaricom), Airtel Money (Airtel), and T-Kash (Telecom) (Communications Authority of Kenya, 2016).

Airtel, Telecom, Safaricom and Equitel clients have been experiencing challenges transacting directly with each other from the onset of mobile money technology in the nation. These have compelled the introduction of cross-network mobile money transfer service due to persistent complaints from other operators

of unfair competition from Safaricom which controls more than 80% of the market. This service is aimed at laying a fairground in the market because initially, a client would receive a notification message from a rival operator about money receipt. Withdrawing and depositing an equivalent amount of money received into customer's mobile phone account was only possible through an agent of the compatible network and this made the process very expensive, complex, and time-consuming (Central Bank of Kenya, 2018).

A report by the Global Service Mobile Association indicates that 67% of markets where mobile money is functional and well established, there exist more than two service providers and this has necessitated the introduction of the interoperability of mobile financial systems. The report also reveals that the service was successfully introduced and adopted between the years 2012 and 2015 in the following countries: Tanzania, Nigeria, Rwanda, Indonesia, Pakistan, Thailand, Sri-Lanka, and Madagascar (Sotir, 2015).

On a global scale, interoperability of mobile financial services are not well established and are in early stages in a few regions where they have been introduced an example in East Africa being Tanzania which was launched in 2014 and now accounts for about 30% of the person-to-person transactions (Global Service Mobile Association, 2016).

Cross-network mobile money transfer service is meant to improve the way customers transact their day to day business activities because economic environment has been affected by rapid technological improvements, many studies prove that innovation is an important factor which businesses need to embrace to enable them to adjust because customers tastes, preferences and designs keep on changing. The adoption of new technology is also a good move for any business which wants to be ahead of others in the market (Zailani, Iranmanesh, Nikbin, &Jumadi, 2014).

In the absence of interoperability, completion of money transfer by parties involved was through many agents from different networks with high transaction fees. Interconnection of the networks is likely to lower trading fees, make transactions faster, and in the end attract more people which will greatly promote the financial inclusion of the poor (Kaffenberger& Zimmerman,2015).

Advancing cross-network mobile money transactions is aimed at ensuring that most people have access to formal financial services including those who were initially excluded by mainstream banks in the developing world. This is because most people are accessing mobile phones and their services more readily than banks. Mobile money makes is easier and affordable to get access to formal financial services at a low cost than other financial platforms traditionally open to the wealthy part of the population. The interconnection of the network will improve the net value of mobile cash by reducing the time and cost of getting to a population not yet accessing banking and other financial services from formal institutions (Marc & Steffen, 2016).

Cross-network mobile money transfer service is likely to make the SMEs' sector improve on its trading activities. This sector has seen consistent growth due to new technologies and this has made it a very important source of jobs to the Kenyan youth because 98% of trading activities in Kenya are done by SMEs as such it has managed to recruit a high number of young men and women who have completed their tertiary education (Ngugi, McOrege, &Muiru, 2013). Mobile financial facilities have addressed many challenges faced by SMEs particularly in handling small transactions that require timely attention (Aron, 2017).

The SME sector is of great benefit because it has a big contribution in the growth, expansion, development, and progress of Kenyan economy hence it needs much attention from the policymakers by introducing policies which will support the sector to continue promoting and enhancing the productivity of the general economy of the country (Kiveu & Ofafa, 2013).

There is an agreement among policymakers and professionals in the business field that SMEs are increasingly becoming a great compliment in accelerating the economic expansion and growth of developing nations as they promote the creation of new jobs, increases a country's production activities, maintaining a suitable balance of trade and acting as a catalyst of inventions as well as promoting an entrepreneurial environment (Fida, 2008).

There is, therefore, market confirmation that SMEs should embrace digital operations such as interoperability of mobile money networks and their related activities and processes to be more efficient and effective through reduced costs and time involved in performing an activity. However, since the start of the interoperability of mobile money operations in Kenya during the year 2018, Safaricom M-Pesa has continued to dominate the mobile money transfer market where its share stands at 81.6% as of 30th September 2018 (Communication Authority of Kenya, 2018). There is, therefore, a need to conduct a study to establish why the adoption rate is low and assess the technological characteristics influencing the adoption of the service.

