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THE RELATIONSHIP BETWEEN MOBILE MONEY AND FINANCIAL INCLUSION IN
GHANA: THE MODERATING ROLE OF SOCIAL NETWORKS

By

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MBA FINANCE

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DECLARATION

I hereby declare that this submission is my own work towards the award of the MBA and that, to the best of my knowledge, it contains no material previously by another person or any material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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DEDICATION

To my spouse; Mrs Mary Effah Otu for her support and motivation. Thank you for believing in me. God richly bless you.

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I am grateful to the Almighty God for his grace and mercy throughout this MBA journey. I thank my supervisor Dr Mireku of KNUST for his patience and guidance. Also, Mary Effah Otu for her massive support, and Josemay Nana Akua Otu.



ABSTRACT

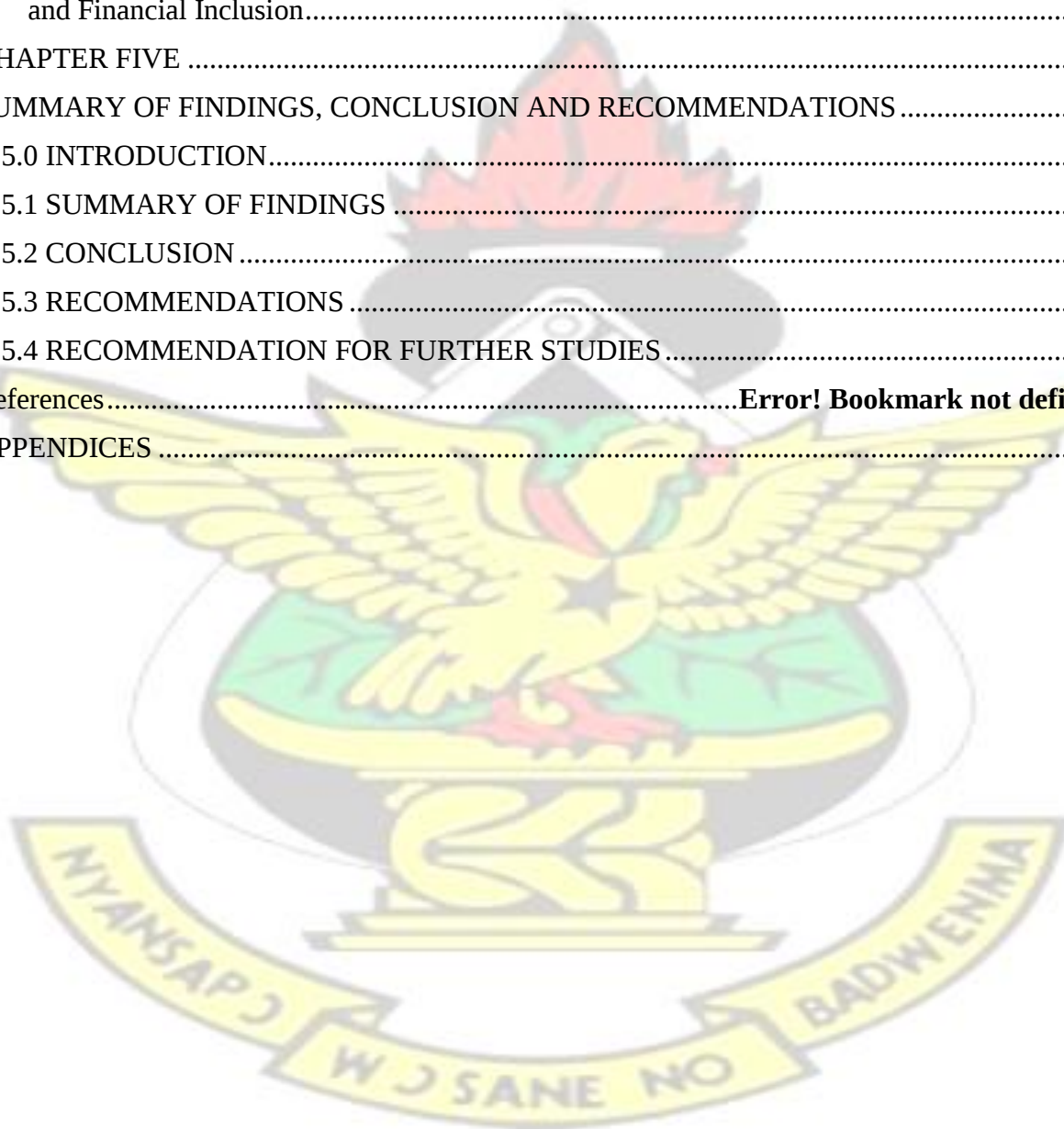
The goal of this study is to explore the role of social networks in the relation between mobile money and financial inclusion in Ghana. The analysis uses the descriptive research method to achieve the above objective. The population for the study was individual mobile money users living in Kumasi Metropolis. The study uses a sample of 117 respondents, two main sampling techniques were employed for this study. First the convenience sampling technique was used to identify individuals who have registered for any mobile money service per the criteria of the research. Secondly, after identifying these persons, the research instruments were delivered at random to avoid bias and ensure every user has an equal chance of being selected. The questionnaire was the primary method for the collection of data. The data collected was processed with Statistical Product for Service Solutions (SPSS) version 21. The data is then analysed for cross-tabulation, frequency counts and percentages. The Multiple Linear Regression Analysis was used in order to achieve the objectives outlined in this research, which is to determine the effect of mobile money on financial inclusion and the role of social networks. Based on the findings of the study, it can be concluded that mobile money usage helps to improve the financial inclusion of the country while social networks also contribute to improving financial inclusion. However, the interaction between social network and mobile money reduces the financial inclusion rates of the country. Based on the above, the study among other factors recommended that that government and policy makers should consider implementing policies to improve the reach of mobile money among the citizens of the country.

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LIST OF ABBREVIATIONS

MM.....	Mobile Money
FI.....	Financial Inclusion
SN.....	Social Network



CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

Overall, there is no bank account for 1.7 billion adults globally (Demirguc-Kunt, Klapper, Singer, Ansar & Hess 2018). In low-income countries in which the figure concerns, 77 per cent of the adult population, these financially excluded individuals are especially clustered (World Bank 2012). This is problematic because financial development is of major importance for smoothing income trends, obtaining finance for start-up companies, protecting against natural or man-made disasters and saving for events in family and personal life. There is a strong awareness in the policy circles of the value of an integrated financial system and, in many countries, financial inclusion has recently become a pressing issue. There are many benefits of an inclusive financial system. It makes it easier to distribute productive resources effectively and therefore can eventually reduce capital costs. Furthermore, the daily management of finances can greatly enhance access to relevant financial services. An inclusive financial system can help to reduce the growth of often exploitative non-formal credit sources (like money lenders). An all-inclusive financial system therefore improves efficiency and welfare through safe, secure savings practices and a range of efficient financial services. Researchers including Ardic, Heimann and Mylenko (2011) and Beck, Levine and Levkov (2010) show that price and non-pricing hurdles, such as high costs of payments and minimum cash flows, lack of physical access, long lending processing time and strict documentation and collateral requirements have resulted in the world's voluntary exclusion of the population.

In comparison, financial integration promoters such as the World Bank and the UNCDF have argued that the use of digital finance through mobile money will lead to increased access for rural communities in developing countries to financial services that are affordable, secure, open, adaptable and available. Extensive empirical evidence suggests, in particular in fostering financial inclusion, that Mobile money may potentially be used as an instrument for economic development in Africa (see for example Aker & Mbiti in 2010). For starters, Bongomin et al . (2018) indicated that mobile money apps would help boost financial inclusion in areas such as remittances, investments and access to finance. Lashitew et al . (2019) have welcomed this proof that mobile money technologies may be used to increase the degree of financial inclusion among African countries. Okello et al . (2018) showed that the usage of mobile money and social networks had a strong and important effect on financial inclusion in rural Africa. Donner & Tellez (2008) noted that the mobile telephone revolt has transformed many lives, in particular in rural poor households, which not only provides communication but also access to essential financial services via telephone money transfer and storage (Demombynes & Thegeya, 2012). In another report, Lawack (2012) has suggested that the usage of mobile money in South Africa has helped to boost financial participation and financial fairness among South Africans. Alexadre and Eisenhart (2012) also find that mobile money is speeding up the growth of financial inclusion and financial integrity account.

Nevertheless, the number of financial excluded in the developing economies is still increasing despite these studies. The Committee of Rangarajan (2008) argues that the use of appropriate technology, such as low operating mobile money, can promote the provision of financial services in remote areas. Bruns and Burgess (2012) supports this by noting that leveraging technology creates channels across branch networks that help to extend banking services to unbanked services,

similar to branch-spreading services. It is suggested by Riquelme and Rios (2010) that the extent to which customers use mobile technologies as transaction media is affected by their families, family and friends' opinion. This enables mobile phone users, like the poor, to obtain useful information and knowledge concerning the use of mobile money technology through their close family networking sites, existing open networking sites for friends and associates. Sadly, the literature and financial inclusion theory in Ghana appear sparse. Slade, Dwivedi, Piercy and Williams (2015) therefore postulate that social networks serve as a source of information for people who are trying all new technologies and information systems (see also Yang, Lu, Gupta, Cao and Zhang, 2012). Increased credibility for mobile service usage is ensured through sharing of valuable information among members in social Networks. Granovetter (1983) argues that the nodes and links, which are part of a network between economic stakeholders, allow them better access to current opportunities and resources information and thinking.

Despite these ascertions however, the existing literature in Ghana focuses on only the extent to which mobile money services can improve financial inclusion and not the extent to which firms can leverage on social networks to improve the adoption of mobile money services thereby improving financial inclusion. Among these studies, Boateng (2016) found that mobile money services offered by mobile networks and banks has improved the rate of saving leading to improved financial inclusion among the selected sample between 2014 to 2017. Aker and Wilson (2013) also studied this phenomenon in the Northern part of Ghana and found that their access to and usage of mobile money and this technology could be used to improve households' access to financial services. In their study, Narteh et al. (2017) also said that providers must ensure that their mobile application services are functional easily, meet the specific needs of specific customers,

protect consumer accounts and be affordable, and thus have a positive effect on customer adoption. This study therefore intends to fill this gap in research by adopting the model of Bongomin et al. (2018) who studied how social networks can improve the mobile money financial inclusion nexus and studying this phenomenon among the Ghanaian users.

