AGENCY BANKING AND FINANCIAL INCLUSION IN UGANDA

BY

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DECLARATION

I, **Ritah Nabatanzi,** do here by declare that this dissertation is my original work and has never been submitted to any institution or university for any academic award.

Signed……. Date……..…….

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APPROVAL

I certify that this dissertation under the title "***Agency Banking and Financial Inclusion in Uganda***'' was carried out by Ritah Nabatanzi under our supervision and has met the requirements of Kyambogo University Graduate school and is now ready for submission with our approval.

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DEDICATION

I would like to dedicate this dissertation to my family that believed and invested so much in me. For what I claim as my achievements, you have achieved much more through your dedication to excellence and the opportunities you provided for me.

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LIST OF ACRONYMS

ABSA:	Amalgamated Banks of South Africa
AFI:	Alliance for Financial Inclusion
ATM:	Automatic Teller Machine
BOU:	Bank of Uganda
CICO:	Cash in Cash Out
DFCU:	Development Finance Company of Uganda
FSPs:	Financial Service Providers
ICT:	Information Communication Technology
KCB:	Kenya Commercial Bank
NFIS:	National Financial Inclusion Strategy
UBA:	Uganda Bankers Association
UN:	United Nation
UNCDF:	United Nation Capital Development Fund

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ABSTRACT

The purpose of the study was to examine the effect of agency banking on financial inclusion in Mukono Municipality. Specifically, the study evaluated the effect of geographical coverage on financial inclusion in Mukono Municipality, the effect of agent transaction volumes on financial inclusion in Mukono Municipality and the effect of number of banking agents engaged on financial inclusion in Mukono Municipality. The study used the agency theory to guide the conceptualization. Using a cross-sectional survey design, primary data was collected by the use of questionnaires and interview guides. A target population of 85 respondents who included bank agents, supervisors, managers and employees was considered and quantitative data was obtained from 60 respondents out of a sample of 70 respondents and the response rate was 85.71%. Simple random sampling was used to collect quantitative data while qualitative data was collected using purposive sampling method from a sample of 8 interviewees and a response rate of 100%. Prerequisite tests were carried out to meet parametric assumptions and these were; Shapiro Wilk tests for normality, scatter plots to check for linearity and multicollinearity tests that were gauged using zero order correlation matrix and Variance Inflation Factors. The study used descriptive statistics to describe the relevant aspects of the phenomenon, Pearson correlation was used to check the relationship among the study variables and finally when data was deemed fit, a multiple regression analysis was performed to address the study objectives. The findings of the study revealed that geographical coverage was a significant predictor of financial inclusion (Beta =0.503, p value =0.000). The number of banking agents engaged was also found to significantly predict financial inclusion (Beta =0.258, p value =0.010). The results of agent transaction volumes were found not to predict financial inclusion (Beta =0.184, p value =0.116). The study concluded that agency banking model is a success as regards to deepening financial inclusion and thus recommended that geographical coverage of agency banking as well as the number of banking agents engaged were found to affect financial inclusion thus efforts have to be made to increase the number of outlets providing bank agency services so as a greater geographical coverage is achieved. Future studies need to be conducted in other areas of Uganda and also increase the sample size to check the robustness of this study.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Banks in Uganda have embarked on an important reform to expand banking services to millions of poor households by enabling third party retail agents as a low-cost distribution alternative to branches. Bank of Uganda in 2011 adopted a new strategy for financial inclusion based on four pillars: financial literacy, financial consumer protection, financial innovations and financial services data and measurement (Ministry of Finance report, 2018) . The initiatives under each pillar are geared towards building a more inclusive financial system that is responsive to the needs of the Ugandan people especially those who are either underserved or un served. While some significant progress has been made on the measuring side of financial inclusion on the demand-side in Uganda, some work still needs to be done with regard to collection of supply-side data from financial institutions. Therefore, the study aimed at contributing to this area of concern with a specific emphasis of examining the effect of agency banking on financial inclusion.

This introductory chapter presents the background to the study, the statement of the problem, purpose of the study, the specific objectives of the study, research hypothesis, conceptual framework, the significance of the study, justification of the study, scope of the study, and operational definitions of terms and concepts. The background, which was presented under four perspectives, was dealt with first before other issues we covered.

1.2 Background to the study

1.2.1 Historical perspective

The evolution of agency banking development dates back to 1999 in Latin America and Brazil with Brazil being the global pioneer to adopt agency banking in 2000 where it developed a network of bank Agents covering over 99% of its municipalities (CGPA, 2011). By 2010, the country had approximately 151,958 bank Agents functioning (The national treasury, 2012). Other countries in Latin America which followed suit in adopting agency banking system were, Peru in 2005, Colombia in 2006, Ecuador in 2008, Mexico and Venezuela in 2009 (Mckay, 2011). In Colombia, the original agent banking regulation was passed in 2006 and 2 specified that any commercial bank, commercial finance company, or regulated savings and credit cooperative could use the agent banking model (The national treasury, 2012)

In Africa and Asia continents, the countries that have utilized the agency banking model to expand financial services include Pakistan, Philippines, Kenya, South Africa, Uganda, and India (Watiri, 2013). Agency banking was implemented in South Africa in 2005 after the amendment of Bank Act giving banks the green light to contract nonbank third parties to collect deposits, money due to the bank or applications for loans or advances, or to make payments to such clients on banks' behalf (Bold, 2011). The agency banking system was introduced in Nigeria in 2013 following the enactment of the regulations by the central bank of Nigeria to guide the implementation of agency bank systems in Nigeria as a way of increasing financial inclusion and delivering banking services in a cost-effective manner (The national treasury report, 2012).

In Ghana, agency banking was introduced in 2008 by allowing bank-based model of branchless banking using nonbank retail Agents. Though the potential for agency banking was recognized in 2008 in Ghana and guidelines set to support it, a complicated regulatory relationship between the

Telco's and banks has inhibited its adoption to full potential. With this in mind, the Bank of Ghana is in the process of updating the regulatory guidelines (Mckay, 2011). In addition, agency banking in Kenya was unveiled in 2011 following the enactment of agency banking regulations in 2010 by the Central Bank of Kenya. Kenya commercial bank (KCB) was the first bank to rollout agency banking in 2011, it further expanded it to its branches in Rwanda (2014), Burundi (2015), Tanzania (2015) and Uganda in 2017 (KCB, 2017). This was followed by Equity Bank Kenya and Cooperative Bank of Kenya.

In Uganda, the amendment of the financial institutions Act of 2004 by parliament paved way for the introduction of agency banking system in Uganda in 2016 with the aim of increasing financial inclusion (Bank of Uganda and the Ministry of Finance Report, 2017). After the amendment of the Act, banks embraced the system as a strategic decision following the direct competition from mobile money services. Mobile money operations had posed a direct threat to the financial performance of the banks by negatively affecting the sales growth, customer base, market expansion, market share, liquidity and profitability (Bank of Uganda Annual report, 2017)

Agency banking has increasingly gained importance in Uganda over the last decade (Odongo, 2016). However, the extent to which agency banking can be used as a tool to deepen the financial sector remains largely unknown. Some of the agency banking transactions which have impact on the financial inclusion in Uganda include loan repayment through Agents, agent transaction volumes, number of banking Agents engaged, customer cash deposits, customer payment of retirement, social benefits and number of new accounts opened (Odongo, 2016).

1.2.2 Theoretical perspective

This particular study was drawn on the agency theory that was useful in guiding conceptualization of agency banking and financial inclusion. Agency theory is founded on the economic theory, it was developed by Meckling& Jensen (1976) and was further advanced by (Alchian & Demsetz, 1972). The theory defines an agency relationship as a contract under which one or more persons (principals) engage another person (agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent (Meckling& Jensen, 1976). It is expected that the agent will continuously act in the best interest of the principal but the theory claims that conflicts are expected to arise when there is incomplete and asymmetric information between principal and agent in a company, there is therefore a need for the agent to reveal more voluntary information to reduce these costs, such as amassing and dissemination of information and infrastructure.

Based on this theory there is the principal who are the commercial banks say Equity, ABSA, Centenary bank among others who own services like loans, insurance, savings and business advice. These banks through a process entrust agents who are referred as bank agents to transact business on behalf of the commercial banks in towns but also in remote areas which are not easily accessible, therefore use of these agents helps banks to provide service or take services closer to people areas hence reducing costs to banks engaged in extending physical infrastructure to remote rural areas and costs in terms of money and time incurred by customers in remote areas to reach bank branches. However, these bank agents are monitored and supervised by the commercial banks to ensure that they do business in the right culture without deviating from the bank policies and procedures. Otherwise, they are accountable to commercial banks.

1.2.3 Conceptual perspective

Otieno (2019) defined agency banking as retail or postal outlets, contracted by the financial institution or a bank network operator, that process the clients' transactions. While Modupe, (2010) defined agency banking as the contractual arrangement by which the licensed financial institutions use third parties to serve clients with financial products. This current study agreed with the definition of agency banking as contended by Modupe, 2010

Shah &Dubhashi (2015) defined financial inclusion as access to a range of financial services including savings, credit, insurance, remittance and other banking/payment services to all bankable households and enterprises at reasonable cost and easy reach. Similarly, Divya (2014) defined financial inclusion as the delivery of financial services at affordable costs to vast sections of the disadvantaged and low-income society. Financial inclusion is also defined as the ability of an individual, household, or group to access a full range of responsibly delivered, affordably priced and reasonably convenient formal financial services, without this ability, people are often referred to as financially excluded (Afande & Mbugua 2015). This study understood financial inclusion as defined by Afande & Mbugua, (2015).