THE OBJECTIVE OF THE STUDY
This paper seeks to examine how technological characteristics influence the adoption of cross-network mobile money transfer services by SMEs in Murang'a municipality.

II. Literature Review

Technology Acceptance Model (TAM) has been applied by many scholars in their studies. The widespread application of TAM is due to its strong theoretical and practical implications (Chuttur, 2009). Alwahaishi &Snásel (2013) confirms that TAM has been supported empirically by many researchers because it has successfully managed to predict how new technology will be accepted and used in society. Clients' behavior towards inventions has been repeatedly and consistently explained by TAM by giving very logical and effective results.

According to Shroff, Christopher &Mee (2011) the theoretical foundation of this model is based on the assumptions that when people are informed about the existence of technology, their readiness to accept the use of that technology will be influenced by the expected usefulness of the innovation which is the extent to which one believes and thinks that using a given system will boost their results. Another aspect of the innovation that will affect its adoption is perceived ease of use, which is the thinking that making use of new technology will be easy and free of complications because if individuals think that utilizing a new system calls for extensive efforts, they may not readily accept it. Attitude towards usage which is a user's willingness or lack of it to use a system will also influence the adoption of new development. A positive attitude will lead to mass adoption and a negative attitude will lead to mass rejection.

Diffusion of innovations is another model describing the process followed by new technological developments and ideas as they disperse across society. Diffusion is the roadmap and procedure involved when innovation is advertised and spread over a given period, targeted at potential owners of a given society and environment, and accepting the use of or rejecting an innovation is referred to as adoption. The following are the features of innovation which influence its adoption: relative advantage which is the magnitude to which the discovery is believed to be more useful in solving prevailing difficulties than the existing technologies, the second feature is compatibility which is the extent to which accepting to use new technology is commensurate with what people do on daily basis, Complexity which is the perception that technology is seemingly challenging to comprehend and apply, the Trialability is testing an innovation so that one decides to accept or reject it. Another important feature is observability which is understood as the level at which the desired outcomes of discovery are clear to other members in the society (Rogers 2003).

The Actor-Network theory which proposes that technology adoption is influenced by relationships formed between human beings and non-human aspects in actor-network is also used to illustrate the acceptance and exploitation of the merits brought about by the invention of cross-network mobile money transfer service by the customers. The theory explains how all actors and individuals ranging from the innovation, mobile money operators, mobile money agents, government policymakers, SMEs traders and other users form a virtual relationship which leads to successful adoption of the technology in all sectors in the Kenyan economy.

The use of the Actor-Network theory complements other theories in this research by providing more explanations of how technology is accepted by individuals, groups, communities, and organizations. Technology being an outcome of social construction depends on both its technological features and social aspects of the individuals adopting it. According to Latour (1987), Technological appropriateness does not mean that the technology will be readily accepted but other parameters including individuals believe about the technology, wide marketing, persuasions on importance of adoption, conformity and compliance to society demands, and the presence of a ready market influence its acceptability.

The key technological drivers toward acceptance and usage of innovation by individuals are compatibility, perceived advantage, complexity, and trialability (Rogers 2002). Perceived image, relative advantage, and compatibility are attributes having a positive effect on an individual's possibility of accepting a new technology (Lemuria& Belanger 2005).

According to Kent (2004), technology compatibility, the relative advantage of discovery, and ease of use of a new system have the greatest control over the adoption decision of expected customers. The study also goes ahead to conclude that the utilization of emerging technology increases as long as the customers have a positive belief that applying it will be beneficial. A study by Kaddachi et.al (2017) revealed that relative advantage, level of risk, time frame, cultural aspects, and difficulties involved while embracing a new development also influences the acceleration rate at which new technology is adopted.