1.1 PROBLEM STATEMENT

The inability of individuals to access financial services has different effects on the person's ability to invest, save and respond to economic shock shocks (Aker & Wilson, 2013). In the instance where financial inclusion is less, economic growth is less. Comparing Africa to other parts of the world, the continent has been deemed to have the lowest levels of financial inclusion. Only 25% of the adult population own account in a formal financial institution compared with 39% in Latin America and the Caribbean, and 89% in high income countries (Demirguc-Kunt & Klapper, 2013). Due to this, various governments within the African continent have adopted financial inclusion as a way to enhance the growth of the economy and develop their countries. To ensure the poor also have access to financial services, most studies and researchers have cited mobile money as a possible means to achieve this. Previous studies such as Jack and Suri (2014), Kikulwe, Fischer and Qaim(2014), Aker, Bumnijel, McClellands and Tierney (2011), Mbiti and Weil (2011), Jonathan & Camilo (2008), Maurer (2008), Jacker and Wright (2012), and Johnson and Nino-Zarazua (2011) show that the use of mobile money can foster access to financial inclusion.

There have been efforts by both the government and its partners to improve financial inclusion such as the introduction of the mobile money interoperability launched by Dr. Mahamudu Bawumia in 2018. Despite these efforts and developments, there is limited study on the extent to

which mobile money services have impacted on the financial inclusion within the country. The few studies show however the level of financial inclusion still remains low among Ghanaians where majority of the population remains unbanked and cannot access basic financial services such as access to finance and savings (Boateng, 2018; Aker and Wilson, 2013; Narteh and Abdulai, 2017). Social network has been recognised as another factor that can affect the extent to which mobile money can improve financial inclusion (Bongomin et al., 2018) however, there exists no studies in Ghana that examines this phenomenon. Thus, the purpose of this study is to test the moderating effect of social networks in the relationship between mobile money usage and financial inclusion in Ghana by providing evidence from Kumasi Metropolis.

1.2 OBJECTIVES OF THE STUDY

The overall objective of this study is to examine the moderating role of social networks in the relationship between mobile money and financial inclusion in Ghana. In order to achieve this, the following objectives would be outlined:

1. To evaluate the effect mobile money on financial inclusion in Ghana.
2. To analyze the effect of social networks on financial inclusion Ghana.
3. To examine the moderating role of social networks in the relationship between mobile money and financial inclusion.

1.3 RESEARCH QUESTIONS OR HYPOTHESES

In order to achieve the above, the following research questions were asked:

1. What is the effect mobile money on financial inclusion in Ghana?
2. What is the effect of social networks on financial inclusion in Ghana?

3. What is the moderating role of social networks in the relationship between mobile money and financial inclusion?

1.4 SIGNIFICANCE OF THE STUDY

The goal of this analysis is to explore the moderating function of social networks in the relationship between mobile money and financial inclusion, and the results of this study would therefore be of interest to academics, practitioners and policy makers. It will add to the comprehensive work on financial inclusion and, in particular, the effect of mobile money on financial inclusion in Ghana, providing practical implications of the relationship between the variables. This work appears to be one of the few studies that explore the connection between mobile money and financial inclusion in Ghana. Second, the state, financial institutions and mobile money service providers, in particular Telecoms, have a stake in implementing the results of the study in the creation of modules on how to build on the increase in mobile money patronage to affect financial inclusion. It will, to a significant degree, allow Ghana's government to insure that 75% of Ghanaians become financially sustainable by 2023. In turn, the results of this report would be valuable for policy-making on sustainable growth and financial inclusion in Ghana, through international agencies such as the World Bank, the International Monetary Fund and the African Development Bank. The findings of the study would provide telecommunication networks with an overview into how their services affects the financial sector of the country and individuals that patronize this service. Finally, this research would add to the literature on social networks and its role in improving financial inclusion through mobile money in Ghana.

1.5 BRIEF METHODOLOGY

The goal of this study is to explore the role of social networks in the relation between mobile money and financial inclusion in Ghana. The analysis uses the descriptive research method to achieve the above objective. The population for the study was individual mobile money users living in Kumasi Metropolis. The study uses a sample of 117 respondents, two main sampling techniques were employed for this study. First the convenience sampling technique was used to identify individuals who have registered for any mobile money service per the criteria of the research. Secondly, after identifying these persons, the research instruments were delivered at random to avoid bias and ensure every user has an equal chance of being selected. The questionnaire was the primary method for the collection of data. The data collected was processed with Statistical Product for Service Solutions (SPSS) version 21. The data is then analysed for cross-tabulation, frequency counts and percentages. The Multiple Linear Regression Analysis was used in order to achieve the objectives outlined in this research, which is to determine the effect of mobile money on financial inclusion and the role of social networks.

1.6 SCOPE AND LIMITATIONS

The overall objective of this study is to examine the moderating role of social networks in the relationship between mobile money and financial inclusion in Ghana. For this reason, the study's scope revolves around users of mobile money services and also residents in Kumasi Metropolis. The study relies on the use of primary data as the main source of data for this study unlike other studies which have relied mostly on secondary data. Finally, the research is scoped towards the use of only registered customers of the three telecommunication networks that provide mobile money services. The study relies solely on quantitative data and the findings are based specifically

on cross-sectional research design, thus, ignoring qualitative data and longitudinal survey design. The study is further limited to mobile money users in Kumasi Metropolis and not mobile money users across the entire country.

1.7 ORGANISATION OF THE STUDY

Five main chapters are organized in the research. In Chapter One, which is the introduction, the study focuses on the background, the problem to be researched, the objectives, the research questions, the significance, the limitations and the way the study is organised. Chapter Two, which is the Review of Related Literature, explores the concepts used in the study. It also explores theories underpinning the relationship between the variables used in the study. Chapter Three, Methodology describes the research design and strategies adopted in carrying out the research. It identifies the population, the study population and how the sample was drawn. It explains how data would be collected ensuring validity and reliability and also how this data would be analysed. Chapter Four, Results and discussions, presents the data obtained by the researcher and discusses the results of the study in the light of results obtained in other similar studies. Chapter Five, Summary, Conclusions and Recommendations, concludes the study by summarizing, drawing conclusions and making recommendations in the light of results obtained from the analysis of the data.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reviews the related literature on this research topic. The chapter is organised in three main sections; section 2.1 focuses on conceptual literature, it focuses on important concepts of the study, section 2.2 defines the theories used in this study, and 2.3 reviews empirical literature done by other researchers on the research topic. Finally, section 2.4 presents the conceptual framework and arguments of the researcher on the roles of the various variables.

2.1 CONCEPTUAL REVIEW

2.1.1 The Concept Of Financial Inclusion

The goal of financial integration is to allow non banking people to access official financial systems, such as deposits , loans and transfers to credit and insurance institutions. Financial inclusion does not mean that everyone can use standardized financial structures or that providers disregard risks and extra costs in terms of service planning. Intentional exclusion and adverse risk return features on the other hand prohibiting the use, regardless of unregulated access, of one or more services in a household or a small business. In fact, these effects do not allow government intervention. The action plan would relatively address consumer disappointments and non-market barriers, as well as exposure to a variety of finance services (Demirguc-Kunt et al., 2018). Financial inclusion would improve everyone's access to finance markets , particularly the less favored ones, by ensuring that a competitive financial system is in place which is an element of economic growth.

2.1.1.1 Definition of Financial Inclusion

The meaning of the term has been changed by prevailing financial inclusion research. There are analyzes which define financial inclusion in financial exclusion links, translated into a broader social exclusion framework. For instance, Leyshon (1995) defines it as the exclusion to official financing systems of certain entities and individuals, while Sinclair (2001) points out that it has no access to the financial services required in an appropriate system. Alternatively the financial inclusion was illustrated by Amidžić, Massara and Mialou (2014), and Sarma (2008). Amidžić, Massara and Mialou (2014) describe financial inclusion as an economic activity that doesn't refuse access to vital financial services to citizens and companies. A robust finance system has many drawbacks. A fair financial structure facilitates the efficient management of profitable funds and can reduce money costs. Moreover, improvement on the regular management of finances may be part of access to sufficient financial services.

The role of the financial sector in politics has been identified and financial integration in a wide range of countries recently proved to be a policy tool. The financial regulators, the governments and the banking sector have provided opportunities for financial inclusion. Political milestones have been reached in several countries. The Community Reinvestment Act (1997) in the United States of America requires banks to have cash during their operations and bans them from targeting only the poorest regions. The Exclusion Law (1998) protects a citizens' right to keep a bank account all around France. In the UK, a task force to curb advancement on financial inclusion was established in 2005.

Financial inclusion is defined as the share of people and enterprises who access financial services in the Global Financial Report 2014 of the World Bank. In the analysis, there is no equivalent absence of use. Others may receive financial services without, however, allowing their use on the basis of quality, agreed barriers, market weaknesses and religious values and cultural traditions (World Bank, 2014). (World Bank , 2014). This study adopts the principle of Sarma (2008) as a framework for prompt access, efficiency and use of financial capital for all economic participants. The term Sarma (2008) is the principle of financial inclusion on a number of scales that can be discussed separately and includes openness, affordability and use.

Financial exclusion work has a well-defined environment for the broader issue of the social isolation of some groups of citizens from the official national banking system. Leyshon (1995) defines banking exclusion as any mechanism structured to prohibit the entry of individuals , social groups and organisations. Carbo and others. (2005) describe financial exclusion as a result, in large part, of difficulties in accessing formal financial services by some individuals or groups. Nonetheless, Conroy (2005) seeks to characterize financial exclusion as a phenomenon which does not allow poor and disadvantaged social groups to access proper financial services in their countries of origin. Mohan (2006) notes further that the financial exclusion is a lack of accepted financial goods and services from approved suppliers, from other sections of society, which are acceptable, inexpensive, equal and insignificant. The World Bank (2014) describes intentional exclusion as a condition for the non-utilization of financial resources by a part of society or by companies or businesses for reasons of culture and religion. In the other side, unintended omission happens because people suffer from low income and have a high risk image or because of limited business weaknesses and imperfections.

2.1.1.2 Benefits of Financial Inclusion

In the political circles (Sarma, 2008), the importance of an inclusive financial system has been widely recognized and financial inclusion was adopted as a policy and a major concern in many countries (Sarma, 2008). Recognizing the critical role of finance as one of the key drivers for growth and development has established the importance of a fair financial structure. Along with this recognition of the fact that growth can not be sustainable on its own, economists, public policy-makers and scholars have become involved in financial integration. A robust financial framework allows for efficient asset distribution, which could minimize capital costs (Sarma, 2008). Financial inclusion gives an opportunity to bring the vulnerable's assets in and invest them on the official financial intermediary scheme.

The development of insensitive loan outlets such as money lenders, which is repeatedly shown to be unfair, will also slow down financial integration (Sarma, 2008). Financial inclusion helps those with unregulated money lenders' strength. The informal sector is sometimes used to benefit those removed from the formal banking system and is often payable at extremely high rates. As a result, the financial left will not be exposed to new credit incentives. A cruel loop of high costs financing is thus common if an individual lends a large part of his / her income to money lenders at high expenses.