Geographical Coverage of Agency Banking means the spread of agency banking in the different parts of the country and to be specific in Mukono Municipality. Sometimes, the measure of cash somebody needs to pull back from the bank is proportionate, or even not as much as the transportation cost, while others locate the new ultra-present day managing an account lobbies scaring (Wainaina, 2011). This study understood geographical coverage as contended by Wainaina (2011).

An amendment to the Banking Act (passed as part of the Finance Act, 2009) explains number of banking agents engaged to mean agents that are allowed to deliver financial services using small shops, petrol stations, pharmacies and other retail outputs (essentially any profit-making entity that has been in business for at least 18 months and can afford to fund a float account to facilitate payment) as agents could have a dramatic impact on improving access to financial services, especially in rural areas (Fin Access report , 2009).Number of banking agents engaged has been understood in this study as reported in the Fin Access report,(2009).

According to a Bank of Uganda Report by Ivan Ssetimba (2016), 21. 1 million Ugandans are registered for mobile money services basically performing Cash In and Cash Out transactions and payments. Banks offer more than this, providing a potential for agency banking for mobile money users that are not banked. In this study, Agent transaction volume was understood as contented in the Bank of Uganda report to mean Cash in and Cash out transactions.

1.2.4 Contextual perspective

Access to financial services in Mukono Municipality includes access to a bank account and access to a debit card; while use of financial services includes use of a bank account and use of a debit card. Access to financial service promotes thrift and develops culture of savings. Efforts to increase formal financial inclusion in Mukono Municipality are faced with significant challenges which are both supply and demand side in nature.

The high cost of providing financial services in Mukono Municipality often means that formal financial institutions lack the incentive to penetrate these areas as well as the ability to mitigate perceived operational risks (Mukono municiaplity report, 2019).From a demand-side perspective on the other hand, the most significant challenge is that most adults in Mukono

Municipality rely on sources of income that give them access to small amounts of cash on an inconsistent basis. The financial behavior of people in Mokono is driven by their daily needs as they are likely to save and borrow small amounts, quick access to savings and credit would be a key requirement, and they are therefore unlikely to see value in opening a bank account or using other formal financial institutions. However, Mukono Municipality has a relatively sparse financial infrastructure by international standard and more than half of the Mukono Municipality's bankable population is still totally out of the financial services orbit (Odongo, 2016)

1.3 Problem Statement

The financial inclusion strategy was put in place with emphasis on five pillars of reduction of financial exclusion and barriers to access financial services, developing the credit infrastructure, building the digital infrastructure, deepening and broadening formal savings, investment and insurance usage, and protecting and empowering individuals with enhanced financial capability which articulates a vision for Uganda by 2022 in which all Ugandans have access to, and use, a broad range of quality and affordable financial services (Ministry of Finance, 2018) . Rendering to this strategy, a number of efforts have been made to increase financial inclusion in both rural and urban areas, that includes agency banking in order to provide financial service providers (FSPs), primarily banks, with insights into consumer segments they may want to target were agents are appointed by commercial banks to set up their own brick and mortar structures so as to introduce agency banking services and related products that are affordable (Finscope, 2018).

Despite the above strategy of agency banking, levels of financial inclusion in rural areas are still inadequate and this has not left Mukono municipality exceptional as the municipality has

relatively sparse financial infrastructure by international standard and more than half of the Mukono Municipality's bankable population is still totally out of the financial services orbit (Odongo, 2016). The banking hall remains the predominant channel, allowing face to face interaction (a form of preference) followed by the ATMs and thus 58% of the potential users of agency banking need to travel for more than 1 hour to access a bank branch in Mukono municipality (Mukono municiaplity report, 2019). This has resulted into high costs of providing financial services, particularly in the rural areas and among the poorer segments of the population, lower revenue for financial service providers given that poor households have limited investment opportunities and small transaction amounts. It is against this background that the researcher has been prompted to undertake a study on the effect of agency banking and financial inclusion using a case of Mukono Municipality.

1.4 Purpose of the study

The purpose of the study was to examine the effect of agency banking on financial inclusion in Mukono Municipality.

1.5 Specific Objectives of the study

i. To analyze the effect of geographical coverage on financial inclusion in Mukono Municipality.
ii. To examine the effect of agent transaction volumes on financial inclusion in Mukono Municipality.
iii. To assess the effect of number of banking agents engaged on financial inclusion in Mukono Municipality.

1.6 Research questions

i. What is the effect of geographical coverage on financial inclusion in Mukono Municipality?
ii. What is the effect of agent transaction volumes on financial inclusion in Mukono Municipality?
iii. What is the effect of number of banking agents engaged on financial inclusion in Mukono Municipality?

1.7 Scope of the Study

1.7.1 Content Scope

The study focused on the effect of agency banking on financial inclusion. The subject matter was based on the contribution of geographical coverage of agency banking, agent transaction volumes and number of banking agents engaged and how these constructs affect financial inclusion in Mukono Municipality.

1.7.2 Geographical scope

The study was carried out in Mukono municipality. Mukono Municipality is located 21 km east of Kampala along the Kampala- Jinja Highway. It is bordered by Kalagi to the north, Kira Town to the west, Lake Victoria to the south, and Lugazi to the east. The town is 27 kilometers (17 mi) east of the central business district of Kampala, Uganda's capital and largest city. This area was selected because its accessibility to financial services especially in village areas is still very low and this is the core problem for the study.

1.7.3 Time scope

The study reviewed literature about Agency banking for a period starting in 2000 up to date. The year 2000 was considered because this is the period when agency banking was introduced in the

world that's to say in Brazil and Latin America which were the pioneers of agency banking. While literature on financial inclusion was reviewed for the period starting 2016 to date because that was the period when financial inclusion strategy was introduced in Uganda.

1.8 Justification of the study

Agency banking is a powerful approach in the quest for financial inclusion because of its ability to reduce bank costs to serve. Many banks are deterred from setting up branches in remote, poor and sparsely populated areas because of the high set up costs which does not correspond to the perceived business from such areas. By setting up agent banks and making use of existing infrastructure offered by retailers a bank is able to penetrate underserved areas and at low cost which ought to reduce financial exclusion. Agency banking systems are up to three times cheaper than traditional bank branches because they minimize fixed costs by leveraging existing retail outlets thus reducing the need for the financial institution to invest in their own infrastructure. It was therefore vital to examine the relationship between agency banking and financial inclusion.

1.9 Significance of the study

The study would significantly add to the already existing theories and the body of knowledge by showing the relationship between agency banking and financial inclusion. This would expand the theoretical and empirical development on literature as different studies have been made though using different variables and proxies.

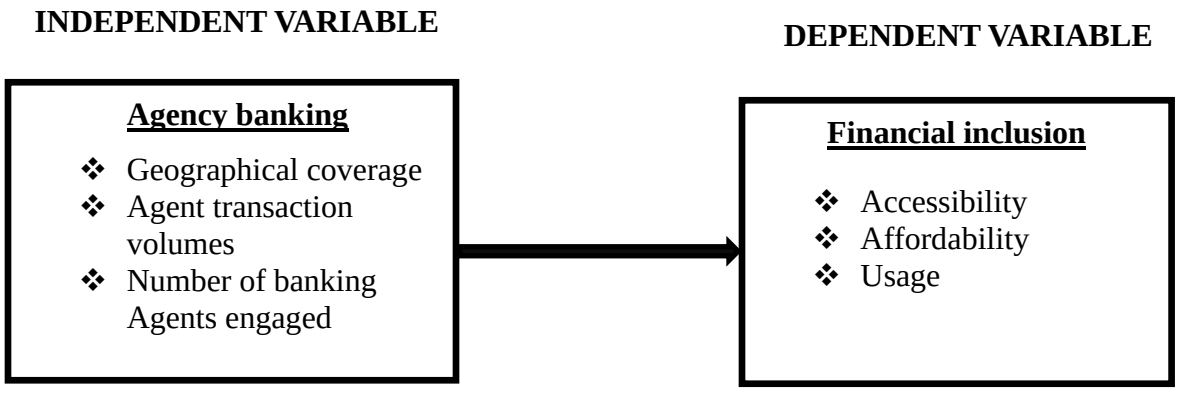
The findings of this study would inform the policy makers such as the, Bank of Uganda and the Ministry of Finance, Planning and Economic Development to develop support strategies on how agency banking can improve financial inclusion.

The study would also provide an opportunity for future researchers to examine the between agency banking and financial inclusion. The recommendations of this study would create room for future research on the relationship among the above variables and as a result, the study may be used as a diagnostic tool to determine specific areas which may require improvement in connection to Financial inclusion.

1.10 Conceptual Frame Work for the Study

Based on the theoretical background and literature reviewed, a conceptual framework was developed for this study. The framework is given in figure 1 below.