Rogers (2003), states that compatibility is the extent to which an innovation is seen to be cognizant of culture, values, beliefs, practices, experiences, and expectations of new and early adopters of a product. Innovations that are believed to be consistent with the firm's vision, values, missions, and objectives have a higher chance of adoption as observed by Derrick and West (2003).

Lack of security and data privacy also has an impact on the speed at which innovation will be adopted as confirmed by the following studies (Saeed et al. 2011, Kraemer 2006 &George 2013). Security concern arises when people believe using a particular system will be insecure by violating data privacy in storing or transmitting information and in conducting financial transactions (Chang et al. 2007).

III. Empirical Literature

A study done by Kabir (2012), found out that implementing interoperability is complex due to many technical aspects in interconnecting various networks. A nation with a small number of mobile operators will more readily implement inerrability either within or outside the country than the one with many operators. In such a situation, a national payment switch initiated by the government can help address the problem when implementing interoperability.

The pattern of mobile cash usage was done on 865 SME based in major urban and semi-urban areas in Kenya. The findings revealed that a mobile cash facility is used in all financial transactions by the business traders who were interviewed. Settling bills, paying suppliers, and employees were done using cell phones. The data also revealed that most of the traders at 99.5% used mobile money services for their daily trading activities as well as own personal use, another 67% used the service exclusively for business reasons (Higgins, Kendall& Lyon 2012).

Factors which successfully lead to a rapid uptake of mobile payments by SME traders were studied and it was noted that accessibility to the product, suitability, price, benefits to be accrued and safety issues had a positive correlation in decisions relating to the acceptability and usage of cell payment modes by small business traders (Moog 2010).

According to Carole, (2012) the consensus within the scholars on mobile money interoperability is that regulation should aim at providing the cashless market with an opportunity to grow to full maturity. If network providers conclude that their commerce activities are hindered and compromised by huge regulatory processes on technological advancements, they are likely to commit little investments and this will lead to little growth.

SMEs in the developing world cannot assess whether they need the use of technologies in their daily undertakings. Identifying areas that may need the use of technological innovations to reduce costs and increase revenue has remained a challenge to most SMEs. Many business traders are reluctant to adopt new technologies because of great resistance to change fearing that installation and eventual uptake of new technology are time-consuming and a costly procedure (Awa et.al, 2011 &, Manochehriet, 2012).

A study was done using technology acceptance theoretical variables namely, perceived usefulness and ease of use to establish the usage of mobile financial facilities and services among SMEs in Makassar City and the results showed the two variables were having a positive impact on the acceptance of innovations, however, perceived usefulness produced a higher impact on the decision to accept and use a discovery by consumers compared to perceived ease of use (Munir&Idrus 2013).

IV. Methodology

Descriptive survey design was used to carry out this research. This research was conducted in Murang'a Municipality which is the administrative capital of Murang'a County in Kenya. The target population of this study comprised of 2500 registered SMEs in the municipality drawn from various sectors such as hair-dressing, transport services, carpentry, retailing, wholesale, tailoring, hotel, and catering services. 250 respondents were chosen as sample size. A questionnaire was administered to collect primary data. Pretesting was conducted to ensure the reliability of the questionnaire. Descriptive statistics were employed in analyzing data.

V. Results And Discussions

Response Rate

Table 1: Rate of Response

Response	Frequency	%
Responded	230	92
No Response	20	8
Total Issued	**250**	**100**

Source: field data (2020)

This research targeted 250 SME traders out of which 230 correctly answered the questions and returned the questionnaires; this corresponded to a 92% response rate which was statistically significant for this study. This rate of response was above 50% as recommended by Mugenda and Mugenda (2008).

Respondents Gender

Table 2: Respondents Gender

Gender	Frequency	%
Male	105	46
Female	125	54
Total	**230**	**100**

Source: field data (2020)

From the results shown above, the male and female gender accounted for 46% and 54% respectively. The adequate representations of both genders ensured that the findings of the study do not suffer from gender bias.