Substantial change in day-to-day financial management will occur in the formal financial system (Sarma, 2008). The lack of access to bank accounts may indicate a gap between debt and wealth in market areas that include cashless systems, such as Western Europe and North America, as well as in developed countries. People without accounts have problems with the performance of their

individual duties, for example bill payments. People without a bank account for transactions rely on an unregulated exchange which leaving such people susceptible to fraud and confusion. This is supported by several empirical findings which show a strong position in favor of increased and unequal development and reduction of the income inequality (Beck & Demirguc-Kunt, 2007; Honohan, 2008). This is also strongly supported by the results of a number of empirical measures. This is because a strong financial framework enables marginalized people to participate more efficiently in their individual economic development in the formal financial system.

2.1.1.3 Dimensions of financial inclusion

The financial inclusion initiative had a major impact on policy-makers like the World Bank, the Advisory Committee on Vulnerable Assistance (CGAP), Asian Development Bank, African Development Bank, IMF and the governments of several African countries from Sub-Saharan Africa, to develop an integrated financial sector. Identifying instruments that understand the soft presence, use and competitive advantage of financial services in the economy is the key characteristic for assessing the degree of financial inclusion. In general, the level of current inclusiveness in the respective countries is very important for policymakers because strategies and initiatives to remove barriers to financial inclusion must be formulated. Three main areas of financial inclusion that serve on the progress of data collection were identified in the Financial Inclusive Data Working Group (FIDWG) of the Alliance for Financial Inclusion (AFI). It is control, use and cost. The Community documents that embrace a broad and multidimensional financial inclusion concept are necessary in order to modify the idea that inclusion can eventually be achieved through the establishment of a suitable point of access.

Financial inclusion is a broad range of categories in which without being constrained metrics can be graded. It clearly provides policymakers with a structure to devise rigorous methods of assessment that represent the multilateral characteristics of financial inclusion. Under that scheme, decision-makers will also be responsible for structuring a series of metrics applicable to the needs of their individual countries and the quantity of properties. Adequate descriptions of the access, use and efficiency of Financial Inclusion aspects include the fourth dimension of corporate and household impact are given by the World Bank Report (2012). A detailed discussion is stated below:

Access: The chance to make use of official company utter financial resources and packages. Intuition and consideration of possible obstacles to the access to any travel and use of a bank account such as charges and the proximity of bank service points (for example branches and ATMs) that require acceptance of accommodation severity. The measurement of the sum of accounts opened by financial companies and approximating the percentage of persons with an account will make an accurate and easy-into-access method.

Quality: Adapting the financial service or commodity to the consumer's agreed needs. Value requires the value of consumers who use the experience and the way those products are currently available to them in the administration. Within the financial service industry and end user, the degree of reasonable quality is accentuated to the metrics, features and assimilation of the relationship.

Usage: In addition to the basic implementation of banks, the use and application centers are additionally dedicated to the continuity and assimilation of financial products. Therefore, to define the query, the accuracy, frequency and time limit data must also be given. It is important to show the details of users , i.e. the evidence collected from the demand-side survey, in order to evaluate their use.

Impact: Variations in consumer barometer life, suitable for use with a financial instrument or product, require astringent procedural tests for survey design. Such advice can be obtained at the demand side, that is at the individual level or the household, on the supply side, or at the level of financial institutions or both. Only from the supply side the advice can be accessed.

2.1.2 Mobile Money

The use of cell phones has made it possible to offer financial services to the community without connection to a register. This is often referred to as mobile currency, mobile payments or mobile banking. Shaik & Karjaluo (2015) analyzed the most popular terminology used to describe banking management using a mobile app. Experts use various terminology to apply to mobile banking, like m-banking; Amin (2006) referred to as branchless banking; Donner (2008) referred to as mpayments, m-transfers or m-finance; and Amin (2006) referred to as pocket banking. In most meanings, the word 'mobile' remains consistent. Pay is defined as a charge without touch by a cell phone. The sim card acts as a way of distinguishing the bulk of the people in the absence of a national Identification. The usage of the sim card allows consumer connectivity for telecommunications firms. Nonetheless, it's also a huge problem to hold the client aware of money laundering laws and acceptable rates (Rao, 2013). To prevent money laundering problems, you

must realize that your company will make several low value deposits in separate anonymous accounts to escape the paying of taxes on those accounts which are classified as anonymous. There are a range of numerous financial resources accessible from a cell phone, wearable or not, varying from bill payments or peer payments to pair transfers and transferring transfers to other facilities such as PIN changes and ATMs found. Both companies will not sell any of their offerings. More specifically, not all m-bank facilities are offered by all providers.

Mobile money has modernized access to financial services: cheaper, quicker, more available, and is seen as an essential resource for financial inclusion and thus poverty reduction. Mobile money use across the world is specific on the basis of various variables. Such considerations involve the legislative system for the region, developments and economic circumstances in that field. Consumer preferences and knowledge are main factors and determinants of the acceptance of mobile currency. The widespread usage of wireless networks helps telephone providers to expand their coverage to a larger regional region which is not served by conventional financial institutions.

2.1.2.1 Overview of Mobile Money in Ghana

In Ghana, the implementation and acceptance of mobile money has taken a massive turn, which has seen its use expand in a brief span of time after the launch of the (MTN) in 2009 (Zetterli, 2012). Ghana has witnessed an spike in cell phone usage in recent years. Approximately 11 million cell phone subscribers (Aker & Wilson, 2013) are reportedly projected from just over 1% to 55% between 1999 and 2000. The growth in the usage of mobile money is partly attributed to this rise in the use of cell phones inside the world. Households in Ghana have always focused on informal methods of moving capital. Sources of these informal approaches include bus delivery services

and person-to - person texting (Kikulwe, Fischer, & Qaim, 2014). This modes of transactions have seen many problems, including an spike in the possibility of keeping or dealing in cash leading to armed robbery , burglary and several more (Donovan, 2012). Mobile banking has helped to solve these problems as it is considered to be cheaper and quicker to transfer money (Davidson & Penicaud, 2011). The implementation and acceptance of mobile money has been gradual and has required a significant turnaround, culminating in a substantial rise in the overall amount of subscribers over time (Aker & Wilson, 2013).

2.1.3 Social Networks And Social Media

The definition of social networking has still not reached a consensus, according to Kaplan and Haenlein (2010) and Van and Coursaris (2013). Comm (2010) says that a number of researchers describe social media as "public knowledge." Strauss and Frost (2009) describe "online networking resources and platforms that allow internet users to collaborate on the content, exchange perspectives and experiences and to connect for business and pleasure." The CCN (2010) is "a cloud based technology community operating on the theoretical and technological basis of Web 2.0, enabling user produced content to be created and shared," Kaplan and Haenlein (2010) claim. "We also define social networking as generating and shared information through online social networking platforms. Social networking also involves social networking as a cloud based technology community. The social media definition includes well-known platforms, according to Centeno, Wainer, Misuraca, Punie and Broster (2009), that enables users to engage in social activities like photo and video-sharing , social network and blogging. Social networking is a set of technological developments which can lead to low-cost content, interoperability, and on-line user usability (Berthon, Plangger & Shapiro, 2012). Social networking is 'a collection of connectivity-

friendly technologies that promote interaction and cocreation, information exchange and dissemination between [stakeholder] companies and their networked communities' (Larson and Watson 2011). Social networking is an international network.

Three big distinctions exist between social networking and computer-mediated conventional interactions. Focus on mobile transaction migration to online sites, migration to build customer trust from the client and the shift from business to end-user power. There is no substantial difference between different social media types according to Kaplan and Haenlein (2010), but the differentiation between social networking sites like Facebook and websites designed for people like LinkedIn varies greatly. These are meant to disseminate photos such as Twitter, photo sharing sites such as the flickr sites, shared media, etc. Even platforms like Facebook help users in microblogging. Blogs for subscribers are now available online. Social media's normal function is the potential to offer individuals an opportunity to have social connections that have not existed previously (Fischer and Reuber, 2011).

2.1.3.1 Kinds of Social Networking Platforms

Digital technology makes contact channels omnipresent and creates more interaction between human beings. In recent times there have been various types of websites that have different structure and demographics, but they are both important to capture the public's feelings in real time (Kietzmann, Hermken, McCarth & Silvestre, 2011). Four social networking sites were the subject of the literature review. Facebook, e-mail, Instagram and YouTube are all included.

Twitter

Twitter has been established globally as an online and microblogging network (Bruns & Burgess, 2012; Facebook, Music, Xiaodan, Finin, & Tseng, 2007). Twitter is used as an information-sharing platform and as a social network, offering real-time news on many subjects. In addition, Twitter has increased the resources needed for academic work in recent years, thereby attracting more interest. On a day that made Twitter the largest micro-blogger platform since its launch in October 2006, Twitter has recently seen 500 millions of tweets. Latest global statistics indicate that some 22% of internet users use Twitter as well (GlobalWebindex, 2014). Twitter has five features including tweets, hashtags, @-messages and mutual updates.

A customer tweets and even follows posts of other customers. This establishes a massive Twitter network of direct fans and ties (Marwick and Boyd, 2011). This system is distinct from other social networking sites, including undirected versions of Facebook. Tweet users can send tweets to other users through @-mail, or annotated # hashtag in the process known as retweeting. Tweets may also provide content on blogs, such as press releases, news reports or reviews. Everyday conversations, news reporting, exchanges of information are main sources of interactions for tweeter users (Java, Song, Finin and Tseng 2007). Facebook has shifted from personal knowledge sharing only to information transmission (Risse, Peters, Senelart and Maynard, 2014).

Facebook

The social networking site is considered to be the most popular on the Facebook page, making it easy for people to share data and photographs in an structured environment (Eskisu, Hosoglu and Rasmussen, 2017). Facebook is known globally and has 1,09 billion members who use the social

networking site daily. Facebook gives users the perfect place to test assumptions on social behaviour. Facebook-used apps have been developed by researchers to be useful in online networking and relationship building. This includes the number of users on Facebooks (Vogel, Rose, Roberts and Ecks, 2014), the frequency and type of messages (Ryan and Xenos, 2011), and the number of Facebook contacts (Lee, Moore, Park and Parks, 2012) privacy settings (Smith, Méndez and White, 2014). Karal and Kokoç (2010) suggests that individuals are using Facebook for recognition purposes (learning others and other people who remember you), for social networking (for example preserving friendship) and for learning (acquiring up-to - date data or suggestions of a specific nature).

Instagram

Instagram has been designed and designed to communicate life experiences in real time by mobile device applications. With over 400 million active users and almost 80 million images posted every day in the US, Instagram is America's largest social network site (Pew, 2015). Instagram helps community users to take pictures and make changes through the use of technology. Users of Instagram can create or "allow" photos of other users. Instagram has a special feature that lets users create images of the highest quality (Lee, Lee, Moon and Sung 2015). The goal behind Instagram's creation is to allow people to share their lives with photos. Studies has found that the use of the Instagram App (Geurin-Eagleman & Burch, 2016; Pittman & Reich, 2016; Ridgway & Clayton, 2016) is largely focused on interactions with individuals. Pittman and Reich (2016) initially proposed that a more positive attitude for Instagram decreases the risk of lonely being. The social media play an significant part in Instagram use, as do the reasons why Facebook and Twitter are

used (Lee et al., 2015). Lee et al, in other words (2015) say that it is the creation and preservation of social ties that is the key reason behind Instagram use.