Figure 1. 1: Conceptual frame work



Source*:* Afande & Mbugua, (2015) ; Ndegwa (2017) *as modified by the researcher*

depicts

Specifically, the figure depicts the relationship between agency banking as the independent variable and financial inclusion as the dependent variable. The dimensions of agency banking as Geographical coverage, Agency transaction volumes and Number of banking Agents engaged

(Ndegwa, 2017). Financial inclusion was conceptualized as the dependent variable, was operationalized, as used in previous empirical studies to mean ability of an individual, household, or group to access a full range of responsibly delivered, affordably priced and reasonably convenient formal financial services (Afande & Mbugua, (2015)

1.11 Definitions of key terms

Agent: an entity that has been contracted by an institution and approved by the Central Bank to provide the services of the institution on behalf of the institution in the manner specified by the Central Bank of Uganda Guideline.

Agent banking business: business carried out by an agent on behalf of an institution as permitted under Central Bank of Uganda guideline.

Financial inclusion: refers to the policy goal of reaching both banked and unbanked households with a full range of responsibly delivered, affordably priced and reasonably convenient formal financial services.

Geographical coverage: The ability of agency bankers to bring financial services closer to customers.

1.12 Organization of the report

This report comprises five chapters: Chapter one introduced the, historical, conceptual, theoretical and contextual aspects of that included Agency banking and Financial inclusion. This draws up the basis for presenting the research problem, the research objectives and the value for

the study to support the research. This chapter also presents the organization of the report which encompasses five chapters.

Chapter two made provision for a review of theories and empirical literature that explains the association among study variables. Agency theory was reviewed and a summary of the empirical studies and research gaps have also been availed in this chapter.

The third chapter presents the methodology used in the study and included the research design, study population, sample size and sampling technique. The chapter discussed reliability and validity and also considered the diagnostic tests that were used in the study. The chapter also presented methods adopted in data collection, measurement of research variables, data analysis techniques, analytical models, ethical issues and limitation for the study.

Chapter four presents the background information of respondents used in the study, descriptive statistics for agency banking and financial inclusion was also presented. Various diagnostic tests were carried out and a Pearson correlation analysis and a multiple regression analysis presented together with the interpretation of findings. Finally, chapter five revealed the summary and discussion of findings, conclusion of the study, recommendations and areas for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presented the related literature on conceptual, empirical and theoretical studies on financial inclusion and agency banking. An analysis of the literature related to the study concepts and the research objectives was reviewed by putting into consideration works that have been done by other scholars regarding the variables in the study and the underlying gaps in the literature that the study intended to fill are specified.

2.2 Theoretical review

This particular study was drawn on the Agency theory that was found to be useful in guiding conceptualization of the study as reviewed below.

2.2.1 Agency theory

The agency theory stands as a very crucial theoretical paradigm in finance and accounting and was developed by Meckling & Jensen, (1976). An agency relationship involves a business owner engaging an agent. Agency theory is profoundly entrenched in Economic theory and assumes that investors who own the company delegate the operations of the business to the manager or an agent

The theory defines an agency relationship as a contract under which one or more persons (principals) engage another person (agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent (Meckling & Jensen, 1976). It is expected that the agent will continuously act in the best interest of the principal but the theory

claims that conflicts are expected to arise when there is incomplete and asymmetric information between principal and agent in a company.

The relationship between the principal and the agent is called the “agency,” and the law of agency establishes guidelines for such a relationship. The formal terms of a specific principal-agent relationship are often described in a contract. A contract to be made by an agent on behalf of a principal is well-thought-out to be the contract of the principal and not that of the agent. It allows the principal to authorize somebody to carry out her duties, either for a specific purpose or generally (to conduct many transactions). Inherent in the Principal-Agent relationship is the understanding that the agent will act for and on behalf of the principal. The agent assumes an obligation of loyalty to the principal that she will follow the principal’s instructions and will neither intentionally nor negligently act improperly in the performance of the act. An agent cannot take personal advantage of the business opportunities the agency position uncovers. A principal, in turn, reposes trust and confidence in the agent. These obligations bring forth a fiduciary relationship of trust and confidence between Principal and Agent (Afande & Mbugua, 2015)

Certainly, so rooted is the notion of the need to keep the incentives of agents and principals aligned that the law frequently holds principals liable for the misdeeds of an agent. For a person or business to decide whether or not to contract with an agent, she must weigh the expected benefits of that relationship against its potential costs. The deviation from the principal's interest by the agent is called 'agency costs. Numerous mechanisms may be used to align the interests of the agent with those of the principal. The first type of agency cost is expenditures by the principal in monitoring the agent. By monitoring costs, economists usually imply not only

observing the behavior of the agent, but also "efforts on the part of the principal to 'control' the behavior of the agent through compensation policies, operating rules, etc" (Ndegwa, 2017).

The concluding class of agency costs is the principal's lost welfare caused by the divergence in her interests from those of her agent. If because of conditions such as technology, geography, or even personalities engaged, an agent cannot be perfectly monitored or bonded, and then we should expect that the interests of the principal and the agent will not be coextensive. Though achieving zero agency costs is nearly impossible, as the marginal costs of doing so will eventually be higher than the accompanying benefits of perfect alignment, monitoring and incentives intends to minimize them (Shapiro, 2005).

Agency Theory is pertinent to this study because it appreciates the role of the agent in achieving a greater goal. According to the theory the delegation of responsibility by the principal and the resulting division of labor are helpful in promoting an efficient and productive economy. The delegation of responsibility in the context of this study is the outreach of financial services from the banking halls to where people live and work ensuring rise in financial inclusion.

2.3 Conceptual review

The conceptual review presented a clear understanding of the concepts that were used in the study. This includes; understanding of agency banking, and financial inclusion, geographical coverage, agent transaction volumes and number of banking Agents engaged.

2.3.1 Agency banking

Agency banking is a section of branchless banking which leverages on ICT to provide financial services outside the traditional brick and mortar bank premises (Quigg, 2013). With the

introduction of agency banking, banks are able to meet the diverse financial needs of their customers in different parts of the country hence improving their market share, profitability, financial inclusion as well as competitiveness (Kariuki & Namusonge, 2016). According to Mas (2009) technology-enabled agent rather than a bank branch teller, conducts financial services such as making deposits, withdraws, and transfers funds and paying bills for the clients on behalf of the bank and it involves movement of financial services beyond conventional banking systems to more scalable and low-cost channels so as to ensure financial services are provided profitably and sustainably to all segments of the population that were previously untapped.

Since 2014, the UN Capital Development Fund (UNCDF) has focused on improving access to financial services in Uganda through its MM4P programme. Core to this effort has been an initiative to support leading banks to implement agency banking as an alternative delivery channel. To do so, UNCDF partnered with five banks on projects between September 2016 and July 2018, providing technical assistance grants in addition to facilitating expert guidance through consultancy firms as the banks designed, piloted, and rolled out agency banking in Uganda (UNCDF, 2019).

The Parliament of the republic of Uganda passed the Financial Institutions (Amendment) Act, 2016 which made provisions for agent banking. Agent banking, governed by agent banking regulations 2017 were to enable financial institutions enter into the digital financing space to drive financial inclusion and increase access to financial/banking services to a range of under-served and unbanked population segments. Banks in Uganda through their umbrella body Uganda Bankers Association (UBA) approached agent banking through a shared interoperable technology platform and agent network management framework to harness the benefits that accrue from collaboration/convergence. The approach was meant to enable all agents provide

agent banking services to customers of all/any bank as the individual banking institutions continue to drive the recruitment of customers and marketing of their own products and services. Through this shared platform, banks use agent banking services to foster financial inclusion and deepen the financial infrastructure and financing lower levels of the economy helps families of any social and economic status to create (Financial Institutions (Amendment) Act ,2016).

Following regulations passed in July 2017, banks in Uganda use agency banking—an extension of services traditionally offered in bank branches whereby third parties (Agents) offer these services on behalf of banks—to expand their presence, particularly in rural areas where brick-and-mortar branches are often expensive. For instance, estimates indicate that over 9 million Ugandans need to travel more than an hour to access a bank branch.1 For customers, agency banking means reduced travel time as well as greater access to and increased convenience of formal financial service (UNCDF, 2019).

2.3.2 Geographical coverage

According to Ivatury and Timothy (2016), agency banking could be of advantage to the customers in the accompanying ways; bring down exchange cost, clients can along these lines withdrawal or store little sums without acquiring additional costs like transport to a bank office, longer opening hours since this organization work for longer hours than banks, shorter lines than in branches, more available for uneducated people and the extremely poor who may feel threatened in branches. Therefore, clients save money on time they need to go to a bank office, and the time they need to hold up in line to be served hence reflecting a sign of financial inclusion.

Achieving poor customers in provincial regions is regularly restrictively costly for budgetary foundations since exchange numbers and volumes don't take care of the expense of a branch (Kitaka, 2001). In such environments, banking gents that piggy back on existing retail foundation and bring down set up and running expense can assume a fundamental part in offering many low wage individuals their first-time access to scope of budgetary administrations. Likewise, low-salary customers frequently feel greater managing an account at their neighborhood store than strolling into a marble branch (Adiera, 2017). The higher the geographic penetration indicator is, the lower is the distance, and therefore the ease of access to the infrastructure. The limitation with this however is that it assumes uniform distribution across the geographical area.

One of the reasons which can be attributed to the low financial inclusion in rural areas is the long distance they need to travel to access financial services. Sometimes, the measure of cash somebody needs to pull back from the bank is proportionate, or even not as much as the transportation cost, while others locate the new ultra-present day managing an account lobbies scaring. In this way they stay away from formal monetary administrations and settle on casual money related administrations which are promptly open in provincial ranges (Wainaina, 2011).