Age of Respondents

Table 3: Age of Respondents

Age	Frequency	%
Below 20 years	30	13
21-30 years	132	57
31-40 years	50	22
41-50 years	13	06
Over 50 years	5	02
Total	**230**	**100**

In this study, 57% of the respondents in this study were aged between 21 -30 years. According to Peter, (2014), young people are individuals aged between 25 and 35 years. This is an indication that mobile money transactions were popular amongst the youth.22% were those aged between 31-40 years. Traders aged below 20 years accounted for 13% followed by age bracket of 41-50 years at 6%. Participants aged above 50 years had the smallest number at 2%. Data shows that 92 % of the respondents were below 40 years, a confirmation that the SME sector investment is mostly done by the youth.

These results agree with the findings by Ntale & Bosire (2018) on the impact of mobile money transfer services on the growth of SMEs in the informal in Kenya. In that study, 72% of 389 respondents were composed of people of between 18-45 years. The study infers that these age groups of the youth use mobile financial products more readily compared to the older age groups.

This indicates that due to low levels of formal employment in Kenya, the youth are more engaged in the SME sector as the alternative source of employment. These results were in agreement with those of Ibrahim & Mahmood (2016) on competitive advantage mediation and association between entrepreneurship and the performance of small and medium enterprises in Nigeria, who found out that the majority of the workers in SMEs was comprised of young people who had acquired formal education.

Marital status of the respondents

Table 4: Marital status of the respondents

Marital status of the respondents	Frequency	%
Married	93	40
Single	137	60
Total	**230**	**100**

Source: field data (2020)

Above data shows that 60% of the respondents indicated that they were single and the remaining 40% revealed that they were married. Most (60%) of the individuals who took part in this survey, therefore, were single. This is supported by the fact that they were young.

Education levels of respondents

Table 5: Education levels of respondents

Education level	Frequency	%
Doctorate	0	0
Master	3	1
Undergraduate	38	17
Diploma	80	35
Certificate	69	30
K.C.S. E	40	17
Total	**230**	**100**

Source: field data (2020)

According to the statistics, 35% of the respondents have diploma qualification, 30% have certificates while undergraduate and KCSE holders tied at 17%. Masters qualification accounted for 1% of the respondents. None of the respondents has a doctorate.

Duration in the current business

Table 6: Duration in the current business

Number of years in business	Frequency	%
Below 2 years	52	23
2-6 years	118	51
7-10 years	48	21

Above 11 years	12	05
Total	**230**	**100**

Source: field data (2020)

The majority of the respondents (74%) had operated in less than 6 years, 21% between 7-10 years, and 5% above 11 years. The majority (74%) of the business operators had run their SMEs in a period ranging between 2-6 years and was ready to adopt new technologies to better their businesses. This was in agreement with the study by Kademeteme& Twinomurinzi (2019) on the ineffectiveness of technology adoption models in SMEs of South Africa, which concludes that most of the people who adopt information communication technologies are usually young.

Mobile Money Provider
The study sought to establish whether or not the respondents were using mobile money facilities, products, and services. All the respondents in this study confirmed that they were engaged in mobile money transactions in their ordinary business activities daily. This is a revelation that mobile money products and services were an integral part of SMEs' trading activities in Kenya.

Data confirms that 81% of the respondents use M-Pesa while 11% and 4% are using Airtel money and Tkash respectively. The remaining 3% had subscribed to Equitel. Therefore, it is clear that many respondents (81%) use M-Pesa as the primary mobile money provider in Kenya. These findings concur with those of Nyaga (2017) on the effect of mobile money services on the performance of SMEs in urban towns in Kenya who established that Safaricom M-Pesa was the dominant mobile cash service provider in Kenya and was followed by Airtel money in the second position. From these findings, it's evident that M-Pesa dominance is still high even after successfully commencing the interoperability of the mobile money network in Kenyan.