The use of Instagram in addition to the key argument for social networks is based on self-expression. Instagram offers people an ability to talk rather than just using ordinary texts (Marwick, 2015). The Instagram user has greater driving power, including self-presentation and capacity to be heard by others, according to Ridgway and Clayton (2016). The creation of photographs with filters and the user's using 'selfies' is a complex means by which this can be achieved. The happiness of an individual's image relates positively to Instagram's posting of selfie.

YouTube

YouTube offers an atmosphere where generated content follows the social inclusion concept, allowing video scoring and voting in order for its exposure to be maximized (Kaplan and Haenlein , 2010). YouTube has been an influence on how people interact in society in this new century. YouTube is one of the most widely used video pages. You Tube provides a forum for users to create and disseminate content that they develop to improve business opportunities (Cha et al., 2007). Shao (2009) stipulates that social networking material (e.g. YouTube) helps users to learn, entertain and help users to regulate moods. YouTube offers a variety of social media features (Benevenuto, Duarte, Rogrigues, Ross, and Almeida 2008), which allow viewers to send video feedback, support or dislike videos to or upload videos to some pages, including Facebook and Twitter (Benevenuto et al . 2008; Kaplan and Haenlein , 2010; Lange, 2007). In particular, the commentary on YouTube videos plays an important role in user participation and group networking.

2.2 THEORIES

2.2.1 Social Resource Theory

The theory of social capital is focused on the systemic forces of social networks. This hypothesis suggests that social capital, in the context of money, socio-economic status, influence, etc., are rooted in a person's social network and are assumed to have a beneficial effect on access to knowledge (Song & Chang, 2012). Lin (1998) noticed that network participants' knowledge is directly related to the level of health information requests in the U.S. Lai (1998) has observed that networking tools had a significant effect on seeking a career for people in the U.S. Households with more links to network partners with rich socio-economic wealth are more involved in the quest for financial knowledge. Song and Chang (2012) established the factors by which social capital affect the extent of the quest for and variety of health knowledge. On the basis of this example, two of the processes can also be extended to the hunt for financial details: improved access to financial details and strengthened search capabilities. As a consequence, if linked to network participants of a higher socio-economic standing, people are more likely to be subjected to financial details and goods from their network members that may encourage them to utilize their respective items.

2.2.2 Townsend Model Of Financial Deepening And Growth

Financial depth and development are linked together, and how that will lead to Ghana 's success over time in terms of the production of the monetized domestic product. Shaw (1973), McKinnon (1973) and King and Levine (1993) provided early scientific contributions based on development and financial structure. These bodies of scientific research have demonstrated that financial depth is at least an important part of the development cycle and may be causal; that is, repressed financial

structures are counterproductive to economic growth. For example, the models cost the structured financial structure for a flat-rate swap or intermediation and the residual costs for future transactions. Other theoretical contributors including Bencivenga and Smith's (1991) have exogenously enabled and disengaged intermediation with an external influence that increases intermediation development.

Acemoglu and Zilibotti (1997) also disclosed the correlation between capital accumulation and enhanced intermediation and that strengthened biodiversity, with higher wealth rates, decreases growth volatility. Furthermore, significant contributions to development and inequalities are well established. Forbes (2000) has reported that high (initial) inequality is correlated in earlier regression studies with low subsequent long-term development, but has found the other hand to be the medium term relationship. The well-known theoretic insights are more inspired by the claim of others that development will lead to increasing and ultimately decreased inequality: Banerjee and Newman (1993) and Lloyd-Ellis and Bernhardt (2000).

2.3 EMPIRICAL REVIEW

2.3.1 Effect Of Mobile Money On Financial Inclusion

The trends of mobile money use in developed and industrialized countries are analyzed in Peruta (2018). Mobile money is a prepaid application that gives users removed from the banking network access to low-cost financial services. This aims at solving the problems of joining the financial sector and of not making a financial network available. Based on the macroeconomic comparative research and case studies of experts in the region, this report is focused on the alternative technique of cluster analysis and takes a specific macroeconomic approach to adopting mobile cash adoption

in 2011-2014. They use the latest technology platforms to identify variations between groups of countries that use mobile money in a similar way. They analyzed how mobile money services are the best accessible in countries that lack exposure to structured banking systems. The findings affirm the predictions in the literature on development proliferation and reduce mobile money's capacity as a way to avoid bank exclusion.

Lashitew et al . (2019) stated that progress in mobile money is increasingly growing to cover trillions of non-banked communities of developed world. However, acceptance rates vary greatly across countries, and innovation performance in countries is often drastically different. This report uses a hybrid analysis approach that incorporates cross-country details regarding adopt levels with an in-depth case study on a recent breakthrough in mobile money to explain the variables that influence the growth with distribution of mobile money services. Quantitative study of the pace of acceptance across countries reveals the differing position of social and economic influences in the implementation and use of mobile money technologies. In order to gain an understanding of innovation creation and diffusion, researchers are carrying out a detailed analysis of M-Pesa in Kenya, one of the most popular mobile money innovations in the world. Resuching using an approach to the realistic innovation framework illustrates the lead company's key role in directing the innovation cycle and in fostering financial inclusion in a reactive regulatory environment. The findings also show how the revolutionary solutions for addressing social challenges would be influenced by the dynamics of power and by the involvement of key players within the innovation system.

Abiona and Koppensteiner (2020) predict the effect of mobile money on demand, deprivation and human capital expenditure in Tanzania. They harness the exponential growth of the mobile money agent network between 2010 and 2012 and use it in a differential-in-difference system along with the idiosyncratic shocks of rainfall variability across time and through distance. We consider that adopting households are capable of smoothing consumption through shock times and sustaining their expenditure in human resources. The reports on the effective function of mobile money in intergenerational diffusion of deprivation support the research on the utilization of children's time and labor force involvement. Sosu (2017) found out that there is fairly close link between financial inclusion and mobile money in his research, "Mobile money in Ghana: financial inclusion enables" regression and association review of the report. Nevertheless, the inflation rate did not appear to be the only significant driver in financial inclusion in Ghana as well. Inclusion was not only essential.

The effect of mobile money on financial inclusion in Myanmar was studied by Grootenhuis (2019). In addition, the aim of this analysis is to recognize factors affecting mobile money capacity. This research uses the statistical approach of conditional logistic regression using data from the Myanmar Market Survey and the Global Financial Inclusion Datasets. The results show that the probability of obtaining transactions is increased significantly by mobile money, while the probability of saving is not statistically significant. The findings indicate that both banked and unbanked citizens use mobile currency. Despite the findings, mobile money services are typically poor in adoption rates, and schooling, employment, distance from the nearest mobile finance agent and age are deemed the main barriers to adoption and use.

2.3.2 Effect Of Mobile Money On Saving Behaviour

Serge et al . (2018) explored the probability of citizens saving money from boring and uncertain lives through the usage of mobile money. Throughout the case of Burkina Faso, the results from the individual surveys we developed and administered from May to June 2014 have been gathered by hand. Although no association between using mobile money and saving for routine incidents is probable, their key findings suggest that citizens tend to be growing the tendency for savings for health emergencies. They also indicated clear proof that the usage of mobile money enhances the tendency to save for health emergencies for vulnerable communities, such as rural, elderly, disabled citizens and persons with erratic incomes. They address the factors underlying the human savings actions in their further study. They find that protection and the prospect of moving money inside the mobile money sub-region would improve the mobile money users' willingness to save for medical emergencies. In fact, their results are consistent with the international political agenda to raise funding and improve financial inclusion across mobile technologies.

Citizens require appropriate instruments of saving to promote exposure to cash for the handling of unexpected incidents, such as health emergencies. It is not straightforward and not often effective to sell property, joys or livestock quickly in reaction to adverse health shocks. Likewise, in the case of ROSCAs affecting people, because a generally default is set, the cash can not be reached immediately in an emergency. Any citizens resort to family members for support in these situations. However, these family members can not be willing to conserve liquids and thus sell properties (Collins et al . , 2009). In this context, mobile money could thus be especially prominent through quick access to cash for emergency purposes. The results by Dupas and Robinson (2013b) confirm this conjection, which indicate that merely providing a safe place to keep money is

sufficient to increase preventive health savings via an experiment in Kenya. This finding shows that citizens need a secure way to make deposits in preparation for unexpected incidents, so that they can get their capital back when appropriate. Under this sense, we anticipate the usage of mobile money to have a significant effect on spending behavior, such as health crises, for unforeseen incidents. However, some vigilance is correct. The choice of mobile money to raise money from mutual funds, accessible everywhere and at any moment, could improve family support and thereby negatively impact the savings of individuals. In addition, the mobile money can, on the one hand, help individuals to avoid unnecessary expenditure, but can prevent them from putting money into their account and denying its impact on their savings.

2.3.3 Moderating Role Of Social Networks

In 2010, South Africa studied the factors influencing the mobile banking system (Masinge 2010). In Masinge's opinion, consumers are able to access mobile banking services everywhere by converging banking and mobile technology. This study analyzed the factors that affect BOP's mobile banking admission in South Africa, which includes risk aspects viewed as: performance risks, safety / privacy risks, the risk of time, social risk and financial risk. The risk factors of the perceived danger of mobile banking are studied. The theory of networking suggests that the central nature and distance, robustness and transitivity of the nodes boost collaborative strength and degree of the communication and dissemination of the information between participating groups (e.g. Granovetter, 2004; Katz, Lazer, Arrow and Contractor, 2005). Near connections to complex networks often provide access to redundant information and resources (Granovetter, 1985). The research of Ajani and Tijani (2009) and Okten and Osili (2004) confirms this, which maintain that social relations improve access to credit for the vulnerable.

In 1994, Sun and Barnett plan to foster social and economic growth through global telecommunications networks, paradoxically. The existence of social networks between people would also lead to the socio-economic advantage of cellular telephone use. Riquelme and Rios (2010) propose, thus, that the attitudes of their spouses, their acquaintances and their friends influence the degree with which customers consider and conclude that they can employ a certain technology. Perhaps a better reputation in the usage of cell phone services is the sharing and exchanging of useful data among social network users. Granovetter (1973) improved the situation by proposing a wider access to information and ideas on future opportunities and resources to the nodes and connections that make up the network between economic players. For many people studied new communications approaches or strategies (Yang et al . 2012; Slade et al . 2015). Network is an important source and inspiration for others. Bongomin et al. are investigating the mild impact of social networking on the use and financial inclusion of mobile funds in rural Uganda. In a new report (2018). These findings indicate an significant and positive moderating effect on social networks on the relationship between mobile cash use and financial inclusion in rural Uganda. Indeed, the financial inclusion of rural Uganda has a strong and important effect on electronic cash and social networks. Therefore, the results indicate that the existence of strong and weak social networks in rural Uganda among mobile money users promotes financial inclusion.