2.3.3 Agent transaction volumes

The agent has to maintain sufficient cash float and e-money float to meet volumes of transaction requirements at business times. Businesses employed as agents might leverage excess cash from their own turnover and profits to provide the required float for CICO transactions (Afande & Mbugua, 2015). In that overview, the agent needs to settle float as frequently as every four days due to the dominance of cash-in transactions from customer savings (Ivatury, & Lyman 2016).

Aduda & Kalunda (2018) opine that banking Agents should be the lowest cost channel for cash transactions, and the charges for using them should reflect that. Transaction charges should be lower on deposit than on withdrawal, reflecting the additional revenue deposits. This may seem at odds with the higher commission the bank might pay the agent for a deposit, but this reflects that the bank stands to gain far more from a deposit than from a withdrawal.

In cases where the bank focuses on savings, transmittances, and payments to meet the specific needs of low-income and unbanked populations, cash-in transactions result in a positive cumulative net cash flow at the agent in early stages, so that the he has to settle excess cash for e-money, once savings accounts are built up, cash-out transactions may dominate. For a consistent customer experience and in order not to discourage customers, adequate float management has to ensure sufficient float to meet cash-out requirements at business times (Ledgerwood, 2017).

Agent banking systems are up to three times cheaper to operate than branches for two reasons. First, agent banking minimizes fixed costs by leveraging existing retail outlets and reducing the need for financial service providers to invest in their own infrastructure. Although agent banking incurs higher variable costs from commissions to Agents and communications, fixed costs per transaction for branches are significantly higher (Mbugua & Omagwa, 2017).

2.3.4 Number of banking Agents engaged

The agents engaged by the commercial banks are paid pre-agreed commissions on the various transactions they carry out on behalf the commercial banks. The banks hence have to continuously do a cost-benefit analysis to ensure that the optimal number of agents is maintained to avoid incurring unnecessary losses (Mateka et al., 2017).

Tarazi and Breloff (2011) continues to state that in all four countries, banks are held fully liable for the services delivered by their Agents. However, there is usually regulation that sets minimum requirements that Agents must fulfill, such as number of years in business or a credit record from the agent. The stricter the requirements the lower the risk to the financial system, but strict requirements can also limit the ability of financial institutions to expand into areas where there are fewer qualified businesses to act as agents.

As indicated by Alliance for Financial Inclusion report of 2018, the types of businesses acting as agents on behalf of banks vary from country to country. Often an agent can be any type of legal entity or business. Mexico and Peru have the additional condition that an agent cannot be an entity whose primary business is financial services. On the other hand, in Brazil and Colombia, Commercial banks, Savings and Credit Cooperatives, and other financial entities are acting as Agents for larger financial institutions (AFI report, 2018).

2.3.5 Financial inclusion

Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker sections and low income groups at an affordable cost in a fair and transparent manner by mainstream institutional players (Dangi & Kumar, 2013). An inclusive financial system facilitates efficient allocation of productive resources and reduces cost of capital. Financial inclusion has two main components that 4 include literacy and inclusion with literacy representing the demand side and inclusion representing the supply side (Afande & Mbugua, 2015).

A well-functioning financial system serve a vital purpose, offering savings, credit, payment, and risk management products to people with a wide range of needs (Sethy, 2015). Inclusive financial systems allowing broad access to financial services, without price or non-price barriers to their use are especially likely to benefit poor people and other disadvantaged groups. Without inclusive financial systems, poor people must rely on their own limited savings to invest in their education or become entrepreneurs and small enterprises must rely on their limited earning to pursue promising growth opportunities, this can contribute to persistent income inequality and slower economic growth (Mbugua & Omagwa, 2017).

Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost (Jansen, 2012). The financial services include the entire gamut of savings, loans, insurance, credit, payments, etc.

The financial system is expected to provide its function of transferring resources from surplus to deficit units, but both deficit and surplus units are those with low incomes, poor background, etc. By providing these services, the aim is to help them come out of poverty. One common measure of financial inclusion that is by and large accepted universally is the percentage of adult population having bank accounts (Sharma et al., 2013). Financial inclusion, of late, has become the buzzword in academic research, public policy meetings and seminars drawing wider attention in view of its important role in aiding economic development of the resource poor developing economies (Mateka et al., 2017).

The size of the financially excluded population in the world is enormous according to the United Nations, approximately three billion people around the globe lack access to formal financial

services- such as bank account, credit, insurance, a safe place to keep saving and a secure and efficient means to receive social benefit payments- through a registered financial institution (Casu et al., 2004).

Sethy, (2015) stipulates that this sizeable population of the world particularly poor, low income and vulnerable group remain excluded from the most basic financial services provided by financial sector. It has been universally accepted that developing financial sector and improving access to financial services accelerate economic growth and helps to achieve inclusiveness growth.

Uganda launched its National Financial Inclusion Strategy 2017 – 2022 on 26 October 2017, the National Financial Inclusion Strategy (NFIS) entails that "all Ugandans have access to, and use of, a broad range of quality and affordable financial services which helps ensure their financial security". The NFIS seeks to reduce financial exclusion from 15 to five percent by 2022.Uganda's NFIS is based on five key pillars that address both demand and supply side barriers to financial inclusion, with critical gaps identified under each strategic pillar. These pillars include: reducing financial exclusion and barriers to access financial services; developing the credit infrastructure for growth; building the digital infrastructure for efficiency; deepening and broadening formal savings, investment and insurance usage; and protecting and empowering individuals with enhanced financial capability. The ultimate objective of enhancing financial inclusion is to improve the welfare of Ugandan citizens and to contribute to socio-economic development (Okello Candiya Bongomin et al., 2016)

2.4 Empirical Review of the study

There are several research studies which have been done in the past which have tried to explain the role of agency banking in promotion of financial inclusion, this section describes these studies in line with the study objectives namely geographical coverage, agent transaction volumes and Number of banking Agents engaged.

2.4.1 Geographical coverage and financial inclusion

A study was conducted on the role of Agent Banking Services in Promotion of Financial Inclusion in Nyeri Town, Kenya by (Afande & Mbugua, 2015). This study explored the extent to which banks were able to partner with Agents and commercial entities with a primary objective of provision of financial services using of a descriptive research design on data that was collected by use of questionnaires, that were administered to bank branch managers and appointed agents of Equity Bank, Co-operative Bank and Kenya Commercial Bank. The findings of the study using a regression analysis indicated that the four factors (availability of liquidity, geographical coverage, costs and security of agent banking services) had a positive ($F=19.34$) and significant ($P<0.05$) relationship to financial inclusion with Geographical coverage being the highest contributor to financial inclusion.

The study conducted by Ivantury and Timothy (2006) whose results were based on surveys of 215 low-income WIZZIT users and 300 low-income nonusers conducted in July and August 2006. Users were randomly selected from a client list provided by WIZZIT and interviewed by telephone. Nonusers were interviewed in person and found by randomly selecting households from the same municipalities in which WIZZIT user respondents live. Ninety nonusers were surveyed in metropolitan areas and 210 in nonmetropolitan areas, including rural farm areas. The

findings revealed that agency banking benefited clients in the following ways; lower transaction cost (Closer to client's home), longer opening hours, shorter lines than in branches, more accessible for illiterates and the very poor who might feel intimidated in branches.

Wright (2012) in Zimbabwe sought to establish the convenience of agency banking. The study found that the average daily deposit (Z$10) is the same as the fare cost to the bank. She also considered time wasted at the bank or ATM plus the opportunity cost of lost business. It was concluded that savings for the client in this case would surpass 100 percent if an agent were nearby to provide the service.

A study conducted by Ndegwa (2017) to evaluate role of agent banking services in promoting financial inclusion in Kenya by analyzing the extent to which geographical coverage and liquidity affect agency banking as a financial inclusion strategy. The study adopted a cross-sectional survey design and targeted 38 administration managers and supervisors of the commercial banks in Kiambu which had adopted the agency banking model. Census was adopted to include 38 managers and supervisors to participate in the study. The study used a self-administered questionnaire to collect data. Based on the results, geographical coverage ($p=0.037$) and liquidity ($p=0.028$) were found to be statistically significant at a 95% confidence level.

Lotto, (2017) assessed the leverage provided by agency banking in promoting the financial inclusion in Tanzania. The study was descriptive in nature and utilized primary data collected from bank Agents' outlets in Dar es Salaam. The analytical results of the study showed that agency banking had helped to simplify banking service by reducing distance for customers to reach service point. The study has also found that liquidity problem is not a big concern as the Agents' operation are properly scrutinized and monitored by the parent banks to avoid cash

shortage crisis and minimizes security issues. It is also found in the study that agency banking costs are reported to be lower compared to those of traditional banking services. It is therefore concluded, from this study, that greater geographical coverage brought about by agency banking is a stronger promoter of financial inclusion because services follow people closer to where they leave and hence reduce the travelling costs and other hassles Engaged like time wasted in long queues at bank branches.

2.4.2 Agent transaction volumes and financial inclusion

In 2018, Boston Consulting Group conducted a study on the economics of financial services agent networks, with a particular focus on those that support mobile money platforms. The work demonstrates that agent networks can flourish in areas that support healthy numbers of transactions. In those locales, the transaction fees earned by Agents more than compensate for the financial costs and operational burdens of the business. Further still the study indicated that worldwide, 35% of the adult population lack basic financial services and this stems from limited reach of financial services networks in many parts of the world. Banks have traditionally used bank branches and ATMs to provide cash in / cash out services but the channels do not make economic sense in many developing market locale thus Agents transactions remain a critical foundation for expanding access to financial services and the profitability of Agents is highly correlated with the volume of transactions they execute because Agents generate revenue primarily from transaction fees(Unnikrishnan et al., 2019).