Usage of cross-network mobile money transfer service
Only 36 % had adopted cross-network mobile money transfer services at the time of the survey while 64 % had not. This shows that the adoption rate is still very low (36%).

Reasons why traders had not adopted cross-network mobile money transfer service
Table 7: Reasons for low uptake of cross-network mobile money transfer service

Reason for not adopting	Frequency	%
Lack of awareness	75	21
Lack of agent interoperability	70	20
Trust in M-Pesa	65	18
M-Pesa loyalty	61	17
Network challenges	58	16
The limited presence of rival networks	27	8
Total	**356**	**100**

Source: Field data (2020)

The respondents (21%) indicated that they had not adopted cross-network mobile money transfer services because they were not aware that such a service was in existence. Similar findings were obtained in a study by Hossain, Islam, Khan, and Ramayah (2011) on mobile trading product usage among the working population in Bangladesh, who established that the acceptance and usage of Mobile Commerce products were greatly influenced by user awareness.

Lack of agent interoperability was another reason which made traders at 20% fail to adopt the service and this was consistent with a study by Mazer & Rowan (2014) on the competitiveness of Kenyan mobile financial processes and services for the country's competition authority who established that full interoperability could only be achieved if agents were interoperable. Platform interoperability was not enough to attract more customers and reduce M-Pesa dominance because traders said they had no choice because even after receiving money from a rival network, one could only withdraw from their registered network.

Other respondents (18 %) had not adopted the new technology due to trust in M-Pesa. Traders felt that M-Pesa service was handling their financial matters more appropriately and this explains the trust they had in it and were not willing to adopt another service. This was in agreement with analyzed data of a study by Alsaad, Mohamad & Ismail (2017), which proved that trust in the existing product had a significant impact when traders had to choose between exiting and new technologies.

Traders also failed to adopt cross-network mobile money transfer service due to loyalty in M-Pesa at 17%. The trades were more loyal to M-Pesa because according to them it had given them financial services effectively and were not ready to shift their loyalty to any other new technology or rival operators in the

country. These findings concurred with study results by Deng, Wei & Zhang (2010) who established that user loyalty in one technology harmed the uptake and utilization of new technology.

Traders further stated that the service was not friendly to them because the other mobile money providers were having network connectivity challenges, 16 % of the respondents gave this reason. Respondents stated that Safaricom was very reliable on network connectivity than the other telecommunication networks in Kenya. They were not willing to shift to new technology due to the belief that they may experience network challenges. These findings were consistent with those of Dube & Gumbo (2016) who established that the implementation of information communication technologies among supermarkets in Zimbabwe was hindered by poor network connectivity resulting in low adoptions.

The little presence of rival networks to Safaricom on mobile money provision services was also a hindrance to adoption. This is confirmed by the fact that the majority of mobile money agent shops in many places in the country are owned by M-Pesa agents. This was according to 8 % of the respondents. This has made competition difficult as such agent shops exclusively serve their primary subscribers. The other agents have limited presence and negatively affect the adoption of cross-network mobile money. A study by Kingiri & Fu (2019) on spread and acceptance of digital finance discovery in upcoming economies established that the Safaricom network management, technically prevented their agents from freely and directly serving customers of rival mobile money service providers in the Kenyan market and this hindered other networks from adequately competing with Safaricom M-Pesa.

Duration of cross-network mobile money transfer service usage
Majority of respondents (64%) have been using the service for one year while the remaining 36% for less than one year. The service was being implemented at the initial stages by most of the respondents.

Technological characteristics affecting the uptake and usage of cross-network mobile money transfer service
Further, this study considers the following to affect the uptake and usage of cross-network mobile money transfer service: Perceived advantage, network complexity, network compatibility, and network security.