2.4 CONCEPTUAL FRAMEWORK

The conceptual framework for the study is presented in the figure below:

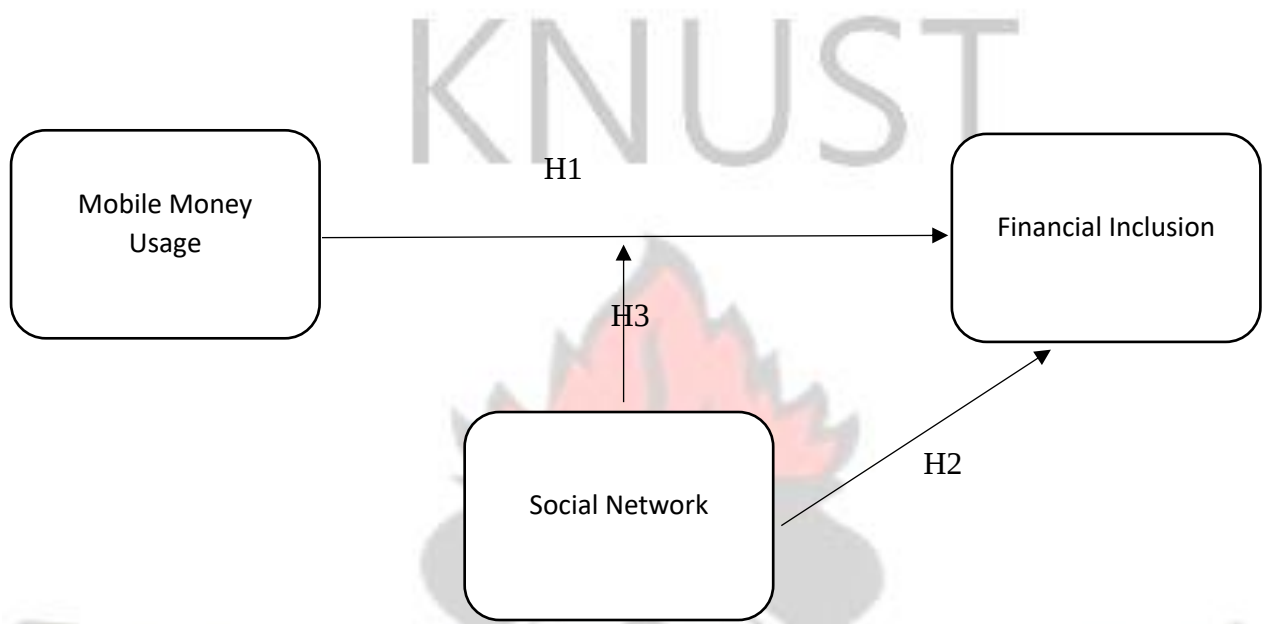


Figure 2. 1: Conceptual Framework

Researchers like Must and Ludewig (2010), Pope et al. (2011), Aker, and Mbiti (2010) have noted the need to transfer cash back to their families on a recurrent basis, while vast numbers of impoverished people in developed countries move from rural to urban areas for their subsistence. Money transactions can, however, be very complicated and expensive. Mobile money in these situations is also the easiest way to exchange funds. Mobile money has been used as an inclusive financial medium, as seen by a 2015 Mobile Money Global Event study (2015) in Kenya, with more than 90 million mobile money transactions, valued at around €2.16 billion (\$227.9 billion) in 2015. Likewise nearly \$10.8 billion (Sh32.5 trillion) was transacted via a mobile money payment network in 2014 in Uganda, with a customer base of 21.1 million registered mobile money users. This is consistent with the claim that, in South Saharan Africa, the potential of mobile money as a resource for economic growth is strong, as set by Donovan (2012) and

Kasekende (2013). Mobility thus applies equally to the unbanked banking. Therefore, here we hypothesize that:

H1: Mobile Money usage significantly and positively influences financial inclusion in Ghana.

Researchers like Mishkin (1998) and Stiglitz (1990) argued in favor of restricting access to credit by poor people to financial system imperfections, including transaction costs and knowledge asymmetry, particularly for those without a physical collateral (Akerlof, 1970). This can be mirrored in the traditional view that the loan to poor families would be inefficient, because the expense is too big and the risks too small. Thus social partnerships will become the only commodity that the poor will leverage to resolve obstacles in access to credit through their current informal networks with strong and weak links. It frequently functions as a crucial method for monitoring loan applications and maintaining the execution of contracts. Van Bastelaer (2000a) notes that the social network strengthens disadvantaged people's capacity to access knowledge on the economy, and builds relations and relationships between participants of communities (Yokoyama & Ali, 2006). Ahlin and Townsend (2007) observed that non-relative social ties decrease mutual punitive repayment rates. Against this context the social relations and the subsequent propensity for sanctioning the weak, Floro and Yotopolous (1991) proposed trying to reduce undesirable collection of and moral hazards issues in shared obligation loans. Biggs, Raturi, and Srivastava (2002) conclude in conclusion that the social network offers knowledge for the vulnerable in order to obtain finance programs and that it serves as an compliance tool (Narayan & Prittchet, 1997). Karlan (2007) also shown that people who stay more together and more psychologically comparable to other participants of the community are more inclined to pay off their debts and invest more, using a randomized survey on 2,000 citizens belonging to the FINCA-

Peru. The tests revealed that participants would control themselves more and implement the compensation of each other. Thus, here we hypothesize that:

H2: Social network significantly and positively influences financial inclusion in Ghana.

The network theory states, in the awareness and the exchanges of information among actors (Granovetter, 2004; Katz, Lazer, Arrow et Contractor, 2005 ; van Bastelaer, 2000) that nodes centrality, distance, size and transitiveness increase frequency and contact degree. The World Bank (2002) calls for business in emerging economies in which the poor live to be primarily based on developed social networks. Near connections to complex networks often provide access to redundant information and resources (Granovetter, 1985). According to the works of Okten and Osilli (2004), Ajani and Tjani (2009) stated that the social partnership improves access to credit among the disadvantaged. However, mobile telephone users as well as the vulnerable rely on their closed family networks, existing, and peer groups to capture and share valuable cell phone data and resources maintaining, sharing, and dispatching skills. CGAP (2013); World Bank (2014) repeatedly argues that there are social networks between customers on mobile telephones that allow them to save, transfer and send money among poor people who do not access formal financial services. They therefore focus primarily on their existing social networks in Sub-Saharan Africa, where most of the poor live, in obtaining economic advantages including mobile telephone connectivity. Research by Rakhi and Mala (2013) has shown that the social influence of mobile Indian cash is a major factor. Henceforth, we hypothesize that:

H3: Social networks moderate the relationship between mobile money usage and financial inclusion in Ghana.

2.5 SUMMARY

The chapter of the study has mainly focused on the definition of the concepts that are used in this research. The definitions cover the various definitions by authors and also the definition used in this research. The chapter further presents the theories that explains the relationship between the concepts. In addition, the empirical studies by other scholars are also presented here while the conceptual framework that explains the relationship that exists between the variables is also presented.



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

The approach used for this research by the researcher is presented in this section. It outlines the techniques and tools used to achieve the research goals. It provides information on the research design, population, sampling process, tools of research, process of collection of data and process of analyzing data. This study section is crucial to guarantee that the study findings are valid, reliable and generalized.

3.1 RESEARCH DESIGN

The goal of this study is to explore the role of social networks in the relation between mobile money and financial inclusion in Ghana. The analysis uses the descriptive research method to achieve the above objective. Descriptive work seeks to define a population, condition or phenomenon accurately and systematically. The descriptive investigation is a suitable choice if analysis is to recognize and therefore considered acceptable characteristics, patterns, trends, associations, and categories for this study and has been utilized by other scholars such as Bongomin, Munene, and Malinga (2018). The research also takes the methodology of the survey and is quantitative. The survey data are analyzed statistically and are thus considered suitable for this research, since this analysis uses quantitative data and a portion of the population to explain the phenomenon in all the population. The findings of this study will then be measured statistically.

3.2 POPULATION OF THE STUDY

The population for the study was individual mobile money users living in Kumasi Metropolis. Specific places such as Ayigya, Ayiduase, and Kotei were selected to enable easy distribution of data. This population was selected because of the convenience and easy access to its populists due to the location of the researcher's institution.

3.3 SAMPLE SIZE AND SAMPLING TECHNIQUES

Considering the number of individual mobile money users in the selected population sample, it would be impossible to collect data from everyone. For this reason, the researcher used a sample of 200 mobile money users located in Ayigya, Ayiduase and Kotei environs respectively. These environs have a high number of individuals and hence the researcher presumes that mobile money users would be easy to identify for the purpose of this study. Two main sampling techniques were employed for this study. First the convenience sampling technique was used to identify individuals who have registered for any mobile money service per the criteria of the research. Secondly, after identifying these persons, the research instruments were delivered at random to avoid bias and ensure every user has an equal chance of being selected.

3.4 DATA COLLECTION

The primary data were the key data source used for this analysis. Such data were collected from individuals in the identified population directly. The primary data are of an original nature and are directly related to the problem or problem and current knowledge. Primary data are also up to date and will provide the researcher with a practical view of the problem. The questionnaire was the primary method for the collection of data. With the questionnaires, a number of questions were

asked and responses gathered from respondents regarding the subject of studies. Specifically, this study employed the use of pre-validated questionnaires developed by scholars in subject matter. This was to ensure that the questionnaire was valid and reliable in measuring the various constructs of the research.

3.5 DATA ANALYSIS

The data collected were processed with Statistical Product for Service Solutions (SPSS) version 21. The data would be analysed for cross-tabulation, frequency counts and percentages. The Multiple Linear Regression Analysis was used in order to achieve the objectives outlined in this research, which is to determine the effect of mobile money on financial inclusion and the role of social networks. The multiple linear regression analysis model for assessing the effect of mobile money on financial inclusion was adopted from Bongomin, Munene and Malinga (2018)s and specified as”:

Financial Inclusion = $\beta_0 + \beta_1(\text{Mobile Money})$ Model 1

Financial Inclusion = $\beta_0 + \beta_1(\text{Mobile Money}) + \beta_2 (\text{Social Network})$ Model 2

Financial Inclusion = $\beta_0 + \beta_1(\text{Mobile Money}) + \beta_2 (\text{Social Network}) + \beta_3 (\text{Mobile Money} * \text{Social Network})$ Model 3

Where: β_0 = Intercept of the regression, β_1 and β_2 = Coefficients of the independent variables.