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has helped to simplify banking service by reducing distance for customers to reach service point. The study has also found that liquidity problem is not a big concern as the Agents' operation are properly scrutinized and monitored by the parent banks to avoid cash shortage crisis and minimizes security issues. It is also found in the study that agency banking costs are reported to be lower compared to those of traditional banking services. During the interview with the bank branch managers it was realized that the initial costs of setting up a branch and running cost takes many years to be translated into profits hence limiting branch expansion. The managers insisted that the only alternative to serve large number of people is taking services closer to the people in areas with potentially less number and volume of transactions like in remote and rural areas via agency banking. This in turn will lead to increased customer base and thus the market share; increased (Lotto, 2017)

2.4.3 Number of banking Agents engaged and financial inclusion

Kamau (2012) studied the relationship between agency banking and financial performance of banks in Kenya. Through review of secondary data, the study found that agency banking outlets had increased to 9,748 active Agents in 2011 from 8,809 in 2010. These specific Agents facilitated a total volume of 8.7 million transactions valued at KSh 43.6 billion in 2011. Most of these transactions were mainly made up of cash withdrawals and cash deposits carried out at the various banking agency outlets. The study used regression analysis to find the relationship between agency banking (in terms of number of Agents and number of deposit and withdrawals transactions undertaken through Agents) and the financial performance of banks as measured by return on equity. From the regression model, all the independent variables were found to have either negative or weak correlation to the dependent variable. Therefore, the study concluded that

agency banking does not solely contribute to increased profitability in Kenyan banks as per the secondary data reviewed for 2010 and 2011.

A study by Kitaka (2001) shows that the operation of banking Agents relieves the commercial banks from attending long queues at their branches and, therefore, increases the convenience of serving their customers. In other developing countries' financial institutions Agents banking is used to reach the business segment which is geographically located away from their usual business centers. According to Kitaka (2001) serving rural area clients is significantly expensive for banks and other financial institutions because the volume of transaction is not large enough to cover the cost of establishing a bank branch. The study concluded that, in a situation where the establishment of a bank branch is economically not viable, banking Agents may serve so much these segments of underserved population at a relatively lower operating cost.

The 2016 amendment of the Financial Institutions Act 2004 provided for agency banking. This innovation allows supervised financial institutions to enter into a contract with a third party referred to as agent, who must be approved by Bank of Uganda (BOU), to provide permitted services on the institution's behalf. Business units that are fully licensed and have been in existence for at least one year qualify to be Agents of agent banking. The objective is to take financial services closer to the community and by doing so reduce the costs associated with operating bank branches.

According to (UBOS 2016), the most commonly used method of saving in several districts is keeping the money at home. Agency banking therefore provides an opportunity for such an unbanked population to access financial services. There are currently 15 banks undertaking agency banking including Equity, Tropical, KCB, Finance Trust, Stanbic, Centenary, Housing

Finance, Exim, DFCU, ABSA, Diamond Trust, Bank of Africa, United Bank of Africa, Ecobank and Opportunity. Total transactions by Agents have grown from Shs. 457 billion in December 2018 to Shs. 1.6 trillion in February 2020. However, transactions dropped in April 2020 to Shs. 900 billion during the lockdown to mitigate COVID-19 spread and recovered in May 2020 to Shs. 1.4 billion. Agency banking is mainly used for depositing, with deposits received through agency banking accounting for 12 percent of total deposits as at May 2020 while withdrawals are less than 1 percent of total withdrawals (BOU working paper, 2020).

2.5 Literature gap from previous studies

Previous researchers have generally focused on the impact of agency banking services toward the financial sector development as a whole and came up with the findings that agency-banking sector has created thousands of jobs since then through the hiring of Agents and brought millions of previously unbanked Ugandans to the formal banking sector (Unnikrishnan et al., 2019; Lotto, 2017). However, there is no previous research which clearly focuses on the effect of agent transaction volumes on the financial inclusion which the current study addresses.

The agency banking is fairly a new phenomenon which banks have adopted as a financial deepening and inclusion initiatives and particularly to reach the unbanked population. In the last five years, research has been carried on agency banking and financial inclusion and discovered that financial inclusion, of late, has become the buzzword in academic research, public policy meetings and seminars drawing wider attention in view of its important role in aiding economic development of the resource poor developing economies (UNCDF, 2019). However, minimal research has been carried out with the objective of establishing the effect tof number of banking Agents engaged on financial inclusion.

2.6 Conclusion

In spite of these great strides by past researchers, a careful examination of the literature on Agency banking and Financial inclusion in developing countries, especially Africa, reveals a surprising gap in the literature regarding country-specific analysis of the effect of Agency banking on Financial inclusion particularly in Uganda. However, based on the literature reviewed and lessons drawn from other developed countries that have adopted agency banking it is crystal clear that to achieve financial inclusion, the number of people with no access to financial services needs to be reduced, the former however can be achieved by supporting agency banking as model to tap into the un banked masses.

2.7 Chapter Summary

This chapter was devoted to a detailed literature review and the chapter provided a detailed description of the agency theory that guided the study. The chapter presented the conceptual review of the various concepts based on the conceptual model used in the study and empirical literature that was based on the study objectives of the study variables. The key academic journals, working papers and theses reviewed focused on Agency banking and Financial inclusion. Knowledge gaps from literature reviewed and conclusions made were also presented in this chapter.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodological choices that were adopted in the study. The chapter underlined the research design, the study population, the description of the sample size and selection, the sampling techniques, and as well as the procedure of data collection and data collection methods used in the study. Additionally, attempts that were utilized to address validity and reliability concerns, data analysis methods as well as the necessary diagnostic tests to ensure the data analysis methods adopted are appropriate for the data to be collected were discussed. Finally, this chapter also presented the ethical consideration and limitations of the study.

3.2 Research Design

Rendering to Saunders, Lewis and Thornhill (2009), a research design should indicate the choice of research strategy, choices of data collection techniques ,analysis procedures, and the time horizon over which a research project would be under taken. In line with this understanding, the study adopted a cross-sectional survey design aimed at establishing facts about the issue of study (Kothari, 2004). A survey strategy was used in order to allow the collection of a large amount of data from selected bank managers, bank clients, supervisors of the banks and employees of the banks in Mukono municipality in a highly economical way, using this strategy the choices of data collection techniques used were a mixed methods approach where both quantitative and qualitative data was collected using a questionnaire, and structured interviews in order to allow triangulation by ensuring that the limitations of one type of data are balanced by the strengths of another. The data collected was analysed quantitatively using descriptive and inferential statistics and qualitatively using content analysis at the same time (parallel). The time horizon over which

the project was undertaken was cross sectional aimed at collection of data at a particular point in time.

3.3 Study Area and study population

The study was carried out in Mukono municipality, and this area was selected because its accessibility to financial services especially in village areas is still very low and this is the core problem for the study. The municipality had 10 banks that had adopted agency banking namely, Absa Bank Uganda Limited, Centenary Bank, Ecobank, DFCU Bank, Equity Bank Uganda Limited, Finance Trust Bank, Housing Finance Bank, Stanbic Bank Uganda Limited, United Bank for Africa, Opportunity Bank Uganda (UBOS 2016).

The study targeted 10 bank managers of the above banks that had adopted agency banking, 30 banking agents of those banks, 35 bank employees, 10 bank supervisors of the banks Mukono Municipality and this comprised a total target population of 85 respondents.

3.4 Sample Size and selection

3.4.1 Sample size determination for quantitative method

In the case of sample size determination, this study drew on Krejcie and Morgan scientific guideline in establishing the sample size of the study. In the study, a 95 percent confidence interval was sought as well 5 % margin of error. With these specification Krejcie and Morgan, (1970) guideline would advocate a sample of 70 respondents out a target population of 85 respondents.

Based on the above sample selection, 8 bank managers 25 banking Agents of those banks, 29 bank employees and 8 supervisors of the banks in Mukono Municipality that had adopted agency

banking were identified and 70 questionnaires distributed to them. However, 60 questionnaires were collected back making an effective response rate of 85.71%. This response rate was considered ideal to carry out the study.

3.4.2 Sample size determination for qualitative method

For qualitative research, the common method used to establish the sample was getting to the point of saturation. In this study, this approach was utilized to obtain the sample size of 8 respondents on which interviews were conducted and these included 3 bank managers, 3 bank Agents and 2 bank employees that were selected using purposive sampling method. All these respondents were interviewed giving a response rate of 100%. With that high response rate, the findings of the study were representative of the actual population and could therefore be generalized (Saunders et.al, 2009).

3.5 Sampling techniques

3.5.1 Purposive sampling

A purposive sampling technique was used to select the bank managers, bank agents and employees. This method enables one to use personal judgment to select cases that can be able to answer the research question(s) and to meet the research objectives. This form of sample is often used when working with very small samples that are particularly informative in order to provide justification to make generalizations from the sample (Saunders, Lewis, & Thornhill, (2009).

3.5.2 Simple random sampling

The study also adopted simple random sampling technique to select bank Agents and bank employees, this method was used to ensure more representative and equal chances of participation in the study by the respondents.