Table 1 Technological characteristics and adoption of cross-network mobile money transfer service

Technological factors	MEAN	Std. deviation
Perceived advantage	3.964	0.689
Network complexity	3.590	0.750
Network compatibility	3.843	0.690
Network security	3.506	0.967

Source: Field data (2020)

Technological characteristics affected the adoption of cross-network mobile money transfer services and products. The perceived advantage of cross-network has a high effect as indicated by an average rate of 3.964 and a standard deviation of 0.689. Traders further indicated that network complexity had a considerably high influence on their decision to accept and make use of the service with a mean of 3.590 and a standard deviation of 0.750. Network compatibility also influenced the decision to adopt the service with a mean of 3.843 and a standard deviation of 0.690. Respondents also strongly agreed that network Security issues influenced their decision to adopt the service as revealed by a mean of 3. 506 and a standard deviation of 0.967.

Technological characteristics had a big and significant influence on the decision of the trader to accept cross-network mobile money transfer as revealed by the above results. These findings were in agreement with studies by Wambua (2015) and Schmidthuber et.al (2018), which found out that technological factor, had a positive effect on the uptake and usage of mobile money facilities by customers.

VI. Conclusion And Recommendations
This study sought to establish technological characteristics influencing the uptake and implementation of cross-network mobile money transfer services. The perceived advantage strongly influenced the decision to use the service as shown by a mean of 3.964. Traders also indicated that network complexity had a considerably significant contribution to the adoption decision of the services as shown by a mean of 3.590. Network compatibility influenced the decision to adopt the service with a mean of 3.843. Participants agreed that network Security influenced their decision to adopt the service as revealed by a mean of 3. 506. This is an indication that the technological features of innovations have a very significant influence on the adoption decision of the target market.

Based on the results, this study confirms that the adoption rate of cross-network mobile money transfer services by SMEs in Murang' a municipality is low (36%). This means that the service has not been widely accepted in Kenya at large. The main reasons for the low adoption were unawareness, lack of agent

interoperability (21%), the limited presence of rival mobile money providers (8%), network challenges (16%), trust, and loyalty in M-Pesa (18%) and (17%) respectively.

Due to the low rate of adoption of cross-network mobile money service in Murang'a municipality, the study recommends to policymakers to introduce interoperability at agent level to attract more customers because consumers will adopt the service if they can conduct cash withdrawals or deposits at any agent shop regardless of the network operators. This is confirmed by a study done by Bourreau & Valetti (2015) on competition and interoperability of mobile money which established that there is a need for network providers to introduce agent level interoperability to ensure widespread usage of mobile money within the population because when there are no such platforms transactions are not very convenient conducted.

There is also a need to conduct aggressive marketing and campaign to increase awareness in the market. A study by Mulwa & Ndati (2013) on marketing and M-Pesa adoption established that marketing by Safaricom about the existence of M-Pesa created widespread awareness and this gave the organization and advantage over the other network providers. This clearly shows that if aggressive marketing is done, cross-network mobile money transfer services will be widely adopted in Kenya.

The study also recommends that other mobile money providers work and improve on network connectivity challenges and increase their presence across the country to increase their competition against M-Pesa. This recommendation is supported by study findings by Dube & Gumbo (2016) who established that poor network connectivity led to low adoption of information technologies. There is a need to ensure network providers work on network challenges not to hinder the adoption decision by customers.

Finally, the study recommends that service providers develop products' having suitable technological characteristics. The innovation should be free of network challenges, should be compatible, complex, and secure, and should guarantee benefits to users. This is because before the potential customers adopt an innovation, they will first conduct thorough scrutiny on its features to decide whether or not to adopt the service. There is also a need to introduce technological features that will ensure lower transaction costs to attract more customers.

The SMEs which had adopted the service should continue using it to accrue more benefits of its usage. Traders who had not utilized cross-network mobile money transfer services should adopt it so that they may conduct their trading activities better. This is because trades who had adopted the service reported increased effectiveness and efficiency in conducting business activities.

Suggestions for Further Areas of Studies

This study found out that the adoption rate of cross-network mobile money transfer services is still very low (36%) in Murang'a Municipality. Therefore, there is a need to conduct further follow-up studies on the same topic in later years to assess the extent of adoption.

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