Table 3. 1: List of Variables and Expected Sign

Variable	Definition	Expected Sign
Mobile Money	Electronic wallet service is mobile money. It is available in many nations and helps people to store and transfer money on their cell phones and to receive it. Mobile money is a common alternative to bank accounts with secure and convenient electronic payments. This can be used on smartphones as well as mobile phones.	+
Financial Inclusion	Inclusion in financial matters ensures that individuals and organizations can access financial products and services that meet their needs in a safely and sustainably manner, both useful and accessible – deposits, investments, savings, credit and insurance.	+
Social Networks	A social network comprises a community of social players (individuals or organisations), dyadic relations and other social interactions among actors. They are the social network.	+

Source: Author's Construct, 2020

3.6 RELIABILITY AND VALIDITY OF DATA

In order to ensure the data collection instrument is valid and reliable, prevalidated questionnaires that measure mobile money, financial inclusion and social network were adopted. Prevalidated questions by Bongomin, Munene and Malinga (2018) were used to measure these variables. The survey's reliability was measured by Cronbach alpha, indicating that the questions used to measure mobile money, financial inclusion and social network would be varied is it meets the acceptable level which is 0.70 Cronbach alpha.

3.7 ETHICAL CONSIDERATION

Ethical issues occur more when work is conducted, access to organizations, and individuals are obtained, the data are collected, analysed and published. This means that the researcher must ensure that the design of the studies for everyone involved is both methodologically and ethically sound. To counter this, the conduct of this study is directed by the postgraduate thesis manual of the School of Graduate School to ensure that ethical concerns are addressed in their entirety. Until conducting the questionnaires, the consent of the volunteers was sorted. They were also assured of confidentiality and the investigator therefore took fair measures to ensure that the data given by the respondents were kept confidential.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 INTRODUCTION

This chapter deals with the presentation, analysis and discussion of data obtained from the questionnaires distributed to the mobile money users in Kumasi Metropolis. The results of the analysis are presented in tables and the analysis covers descriptive statistics of the sample, analysis of means, and multiple OLS regression analysis used to achieve the research objectives.

4.1 BACKGROUND OF RESPONDENTS

This section presents the demographics of the respondents used in this study. The demographics of the respondents of this study are presented in Table 4.1 below:

4.1.1 Gender

From the table above, relative to the gender of the respondents, 55.6 percent of the respondents were males while 42.7 percent of the respondents were females respectively. This implies that majority of the respondents in this study were males.

4.1.2 Age

Relative to the ages of the respondents, it was observed that 3.4 percent of the respondents were 18 to 28 years while 18.8 percent of the respondents were 29 to 38 years. 8.5 percent of the respondents were 39 to 48 years while 58.1 percent of the respondents who were 49 to 60 years. Also it was observed that 11.1 percent of the respondents were above 60 years.

Table 4. 1: Demographics

Item	Variable	Frequency	Percentage
Gender	Male	65	55.6
	Female	50	42.7
Age	18-28	4	3.4
	29-38	22	18.8
	39-48	10	8.5
	49-60	68	58.1
	Above 60	13	11.1
Marital Status	Single	24	24.7
	Married	56	57.7
	Divorced	10	10.3
	Widowed	1	1.0
	Separated	6	6.2
Level of Education	JHS	8	7.1
	SHS	17	15.2
	Diploma/HND	29	25.9
	Degree	15	13.4
	Master's Degree	33	29.5
	PHD	10	8.9
Employment Status	Unemployed	9	8.3
	Employed (Accounting, administration, banking or finance related)	48	44.0
	Employed (other sectors)	52	47.7
Income	Below 500	11	9.5
	501-1000	11	9.5
	1001-1500	17	14.7
	1501-2000	20	17.2
	2001-3000	52	44.8
	Above 3000	5	4.3
Length of Usage	Less than 1 years	8	7.1
	2 years	26	23.0
	3 years	22	19.5
	4 years	35	31.0
	More than 4 years	22	19.5
Frequency of use	Daily	49	41.9
	2-4 times a week	20	17.1
	Once a week	11	9.4
	2-4 times a month	33	28.2
	Once a month	4	3.4

Source: Field Study, 2020

4.1.3 Marital Status

In terms of marital status, it was observed that 24.7 percent of the respondents were single while 57.7 percent of the respondents were married. 10.3 percent of the respondents were divorced according to the table above. It was also observed that 1.0 percent of the respondents were widowed while 6.2 percent of the respondents were separated respectively.

4.1.4 Level of Education

According to the table above, relative to the highest level of education of the respondents, it was observed that 7.1 percent of the respondents had JHS level of education. 15.2 percent of the respondents had SHS educational level while 25.9 percent of the had a Diploma level of education respectively. 13.4 percent of the respondents had a Degree educational level. From the table above we can see that 29.5 percent of the respondents had a Master's degree while 8.9 percent of the respondents had PhD educational level.

4.1.5 Employment Status

From the above table we observe that in terms of employment status, 8.3 percent of the respondents were Unemployed. 44.0 percent of the respondents were employed (accounting, administration, banking or finance related) while 47.7 percent of the respondents according to the table, were employed (other sectors).

4.1.6 Level of Income

From the table above, relative to the income level of the respondents, it was observed that 9.5 percent of the respondents earns below 500 cedis while 9.5 percent of the respondents earns

between 501 to 1000. It was also observed that 14.7 percent of the respondents earns 1001 to 1500 cedis and 17.2 percent of the respondents earns between 1501 to 2000. Also 44.8 percent of the respondents earns 2001 to 3000 cedis while 4.3 percent of the respondents earns above 3000 cedis.

4.1.7 Length of Usage

With respect to the length of transacting business with mobile money by the respondents, 7.1 percent of the respondents did business with mobile money for less than 1 year. 23.0 percent of the respondents did business with mobile money for 2 years. We can also see from the table that 19.5 percent of the respondents did business with mobile money for 3 years while 31.0 percent of the respondents did business with mobile money for than 4 years. We can also see that 19.5 percent of the respondents did transacting business with mobile money for more than 4 years.

4.1.8 Frequency of Use

In terms of how often mobile money services of this network is used by the respondents, it was observed that 41.9 percent of the respondents used the mobile money services daily. 17.1 percent were those of the respondents that used the mobile money services 2 to 4 times a week. It was observed that 9.4 percent of the respondents used the mobile money services for once a while 28.2 percent of the respondents used the mobile money services for 2 to 4 times a month. It was also observed that 3.4 percent of the respondents used mobile money service once a month.

4.2 DESCRIPTIVE STATISTICS

4.2.1 Descriptive Statistics of Mobile Money Usage

The descriptive statistics of mobile money usage is presented in Table 4.2 below:

Table 4. 2: Descriptive statistics of mobile money usage

	N	Min	Max	Mean	Std. Deviation
I will continue to use mobile money services in the next few weeks	117	1	5	3.8718	0.67643
I use mobile money for services beyond just money transfer	117	1	5	3.7778	0.74407
I will continue using mobile money services in the next coming years	117	1	5	3.8547	0.74585
I have a positive perception toward the use of mobile money services	117	1	5	3.8632	0.74169
My attitude toward the use of mobile money services is always positive	115	1	5	3.9043	0.73716
I enjoy using mobile money services for my transactions	116	1	5	3.9052	0.74575
My mobile money services provided meets my financial needs	114	1	5	3.6053	0.68638
My mobile money system provides all the banking services I need	117	1	5	3.7607	0.69045
I usually have no complaints about my mobile financial service provider	117	1	5	3.6752	0.69268
I am content with the costs incurred in using mobile money financial system	117	1	5	3.7094	0.6703
The mobile money service is always reliable to me	117	1	5	3.6581	0.67162

Source: Field Study, 2020

The table above shows the item “I will continue to use mobile money services in the next few weeks” which recorded a mean of 3.8718 and standard deviation of .67643. This is followed by the item “I use mobile money for services beyond just money transfer” which recorded a mean of 3.7778 and a standard deviation of .74407. Also the item “I will continue using mobile money services in the next coming years” recorded a mean of 3.8547 and a standard deviation of .74585. The next item “I have a positive perception toward the use of mobile money services” also recorded a mean of 3.8632 and a standard deviation of .74169. The item “My attitude toward the use of mobile money services is always positive” recorded a mean of 3.9043 and a standard deviation of .73716.

The item “I enjoy using mobile money services for my transactions” also recorded a highest mean of 3.9052 and a standard deviation of .74575. This implies that majority of the respondents agrees to this item. From the table we can also see that the item “My mobile money services provided meets my financial needs” recorded a lowest mean of 3.6053 and a standard deviation of .68638. This implies that minority of the respondents agrees to this item. The item “My mobile money system provides all the banking services I need” recorded a mean 3.7607 and a standard deviation of .69045. The next item “I usually have no complaints about my mobile financial service provider” also recorded a mean of 3.6752 and a standard deviation of .69268. And also the table above shows the item “I am content with the costs incurred in using mobile” which recorded a mean of 3.7094 and a standard deviation of .67030 while the item “The mobile money service is always reliable to me” recorded a mean of 3.6581 and a standard deviation of .67162 respectively.

4.2.2 Descriptive Statistics of Social Network

The descriptive statistics of social network is presented in Table 4.3 below:

According to the table above, the item “I belong to social groups with members from diverse occupations” recorded a highest mean of 4.2393 and standard deviation of 3.74085. This implies that majority of the respondents agrees to this item. This is followed by the item “I belong to social groups with members from diverse religion” which recorded a mean of 3.9310 and a standard deviation of .41124. Also the item “My social network has members from diverse ethnicity” recorded a mean of 3.7778 and a standard deviation of .52705. The next item “My social network has members with different ages” also recorded a mean of 3.6410 and a standard deviation of .67545. The item “I belong to social groups that frequently interact with other groups outside the community” recorded a mean of 3.6838 and a standard deviation of .65191. The next item “In

my social network, we always participate in social organisations in this community” also recorded a mean of 3.6667 and a standard deviation of .70711.