3.6 Data Collection methods

Quantitative and qualitative data collection methods were utilized to collect data through primary sources from the targeted group of people about their opinions, behavior, or knowledge about the phenomenon. The quantitative data collection method was the main method employed to address the study objectives while the qualitative method was used to triangulate results obtained using the quantitative method.

3.7 Data Collection instruments

A structured questionnaire and an interview guide were used by the researcher to gather firsthand information from the bank managers, bank Agents, bank employees and bank supervisors.

3.7.1 Data collection using a questionnaire

A structured questionnaire was developed following recommended guidelines by various scholars that including Kothari, (2004) and Sekaran and Bougie (2010). The first section of the instrument addressed issues of demographic data, section two geographical coverage of agency banking, section three addressed Agent transaction volumes, Section four addressed the number of banking Agents engaged and section five addressed financial inclusion. The study constructs were put on a five-point likert scales ranging from strongly Agree as response 5 to strongly Disagree as response 1. In each section, the respondents were given clear instructions on how to

complete the item and the questionnaires were close-ended. All the questionnaires were self-administered using a drop and pick method and questionnaire was refined once the instrument was piloted.

3.7.2 Data collection using an interview guide

An interview guide was used to collect qualitative data. The researcher designed a structured interview guide which was used during the interview of the key respondents. Questions posed were intended to lead the respondents towards giving that would be used to triangulate the results from the questionnaires and probe the respondents in order to seek clarification about responses provided. All interviews for this study were conducted face-to-face and this took only 30 minutes on every respondent and anonymity was held.

3.8 Procedures of data collection

Before administration of questionnaires, an introduction letter was obtained from Kyambogo University graduate school and was used when seeking permission to collect data from the respondents about the topic under study in two phases of the pilot and main study.

A pilot-study was carried out in Nansana municipality from the banking that had adopted agency banking as it was believed that banks in this division had similar characteristics with those of Mukono municipality. Thirty respondents were randomly and purposively selected from the banks seeking approval from the town clerk of the municipality. The questionnaires were administered bank Agents, bank employees, and bank managers. Based on their feedback, modifications were made to the questionnaire for the next phase of data collection. Responses from the pilot-study were not included in the final sample.

In the main study phase, approval was sought from the town clerk of Mukono municipality to be able to access the bank managers, bank Agents, bank supervisors and bank employees in the area and thereafter, questionnaires were delivered to them based on the survey sample. The package contained a covering letter and a questionnaire, the cover letter was used to explain the purpose of the survey. The respondents were assured of the confidentiality of their responses. After administration of questionnaires that were retrieved after 2 days and checked for completeness of all answers and the questionnaires retrieved were then arranged for data analysis

3.9 Quantitative study validity and reliability of instruments

3.9.1 Validity

A face validity was used where items included in the questionnaire were derived from previous empirical studies as those that were found to explain the construct variables well. For further analysis after collection of data, convergent and construct validity tests were conducted for the research variables. To demonstrate convergent validity, magnitude of the structural relationship between the item and the latent construct (factor) should be statistically different from zero (Hair et al., 2010). Construct validity being the extent to which a particular item relates to other items measuring the same variable were examined using factor analysis. All the factor loadings were greater than the cutoff point of 0.50, as recommended by Nunnally (1978), this showed strong convergent validity and thus all the items above the threshold were considered for final study as shown in the table 3.1 below;

Table 3. 1: Factor analysis for the study variables

Variables and their measures	**Factor loadings**
Geographicl coverage α=0.779	
Banks take their services closer to their customers in areas with potentially less number and volume of transactions	.670
Clients are willing to pay more at agent outlets since they are near their premises	.540
There is proximity agencies to residential areas	.690
Customers don't have to travel far and then queue on ATM and banking halls to make payments or withdrawals	.584
Eigen value	**3.156**
Total variance explained	**63.281**
Kaiser-Meyer-Olkin (KMO)	**0.579**
Bartlett's Test Sphericity	**42.79*** **
Agent transaction volumes α=0.752	
The agent collects compliance materials from users before performing any transaction	.709
The agent selects the type of transaction on personal device and enters the amount after swiping the client's card through the device	.674
The bank client requests the specific transaction and the amount to be withdrawn, deposited or transferred through agents	.674
Eigen value	**3.156**
Total variance explained	**47.017**

Kaiser-Meyer-Olkin (KMO)	**0.59**
Bartlett's Test Sphericity	**64.47*** **

Number of bank agents engaged α=0.776

The bank sets strict requirements that limit the ability of financial institutions to expand into areas where there are fewer qualified businesses to act as agents	.672
The agencies engaged by the commercial banks are paid pre-agreed commissions on the various transactions they carry out on behalf the commercial banks	.734
The optimal number of agents is maintained to avoid incurring unnecessary losses	.791
Banks are held fully liable for the services delivered by their agents	.629
Eigen value	**2.012**
Total variance explained	**50.306**
Kaiser-Meyer-Olkin (KMO)	**0.712**
Bartlett's Test Sphericity	**32.99*** **

Financial inclusion α=0.742

Individuals in Mukono municipality have access to savings, credit, payment, and risk management products to meet their wide range of needs	.625
Entrepreneurs in Mukono municipality have timely and adequate credit which can be invested in their small-scale income generating activities	.800
Proper financial institutions are established to cater for the needs of the poor	.806
The biggest percentage of adult population in Mukono Municipality have bank accounts	.653

People save their cash so that they can make future investments or respond to unforeseeable risks in Mukono Municipality	.603
Eigen value	**2.471**
Total variance explained	**49.410**
Kaiser-Meyer-Olkin (KMO)	**0.675**
Bartlett's Test Sphericity	**69.*** **

N=155, ***p<0.00, **p<0.01, *p<0.05, α is Cronbach Alpha coefficient computed for scales with three items and more

Source: Primary data 2020

3.9.2 Reliability

For reliability, consistency was examined by establishing internal consistency reliability of the measurement scales for the study variables as well as split-half reliability using Cronbach's alpha (Cronbach, 1951) and Sekaran & Bougie, 2010)). All the reliability coefficients were above 0.70, a cutoff recommended by Nunnally (1978) and the findings for each of the variables are presented below

Table 3. 2: Reliability of the research variables

Variable	No. of items	Cronbach Alpha
Geographical coverage	4	0.779
Agent transaction volumes	3	0.752
Number of banking Agents Engaged	4	0.766
Financial inclusion	5	0.742

Source: Primary data 2020

3.9.3 Addressing validity and reliability concerns in the qualitative data

Saunders et.al (2009), suggested a number of measures to minimize bias during qualitative studies to include but not limited to; acknowledging biases in sampling, making accountability for personal biases and data triangulation. In this study, the supervisors' comments were utilized to correct and improve the interview guide document.

3.10 Measurement of study variables

3.10.1 Measurement of the Independent variables

The independent variable of the study was agency banking that was measured using geographical coverage, agent transaction volumes and number of banking Agents Engaged. The items that were used to measure these constructs were put on a five-point likert scale ranging from "strongly agree" to "strongly disagree" and means were computed to enable the analysis, a similar measurement was adopted by other researchers such as Afande & Mbugua, (2015) and Ndegwa (2017) . A list of the constructs used in this study along with the set of items/indicators used to measure each construct can be found in Appendix one.

3.10.2 Measurement of the Dependent variable

The dependent variable of the study was financial inclusion that was operationalized using affordability, accessibility and usage (Ndegwa, 2017). The items that were used to measure these constructs were put on a five-point Likert scale ranging from "strongly agree" to "strongly disagree" and means were computed to enable the analysis,

3.11 Data Analysis

The Collected data from the questionnaire was edited, coded and then quantitatively analyzed. The SPSS tool version 23 was used to capture and analyse the data. The analysis Engaged multiple regression equation model to test the effectof agency banking using geographical coverage, agent transaction volumes and number of Agents Engaged on Financial inclusion. In order to utilize a multiple regression, the researcher needed to ensure that the data was appropriate along the assumption of Field (2009) that data that exhibits non – normality characteristics may lead to inaccuracy and distortion of the results. In order to use parametric tests of analysis different the study variables were subjected to diagnostic tests of analysis on the assumption of Partial Least Square (PLS) and these were normality, linearity and multicollinearity as explained in the preceding sections.

Normality of the data was tested using the Shapiro – Wilk test, Kolmogorov – Smirnov test and test of skewness and kurtosis (Shapiro & Wilk, (1965); Curran, West, & Finch, (1996). Research using Monte Carlo simulations indicate that significant problems tend to arise when skewness is greater than 2.00 and kurtosis exceeds 7.00 (Curran, West, & Finch, 1996). For the Shapiro Wilk test the significance values should be greater than 0.05 to reveal that data is normally distributed (Shapiro & Wilk, 1965).

Multicollinearity tests were also done to test for collinearity and this arises when some individual independent variables are highly correlated (Field, 2005). This problem was evaluated by using variance inflation factor (VIF) estimates to detect multi-collinearity that decreases the reliability and accuracy of empirical results. The higher VIF meant that multi-collinearity effects are present. Hair et al (2010) stated that a problem of multi-collinearity is present if the factor is greater than 10.

Pearson Correlation analysis was also performed to explain the direction and the strength of relationship that exists between the study variables as well as the linearity between the study variables. The correlation coefficient ranges from -1 to +1.0 and the closer it is to 1, the stronger the relationship and closer it is to -1, the weaker the relationship between the variables (Field, 2009).

3.11.2. Model specification

The multiple regression equation assumed was of the form:

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where: $\hat{\mathbf{Y}}$ = Financial inclusion

β_0 = constant

X_1 = *Geographical coverage*

X_2 = ***Agent transaction volume***

X_3 = ***Number of Agents Engaged***

$\beta_{1, 2, 3,}$ = effect of unit increase associated with X1, X2 and X3 respectively on Y

ε = Error term or the random disturbance term

The test of significance (coefficient of determination (R^2) was also conducted to measure the extent of level of effect of the independent variables on the dependent variable

3.12 Ethical Consideration

A number of ethical issues were put into consideration including:

1. Confidentiality: Respondents were not required to reveal their names nor their contacts on the questionnaires. Identification numbers were used instead of names to avoid information given being traced to a respondent.

The research procedures were explained to all the respondents before they took part in the research and their informed consent obtained.

All the sources of literature were acknowledged throughout the whole study through proper citations and referencing.

3.13 Limitations of the study

The results of the study could not be over generalized because the geographical scope was only in Mukono Municipality.

The study faced the limitation of inability to reach as many respondents as possible due to their tight work schedules. However, the researcher made arrangement with the respondents at an appropriate time so as to get the required information for the study.

3.14 Chapter Summary

The chapter presented the methodology that the study used. The study employed a cross sectional survey design. A sample of 70 respondents out of population of 85 respondents were selected. Al the 70 questionnaires were administered however; 60 questionnaires were collected back making an effective response rate of 85.71%. Data was collected using a questionnaire and

interviews were later conducted for triangulation purposes. Reliability and validity tests were considered for the variables used, measurement of the research variables was made and model specifications were generated. Finally, ethical considerations and limitations of the study were presented.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter presents background information of respondents included in the study, descriptive statistics of the research variables, and inferential findings based on the specific objectives of the study. The first section presented the background information of respondents included in the study, this was followed by the descriptive analysis for the geographical coverage, agent transaction volumes number of agents involved financial inclusion. Thereafter, the results of the multiple regression were presented after taking in considerations all the diagnostic tests required to run a regression and these quantitative results were presented and interpreted while being triangulated with interview results.

4.2 Background information of the respondents included in the study

Respondents included in the study were asked about, their gender, age bracket, designation, and level of education. Findings regarding this information is shown in Table 4.1 below;

Table 4. 1: Background Information of the respondents included in the study

Construct	Categories	Frequency	Percentage
Gender	Male	21	35.0
	Female	39	65.0
	Total	**60**	**100.0**
Age bracket	20-25 years	8	13.3
	26-30 years	28	46.7
	31-40 years	18	30.0
	Above 40 years	6	10.0
	Total	**60**	**100.0**
Designation	Bank Manger	8	13.3
	Bank Agent	28	46.7
	Bank Supervisor	9	15.0
	Bank Employee	15	25.0
	Total	**60**	**100.0**
Education level	Certificate	17	28.3
	Diploma	27	45.0
	Degree	12	20.0
	Masters	4	6.7
	Total	**60**	**100.0**

Source: Primary data 2020

In terms of gender of respondents, Table 4.1 above shows that 65% of the respondents were female whereas 35% were male. This implies that females were more than males, meaning that most agents, bank employees, bank supervisors and bank managers in Mukono Municipality are dominated by females who pay attention to money transactions since they are sensitive and require paying attention.

When asked about the age bracket, the findings showed that majority of the respondents were between the age of 26 and 30 years representing 46.7%, 30% were between the age of 31 and 40 years, 13.3% were between the age of 20 and 25 years while only 10.0% were above the age of 40 years This implies that majority of the respondents were still single with less responsibility meaning that their level of commitment is high compared to staff who are above 30 years of age. This could be attributed to the fact that most people in this bracket have already finished school and in the working age as most bank agencies are be started by people in their earlier years of life as they seek to create employment build them into big businesses.

Furthermore, in terms of the designation of respondents, the study found that 46.7% of the respondents were bank agents, followed by bank employees representing 25% whereas 15% and 13.3% were bank supervisors and bank managers respectively. This implies majority of the respondents were bank agents and this helped the researcher to achieve the target of the study since much emphasis was put on bank agents as they are the ones contracted by banks to do agency banking as a tool to affect financial inclusion.

In relation to education level of respondents, the findings indicated that most of the respondents had a Diploma as their highest level of education representing 45%, 28.3% had certificates, 20% had attained degrees, while only 6.7% had a Master's degree. This implies that majority of the respondent's attained diplomas while only few attained Master's degrees. The implication here is that most of the respondents included in the study were educated and could thus have knowledge pertaining to agency banking and financial inclusion.

4. 3 Descriptive statistics of the variables included in the study

This section consists of the descriptive statistics of the variables under study. The variables of the study whose descriptive statistics were computed included the agency banking as the independent variable (geographical coverage, agent transaction volumes, number of agents engaged) and financial inclusion as the dependent variable. The constructs under these variables were put on a Likert scale of 1-5 where 1 is for strongly disagree and 5 is for strongly agree were respondents were requested to indicate their level of agreement or disagreement with each sentence by ticking the option which best represented their personal feelings and understanding towards the statements on the level of geographical coverage, agent transaction volumes, number of agents engaged and financial inclusion.

4.3.1 Level of geographical coverage of agency banking

The constructs for geographical coverage studied were based on reduction of overcrowding in banking halls, bringing of banking services closer to customers, client's willingness to pay at agent outlets, proximity of bank agents to residential areas and reduction of queuing on ATMs and banking halls by clients. The descriptive statistics showing the mean and standard deviation of the statements on the level of geographical coverage of agency banking is given in table 4.2 below

Table 4. 2: Level of geographical coverage of agency banking

Statement on geographical coverage of agency banking	Mean	Std. Deviation
Banks take their services closer to their customers in areas with potentially less number and volume of transactions	4.05	1.080
Clients are willing to pay more at agent outlets since they are near their premises	4.23	.890
Customers don't have to travel far and then queue on ATM and banking halls to make payments or withdrawals	4.37	.823
There is proximity bank agencies to residential areas	4.18	.892
Grand mean (N=60)	**4.21**	

Source: Primary data 2020

As detailed in Table 4.2 above, the findings reveal that generally, respondents perceive all the constructs of geographical coverage studied to be above average on the scale of 1 to 5 with an average grand mean of 4.21 and an average standard deviation of 0.921 that shows variations in the responses given by respondents.

It can be seen that there are notable variances on the various constructs evaluated. For instance, in terms of customers not having to travel far and then queue on ATM and banking halls to make payments or withdrawals, the score by the respondents was 4.37 with standard deviation of 0.823, in relation to all the other aspects this constituted the highest score implying respondents accorded it a greater importance in examining geographical coverage of agency banking. This was followed with client's willingness to pay more at agent outlets since they are near their premises (mean = 4.23, standard deviation= 0.890).

The items of proximity of bank agencies to residential areas with a mean = 4.18, standard deviation= 0.892 and banks taking their services closer to their customers in areas with potentially less number and volume of transactions with a mean = 4.05, standard deviation= 1.080 were all below the grand mean of 4.21 suggesting that respondents did not accord much importance to these statements of geographical coverage of agency banking.

Under the same test, there was revealed varied responses from the respondents interviewed for instance when asked about how geographical coverage of agency banking influences financial inclusion one bank manager had this to say;

'The long distance between the bank branches and the rural homes is the reason for poor financial inclusion in remote and rural areas, it may be cost ineffective for customers to travel to a distant bank branch only to make bank transactions whose cost may be closer to the cost of transport and upkeep".

In another interview with a bank agent about geographical coverage, he had this to say

"The initial cost of setting up a branch and running cost are very which limits branch expansion so the only way to attend large number of people who need financial services is taking services closer to them."

4.3.2 Level of agent transaction volume of agency banking

The items for agent transaction volume studied were based on based collection of compliance materials from users before performance of any transaction, selection of the transactions on the agent's personal device and the client placing requests of specific transactions. The descriptive

statistics showing the mean and standard deviation of the statements on the level of agent transaction volumes in agency banking is given in table 4.3 below

Table 4. 3: Level of agent transaction volume of agency banking

Statement on agent transaction volume of agency banking	Mean	Std. Deviation
The agent collects compliance materials from users before performing any transaction	3.87	.982
The bank client requests the specific transaction and the amount to be withdrawn, deposited or transferred through agents	4.03	.901
The agent's device prints the client's receipt once the transaction has been authorized	4.17	1.028
Grand mean (N=60)	**4.023**	

Source: Primary data 2020

As evidenced in Table 4.3 above, the findings reveal that generally, respondents perceive all the constructs of agent transaction volumes studied to be above average on the scale of 1 to 5 with an average grand mean of 4.023 and an average standard deviation of 0.970 that shows variations in the responses given by respondents.

From the Table above, there are noteworthy differences on the various constructs evaluated. In terms of the agent's device being able to print the client's receipt once the transaction has been authorized, the score by the respondents was 4.17 with standard deviation of 0.901, relative to all the other constructs this formed the highest score implying respondents agreed that this particular item was important in examining agent transaction volumes of agency banking. This was followed with the bank client being able to place requests of the specific transaction and the

amount to be withdrawn, deposited or transferred through agents (mean = 4.03, standard deviation= 0.901).