Table 4. 3: Descriptive statistics of social network

	N	Min	Max	Mean	Std. Deviation
I belong to social groups with members from diverse occupations	117	1	44	4.2393	3.74085
I belong to social groups with members from diverse religion	116	3	5	3.931	0.41124
My social network has members from diverse ethnicity	117	3	5	3.7778	0.52705
My social network has members with different ages	117	2	5	3.641	0.67545
I belong to social groups that frequently interact with other groups outside the community	117	2	5	3.6838	0.65191
In my social network, we always participate in social organisations in this community	117	1	5	3.6667	0.70711
In this household, members always get together with friends to play games and recreational activities	117	2	5	3.7179	0.61372
Members of my social groups always get together with others regularly to do an activity	117	2	5	3.6667	0.64327
In my social network, I have people I feel at ease with	117	2	5	3.7009	0.68563
I have people I can talk to about private matters in my social network.	117	3	5	3.5983	0.5881
My social network greatly influences my decision making	117	3	5	3.6239	0.61204
I often seek help from my social network before I use a product or service	116	2	5	3.6552	0.62001
Overall, my social network has great influence on my choices	116	1	5	3.5776	0.6997
Overall, my social network has great influence on my choices	116	1	5	3.5776	0.6997

Source: Field Study, 2020

From the table we can also see that the item “In this household, members always get together with friends to play games and recreational activities” recorded a mean of 3.7179 and a standard deviation of .61372. The following item “Members of my social groups always get together with

others regularly to do an activity” recorded a mean 3.6667 and a standard deviation of .64327. The next item “In my social network, I have people I feel at ease with” also recorded a mean of 3.7009 and a standard deviation of .68563. And also the table above shows the item “I have people I can talk to about private matters in my social network” which recorded a mean of 3.5983 and a standard deviation of .58810 while the item “My social network greatly influences my decision making” recorded a mean of 3.6239 and a standard deviation of .61204. This is followed by the item “I often seek help from my social network before I use a product or service” which recorded a mean of 3.6552 and a standard deviation of .62001 while the next item “Overall, my social network has great influence on my choices” recorded a lowest mean of 3.5776 and a standard deviation of .69970. This implies that minority of the respondents agrees to this item according to the table above.

4.2.3 Descriptive Statistics of Financial Inclusion

The descriptive statistics of financial inclusion is presented in Table 4.4 below:

According to the table above, the item “There are many mobile money service delivery channels closer to my location” which recorded a mean of 3.5431 and a standard deviation of .60995. Also the item “The account maintenance fees charged by the service provider is affordable” recorded a mean of 3.6034 and a standard deviation of .58799. The next item “The loan fees charged by the service provider is affordable” also recorded a mean of 3.6034 and a standard deviation of .60259. The item “The minimum loan amount offered by the mobile money service provider is satisfactory” recorded a mean of 3.7845 and a standard deviation of .45313. The next item “The savings product provided by the mobile money service provider suits our needs” also recorded a mean of 3.8707 and a standard deviation of .44780.

Table 4. 4: Descriptive statistics of financial inclusion

	N	Min	Max	Mean	Std. Deviation
There are many mobile money service delivery channels closer to my location	116	2	5	3.5431	0.60995
The account maintenance fees charged by the service provider is affordable	116	2	5	3.6034	0.58799
The loan fees charged by the service provider is affordable	116	2	5	3.6034	0.60259
The minimum loan amount offered by the mobile money service provider is satisfactory	116	2	4	3.7845	0.45313
The savings product provided by the mobile money service provider suits our needs	116	2	5	3.8707	0.4478
The savings product provided by the financial institution is safe for us	115	2	5	3.6609	0.56018
The loan product provided the mobile money provider is safe for us	116	1	5	3.681	0.69281
The cost of making a trip to the mobile money provider is low	116	1	5	3.6552	0.69911
The paper work requirements by the mobile money service is favorable	116	2	5	3.6724	0.54014
The fees charged by the mobile money provider on use of its services are favorable	116	2	5	3.681	0.55324
The level of service provision by the mobile money provider is very good	116	1	5	3.4914	0.77455
The products and services provided by the mobile money institution are user friendly	116	2	5	3.6724	0.61539
The products/services provided by the mobile money service provider has improved my standard of living	116	2	5	3.7155	0.62978
The products/services provided by the mobile money provider has increased my income	114	3	5	3.6754	0.60229
The products/services provided by the mobile money provider has enabled me acquire more assets	115	3	5	3.6609	0.5443
The products/services provided by the mobile money institution has led to increased consumption in my home	114	3	5	3.6491	0.56416

Source: Field Study, 2020

From the table we can also see that the item “I The savings product provided by the financial institution is safe for us” recorded a mean of 3.6609 and a standard deviation of .56018. The following item “The loan product provided the mobile money provider is safe for us” recorded a highest mean 3.6810 and a standard deviation of .69281. This implies that majority of the respondents agrees to this item. The next item “The cost of making a trip to the mobile money provider is low” also recorded a mean of 3.6552 and a standard deviation of .69911. And also the table above shows the item “The paper work requirements by the mobile money service is favorable” which recorded a mean of 3.6810 and a standard deviation of .55324 while the item “The level of service provision by the mobile money provider is very good” recorded a lowest mean of 3.4914 and a standard deviation of .77455. This implies that minority of the respondents agrees to this item according to the table above.

This is followed by the item “The products and services provided by the mobile money institution are user friendly” which recorded a mean of 3.6724 and a standard deviation of .61539 while the next item “The products/services provided by the mobile money service provider has improved my standard of living” recorded a lowest mean of 3.7155 and a standard deviation of .62978. The above table shows the item, “The products/services provided by the mobile money provider has increased my income” recorded a mean of 3.6754 and standard deviation of .60229. This is followed by the item “The products/services provided by the mobile money provider has enabled me acquire more assets” which recorded a mean of 3.6609 and a standard deviation of .54430. Also the item “The products/services provided by the mobile money institution has led to increased consumption in my home” recorded a mean of 3.6491 and a standard deviation of .56416.

4.3 DATA ANALYSIS

This section of the chapter presents the data analysis and the various tests conducted before the data was analysed.

4.3.1 Reliability Statistics

The reliability statistics of the questionnaire is presented in Table 4.5 below. From the table, we can observe that the Cronbach alpha of the various variables are greater than 0.70 which is the recommended threshold for reliability test. This implies that this questionnaire would be more than 70 percent efficient under similar circumstances.

Table 4. 5: Reliability Test

Variable	No. of Items	Cronbach's Alpha
Mobile money usage	11	0.926
Social network	13	0.763
Financial inclusion	16	0.858

Source: Field Study, 2020

4.3.2 Correlation Analysis

The main purpose of correlation analysis is to highlight whether there exists some strong relationship between the variables which could affect the outcome of the analysis. From the Table 4.6 below, it is evident that there is no perfect correlation between the variables being used in this study and hence this data can be used for the analysis.

Table 4. 6: Correlation Analysis

		Mobile Money Usage	Social Network	Financial Inclusion
Mobile Money Usage	Pearson Correlation	1	.329**	.422**
	Sig. (2-tailed)		0	0
Social Network	N	117	117	117
	Pearson Correlation	.329**	1	.544**
Financial Inclusion	Sig. (2-tailed)	0		0
	N	117	117	117
Financial Inclusion	Pearson Correlation	.422**	.544**	1
	Sig. (2-tailed)	0	0	
	N	117	117	117

** Correlation is significant at the 0.01 level (2-tailed). Source: Field Study, 2020

4.3.3 The Effect Mobile Money On Financial Inclusion

The model summary for the regression analysis is presented in Table 4.7 below:

Table 4. 7: Model Summary for mobile money and financial inclusion

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.422 ^a	.178	.171	.31064

a. Predictors: (Constant), Mobile Money (MM) Source: Field Study, 2020

The Anova statistics for the regression model is presented in Table 4.8 below:

Table 4. 8: Anova Statistics for mobile money and financial inclusion analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.407	1	2.407	24.941	.000 ^b
	Residual	11.097	115	.096		
	Total	13.504	116			

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Mobile Money Source: Field Study, 2020

The regression summary for containing the coefficients of the regression analysis is presented in the Table 4.9 below:

Table 4. 9: Regression summary for mobile money and financial inclusion analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.653	.205		12.955	.000
	Mobile Money	.268	.054	.422	4.994	.000

a. Dependent Variable: Financial Inclusion. Source: Field Study, 2020

The first regression analysis focused on examining the effect mobile money on financial inclusion in Ghana. From the regression summary table, it can be observed that the model has a constant of 2.653 which is found to be statistically significant at .05 significance level. This implies that holding all other variables constant, financial inclusion is expected to increase by 2.653 units. The study further shows that mobile money has a parameter estimate of 0.268 which is found to be statistically significant at .05 significance level ($p=0.000$). This implies that in the absence of all other variables, a unit increase in mobile money would be expected to result in a 0.268 unit increase in financial inclusion. The model has an F-statistics of 24.941 which is significant and hence shows that this regression model is significant. The model further has an R-squared of 0.178 which implies that this model can explain up to 17.8 percent of the changes in financial inclusion.

4.3.4 The Effect Of Social Media On Financial Inclusion

The model summary for the regression analysis is presented in Table 4.10 below:

Table 4. 10: Model summary for social media and financial inclusion

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.544 ^a	.296	.290	.28748

a. Predictors: (Constant), Social Network (SN). Source: Field Study, 2020

The Anova statistics for the regression model is presented in Table 4.11 below:

Table 4. 11: Anova statistics for social media and financial inclusion

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.000	1	4.000	48.398	.000 ^b
	Residual	9.504	115	.083		
	Total	13.504	116			

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Social Network. Source: Field Study, 2020

The regression summary for containing the coefficients of the regression analysis is presented in the Table 4.12 below:

Table 4. 12: Regression summary for social network and financial inclusion

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.220	.209		10.596	.000
	Social Network	.388	.056	.544	6.957	.000

a. Dependent Variable: Financial Inclusion. Source: Field Study, 2020

The next regression analysis focused on examining the effect social networks on financial inclusion in Ghana. From the regression summary table, it can be observed that the model has a constant of 2.220 which is found to be statistically significant at .05 significance level. This implies that holding all other variables constant, financial inclusion is expected to increase by 2.220 units. The study further shows that social network has a parameter estimate of 0.544 which is found to

be statistically significant at .05 significance level ($p=0.000$). This implies that in the absence of all other variables, a unit increase in social networking would be expected to result in a 0.544 unit increase in financial inclusion. The model has an F-statistics of 48.398 which is significant and hence shows that this regression model is significant. The model further has an R-squared of 0.296 which implies that this model can explain up to 29.6 percent of the changes in financial inclusion.

4.3.5 The Moderating Role of Social Networks

The model summary for the regression analysis is presented in Table 4.13 below:

Table 4. 13: Model summary for the moderating role of social networks

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.676 ^a	.457	.443	.25470

Predictors: (Constant), Interaction, Mobile Money, Social Network. Source: Field Study, 2020

The Anova statistics for the regression model is presented in Table 4.14 below:

Table 4. 14: Anova statistics for moderating role of social networks

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.173	3	2.058	31.720	.000 ^b
	Residual	7.331	113	.065		
	Total	13.504	116			

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Interaction, Mobile Money, Social Network. Source: Field Study, 2020

The regression summary for containing the coefficients of the regression analysis is presented in the Table 4.15 below:

Table 4. 15: Regression summary for moderating role of social networks

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-5.102	1.570		-3.250	.002
Mobile Money	1.862	.383	2.933	4.860	.000
Social Network	2.299	.448	3.228	5.134	.000
Interaction	-.483	.109	-4.442	-4.442	.000

a. Dependent Variable: Financial Inclusion. Source: Field Study, 2020

The next regression analysis focused on examining the moderating role of social networks in the mobile money and financial inclusion relationship. From the regression summary table, it can be observed that the model has a constant of -5.102 which is found to be statistically significant at .05 significance level ($p=0.002$). This implies that holding all other variables constant, financial inclusion is expected to reduce by 5.102 units. The study further shows that mobile money in this model has a parameter estimate of 2.933 which is found to be statistically significant at .05 significance level ($p=0.000$). This implies that in the absence of all other variables, a unit increase in mobile money would be expected to result in a 2.933 unit increase in financial inclusion.

Furthermore, the model shows that social network has a parameter estimate of 3.228 which is found to be statistically significant at .05 significance level ($p=0.000$). This implies that in this model, when social networking increases by one unit, financial inclusion would be expected to increase by 3.228 units. The interaction between the two variables has a parameter estimate of -4.442 which was also found to be significant at .05 significance level ($p=0.000$). This implies that holding all other variables constant, a unit increase in the interaction between mobile money and social network would be expected to result in a -4.442 unit decrease in financial inclusion. The model has an F-statistics of 31.720 which is significant and hence shows that this regression model

is significant. The model further has an R-squared of 0.457 which implies that this model can explain up to 45.7 percent of the changes in financial inclusion.

4.4 DISCUSSION OF FINDINGS

4.4.1 The Effect of Mobile Money On Financial Inclusion in Ghana

The first objective of this study is to examine the effect of mobile money on financial inclusion in Ghana. In order to achieve the above objective, the study uses the regression analysis. From the analysis, the study found that mobile money has a coefficient of 0.422 which is also significant. This implies that mobile money usage has a positive and significant effect on financial inclusion, supporting hypothesis (H1) of the study which, states that mobile money usage is significantly and positively related to financial inclusion. This conforms to the argument that mobile money as a tool for economic development has a high potential to foster financial inclusion in Sub-Saharan Africa. This is further consistent with the findings of Grootenhuis (2019) who found that mobile money helps to improve the financial inclusion rate of rural citizens.

4.4.2 The Effect of Social Networks On Financial Inclusion in Ghana

The second objective of the study examined the effect of social media on financial inclusion in Ghana. With this objective also, the study uses the regression analysis to achieve the research objective. From the regression analysis, it was found that social networking has a coefficient of 0.544 which is found to be significant. This implies that social network has a positive and significant effect on financial literacy among Ghanaian. This is found to be consistent with the findings of Biggs et al. (2002) who argue that in accessing financial services, social network helps

the poor by supplying information and it acts as a mechanism for enforcement (Narayan & Pritchett, 1997).

4.4.3 The Moderating Role of Social Networks in The Relationship Between Mobile Money and Financial Inclusion

In the final objective, the study examines the moderating role of social networks in the relationship between mobile money usage and financial inclusion in Ghana. From the analysis, we found evidence to suggest that in this model, mobile money is found to have a coefficient of 2.933 while social networks has a coefficient of 3.228 which are all found to be significant indicating the social media and mobile money both have significant effects on financial inclusion. However, the moderating analysis indicates that the interaction between the two variables has a coefficient of -4.442 which is found to be significant. This implies that the interaction between the two variables negatively affects financial inclusion. Hence, even though there is a significant moderation, this moderation is found to be negative. This is contrary to the findings of Bongomin et al. (2018) who found a positive moderation between the variables.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

This chapter of the study presents the summary of the findings of the study, conclusion that can be made from these findings and recommendations made based on the findings of this study. The chapter has three main sections that helps to address the above.

5.1 SUMMARY OF FINDINGS

The overall objective of the study is to examine the role of social networks in the relationship between mobile money and financial literacy. Relative to the first objective, the study examined the effect of mobile money usage on financial inclusion. The study found relative to this objective that that mobile money has a coefficient of 0.422 which is also significant. This implies that mobile money usage has a positive and significant effect on financial inclusion, supporting hypothesis (H1) of the study which, states that mobile money usage is significantly and positively related to financial inclusion. This conforms to the argument that mobile money as a tool for economic development has a high potential to foster financial inclusion in Sub-Saharan Africa. This is further consistent with the findings of Grootenhuis (2019) who found that mobile money helps to improve the financial inclusion rate of rural citizens.

With respect to the second objective, the study sort to examine the effect of social media on financial inclusion in Ghana. The analysis showed that social network has a positive and significant effect on financial literacy among Ghanaian. This is found to be consistent with the findings of Biggs et al. (2002) who argue that in accessing financial services, social network helps the poor by supplying information and it acts as a mechanism for enforcement (Narayan & Pritchett, 1997).

The final objective sort to examine the moderating role of social networks in the relationship between mobile money usage and financial inclusion in Ghana. the moderating analysis indicates that the interaction between the two variables has a coefficient of -4.442 which is found to be significant. This implies that the interaction between the two variables negatively affects financial inclusion. Hence, even though there is a significant moderation, this moderation is found to be negative. This is contrary to the findings of Bongomin et al. (2018) who found a positive moderation between the variables.

5.2 CONCLUSION

The goal of this study is to explore the role of social networks in the relation between mobile money and financial inclusion in Ghana. The analysis uses the descriptive research method to achieve the above objective. The population for the study was individual mobile money users living in Kumasi Metropolis. The study uses a sample of 117 respondents, two main sampling techniques were employed for this study. First the convenience sampling technique was used to identify individuals who have registered for any mobile money service per the criteria of the research. Secondly, after identifying these persons, the research instruments were delivered at random to avoid bias and ensure every user has an equal chance of being selected. The questionnaire was the primary method for the collection of data. The data collected was processed with Statistical Product for Service Solutions (SPSS) version 21. The data is then analyzed for cross-tabulation, frequency counts and percentages. The Multiple Linear Regression Analysis was used in order to achieve the objectives outlined in this research, which is to determine the effect of mobile money on financial inclusion and the role of social networks. Based on the findings of the study, it can be concluded that mobile money usage helps to improve the financial inclusion of the

country whiles social networks also contributes to improving financial inclusion. However, the interaction between social network and mobile money reduces the financial inclusion rates of the country.

5.3 RECOMMENDATIONS

Based on the findings above, the study makes the following recommendations:

The study recommends that government and policy makers should consider implementing policies to improve the reach of mobile money among the citizens of the country. This comes at the back of the findings that mobile money contributes to financial inclusion positively.

The study also recommends that mobile networks should try to improve their service delivery with respect to mobile money services in order to attract more citizens to use the service since this would help improve financial inclusion rate.

On the basis of the finding that social networks helps to improve financial inclusion, the study recommends that

5.4 RECOMMENDATION FOR FURTHER STUDIES

The study finally recommends that future studies should consider increasing the scope of this study in order to cover other mobile money users across other regions since this study focuses on Kumasi Metropolis. This would help give more valid conclusion on the relationship between the variables.

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APPENDICES

QUESTIONNAIRE

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

SURVEY QUESTIONNAIRE

My name is Derland Joseph Otu. I am a Postgraduate student at the Kwame Nkrumah University of Science and Technology, Department of Accounting and Finance, Kumasi. This survey instrument has been designed to enable me carry out a research on **‘EXAMINING THE RELATIONSHIP BETWEEN MOBILE MONEY AND FINANCIAL INCLUSION IN GHANA: THE MODERATING ROLE OF SOCIAL NETWORKS’**. Any information provided will ONLY be used for general information, and it will be treated as **HIGHLY CONFIDENTIAL**.

INSTRUCTIONS: Please kindly write in ink in the box which corresponds to the statement, which in your opinion is the most appropriate answer to the related question. For the following questions, kindly select by checking (✓) all that apply.

SECTION A: DEMOGRAPHICS OF RESPONDENTS

- 1 Gender of respondent ☐ Male ☐ Female

2. Age of respondent ☐ 18-28 ☐ 29-38 ☐ 39-48 ☐ 49-60 ☐ above 60

3. Marital Status ☐ single ☐ married ☐ divorced ☐ widowed ☐ Separated

4. Highest level of education
☐ JHS ☐ SHS ☐ Diploma/HND
☐ Degree ☐ Master's Degree ☐ PhD

5. What is your employment status?
☐ Unemployed ☐ Employed (Accounting, Administration, Banking or Finance related)
☐ Employed (Other Sectors)

6. Income level

- ☐ Below 500 ghc ☐ 501 – 1000 ghc ☐ 1001 – 1500 ghc
☐ 1501 – 2000 ghc ☐ 2001 – 3000 ghc ☐ Above 3000 ghc

7. How long have you been transacting business with mobile money?

- ☐ less than 1 year ☐ 2 years ☐ 3 years ☐ 4 years ☐ more than 4 years

8. How often do you use the mobile money services of this network?

- ☐ Daily ☐ 2-4 times a week ☐ Once a week ☐ 2-4 times a month
☐ Once a month

SECTION B: MOBILE MONEY

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I will continue to use mobile money services in the next few weeks					
I use mobile money for services beyond just money transfer					
I will continue using mobile money services in the next coming years					
I have a positive perception toward the use of mobile money services					
My attitude toward the use of mobile money services is always positive					
I enjoy using mobile money services for my transactions					
My mobile money services provided meets my financial needs					
My mobile money system provides all the banking services I need					
I usually have no complaints about my mobile financial service provider					
I am content with the costs incurred in using mobile money financial system					
The mobile money service is always reliable to me					

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SECTION B: SOCIAL NETWORK

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I belong to social groups with members from diverse occupations					
I belong to social groups with members from diverse religion					
My social network has members from diverse ethnicity					
My social network has members with different ages					
I belong to social groups that frequently interact with other groups outside the community					
In my social network, we always participate in social organisations in this community					
In this household, members always get together with friends to play games and recreational activities					
Members of my social groups always get together with others regularly to do an activity					
In my social network, I have people I feel at ease with					
I have people I can talk to about private matters in my social network.					
My social network greatly influences my decision making					
I often seek help from my social network before I use a product or service					
Overall, my social network has great influence on my choices					

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SECTION B: FINANCIAL INCLUSION

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

There are many mobile money service delivery channels closer to my location					
The account maintenance fees charged by the service provider is affordable					
The loan fees charged by the service provider is affordable					
The minimum loan amount offered by the mobile money service provider is satisfactory					
The savings product provided by the mobile money service provider suits our needs					
The savings product provided by the financial institution is safe for us					
The loan product provided the mobile money provider is safe for us					
The cost of making a trip to the mobile money provider is low					
The paper work requirements by the mobile money service is favorable					
The fees charged by the mobile money provider on use of its services are favorable					
The level of service provision by the mobile money provider is very good					
The products and services provided by the mobile money institution are user friendly					
The products/services provided by the mobile money service provider has improved my standard of living					
The products/services provided by the mobile money provider has increased my income					
The products/services provided by the mobile money provider has enabled me acquire more assets					
The products/services provided by the mobile money institution has led to increased consumption in my home					

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