The items of the agent collecting compliance materials from users before performing any transaction with a mean = 3.87 and a standard deviation= 0.982 was below the grand mean of 4.02 suggesting that respondents did not accord much importance to this statement in evaluating agent transaction volume of agency banking. Further still the standard deviation of 0.982 was above the average standard deviation of 0.970 suggesting that respondents had variation in responses on the claim or the standard deviation value could also be interpreted to imply that some of the respondents were not sure about the claim.

In follow up interviews on how agent transaction volume of agency banking effectfinancial inclusion, one bank agent had this to say;

"A good number of the banks and other financial institutions think that a lot of agents do not have capacity to hold larger sums of cash because they are worried of security issues this ultimately affects the customers who sometimes require larger sums of money in form withdraws and deposits hence the agents end up performing less transactions because they do not have enough float".

4.3.3 Level of number of banking gents engaged in agency banking

The constructs for number of agents engaged in agency banking studied were based on the bank setting strict requirements that limit the ability of financial institutions to expand into areas where there are fewer qualified businesses to act as agent, the agencies engaged by the commercial banks being paid pre-agreed commissions on the various transactions they carry out

on behalf the commercial banks, maintaining of optimal number of agents to avoid incurring unnecessary losses and banks being held fully liable for the services delivered by their agents. The descriptive statistics showing the mean and standard deviation of the statements on the number of agents engaged in agency banking is given in table 4.4 below

Table 4. 4: Level of number of banking agents engaged in agency banking

Statement on number of agents engaged in agency banking	Mean	Std. Deviation
The bank sets strict requirements that limit the ability of financial institutions to expand into areas where there are fewer qualified businesses to act as agents	4.08	.962
The agencies engaged by the commercial banks are paid pre-agreed commissions on the various transactions they carry out on behalf the commercial banks	3.98	.965
The optimal number of agents is maintained to avoid incurring unnecessary losses	4.05	.964
Banks are held fully liable for the services delivered by their agents	4.15	.965
Grand mean (N=60)	**4.065**	

Source: Primary data 2020

From Table 4.4 above, the findings indicate that generally, respondents perceive all the constructs of number of agents engaged in agency banking studied to be above average on the scale of 1 to 5 with an average grand mean of 4.065 and an average standard deviation of 0.974 that shows variations in the responses given by respondents.

Findings reveal that, there are remarkable differences on the various constructs evaluated. In terms of the banks being held fully liable for the services delivered by their agents, the score by the respondents was 4.15 with standard deviation of 0.965, in relation to all the other constructs this formed the highest score implying respondents agreed that this particular item was important in examining the number of agents engaged in agency banking. This was followed with the bank setting strict requirements that limit the ability of financial institutions to expand into areas where there are fewer qualified businesses to act as agents (mean = 4.08, standard deviation= 0.962).

The items of maintaining optimal number of agents to avoid incurring unnecessary losses with a mean = 4.05, standard deviation= 0.964 and agencies engaged by the commercial banks being paid pre-agreed commissions on the various transactions they carry out on behalf the commercial banks with a mean = 3.98, standard deviation= 0.965 were all below the grand mean of 4.065 suggesting that respondents did not accord much importance to these statements on number of agents engaged in agency banking.

In follow up interviews on how the number of agents involved in agency banking effect financial inclusion, one bank agent noted that setting up a large number of outlets providing agency services helps to reduce operational costs that would be incurred by commercial banks that always require high branch set-up cost which would result in increase in cost of services to customers.

Similarly, in another interview on the same, one branch manager had this to say;

"The bank is fully held liable for the services performed by their agents and in all cases, parent banks ensure that their customers do not encounter cash shortages for withdrawal, deposits and

loan enquiries, parent banks have to dictate cash limits that the agents could hold and that there is a proper monitoring system to avoid perennial cash shortages at every banking outlet".

Majority of the bank branch managers interviewed confirmed that their respective banks had put in place a monitoring system for agents to ensure that cash shortages rarely occurs.

4.3.4 Level of financial inclusion

The constructs of financial inclusion studied were based on access to savings, credit, payment, and risk management products to meet their wide range of needs, timely and adequate access to credit which can be invested in their small scale income generating activities, proper financial institutions established to cater for the needs of the poor, percentage of adult population that have bank accounts and cash savings to make future investments or respond to unforeseeable risks.The descriptive statistics showing the mean and standard deviation of the statements on the number of agents engaged in agency banking is given in table 4.5 below

Table 4. 5: Level of financial inclusion

Statement on financial inclusion	Mean	Std. Deviation
Individuals in Mukono municipality have access to savings, credit, payment, and risk management products to meet their wide range of needs	4.63	.758
Entrepreneurs in Mukono municipality have timely and adequate access to credit which can be invested in their small-scale income generating activities	4.27	.899
Proper financial institutions are established to cater for the needs of the poor	4.37	.882
The biggest percentage of adult population in Mukono Municipality have bank accounts	4.35	.709
People save their cash so that they can make future investments or respond to unforeseeable risks in Mukono Municipality	4.28	.825
Grand mean (N=60)	**4.38**	

Source: Primary data 2020

Findings revealed from Table 4.5 above indicate that largely, respondents perceive all the constructs of financial inclusion studied to be above average on the scale of 1 to 5 with an average grand mean of 4.38 and an average standard deviation of 0.815 that shows variations in the responses given by respondents.

The study found that Individuals in Mukono municipality have access to savings, credit, payment, and risk management products to meet their wide range of needs. This is shown by the mean of 4.63 that ranked the highest in relation to all other aspects studied and a standard deviation of 0.758.

All the other constructs studied were below the grand mean o 4.38 suggesting that respondents did not accord much importance to them in as far as explaining financial inclusion. None the less, the means obtained were not too far from the grand mean of 4.38 with a standard deviation of 0.815 and there were a number of variations noted. For instance, in terms of establishment of proper financial institutions to cater for the needs of the poor the mean scored was = 4.37, standard deviation = 0.882, in agreement to the biggest percentage of adult population having bank accounts (mean= 4.35, standard deviation = 0.709), in treaty with people saving their cash so that they can make future investments or respond to unforeseeable risks respondents scored a mean of 4.28 with variations to their responses at 0.825. Lastly in agreement with entrepreneurs having timely and adequate access to credit which can be invested in their small-scale income generating activities the respondents scored a mean of 4.27 with variations in their responses at 0.899, in all other aspects this scored the least.

4.4 Preliminary analysis

Prior to doing many of the statistical analysis such as correlation analysis, ANOVA and Regression analysis, it is important to check that many of the assumptions made by the individual tests are not violated. These include normality, Linearity, ty and multicollinearity. Testing of assumptions involved obtaining descriptive statistics on the variables such as Mean, standard deviation, Kurtosis and skewness values.

4.4.1 Tests of Normality

Normality of the data was tested using the Shapiro – Wilk test, Kolmogorov – Smirnov test and test of skewness and kurtosis (Shapiro & Wilk, (1965); Curran, West, & Finch, (1996). The results testing for normality are indicated in table 4.6 below;

Table 4. 6: Tests for normality of study variables

Variable	*Statistics*	*df*	*Sig.*
Geographical coverage			
Kolmogorov-Smirov	.0314	90	.200*
Shapiro-Wilk	.145	90	.363
Skewness	1.178		
Kurtosis	.245		
Agent transaction volume			
Kolmogorov-Smirov	.154	90	.16
Shapiro-Wilk	.820	90	.154
Skewness	1.697		
Kurtosis	2.152		
Number of Agents Engaged			
Kolmogorov-Smirov	.0230	90	.200
Shapiro-Wilk	.862	90	.314
Skewness	1.089		
Kurtosis	.536		
F***Financial inclusion***			
Kolmogorov-Smirov	513	90	.014
Shapiro-Wilk	.913	90	.008
Skewness	.114		
Kurtosis	1.730		

N=155, ***p<0.000, *p<0.01, *<0.05

From the Table above, a Shapiro-Wilk test had insignificant values (*p>0.05) and a visual inspection of their histograms, normal Q-Plots and box plots showed that the variables were approximately normally distributed. In addition, all the skewness values were less than 2.00 and kurtosis was less than 7.00 implying that data was normally distributed.

4.4.2 Multicollinearity test

Multicollinearity tests were also done to test for collinearity and this arises when some individual independent variables are highly correlated (Field, 2005). This problem was evaluated by using variance inflation factor (VIF). Results testing for multicollinearity are showed ion table 4.7 below.

Table 4. 7: Variance Inflation Factors

		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	Geographical coverage	.843	1.186
	Agent transaction volumes	.838	1.193
	Number of Agents Engaged	.823	1.214
a. Dependent Variable: Financial inclusion			

Source: Primary data 2020

From Table 4.7 above, all Variance Inflation Factors (VIF) were less than 10 indicating that the independent variables were not highly correlated and hence no multicollinearity.

4.4.3 Correlation analysis

Pearson Correlation analysis was also performed to explain the direction and the strength of relationship that exists between the study variables as well as the linearity between the study variables. The results are indicated in table 4.8 below

Table 4. 8: Correlation between the study variables

Variables	1	2	3	4
Geographical Coverage (1)	1			
Agent Transaction Volume (2)	.312*	1		
Number of banking agents engaged (3)	.336**	.344**	1	
Financial Inclusion (4)	.581**	.362**	.295*	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data 2020

From the Table 4.8 above, it is evident that there is a strong positive and significant relationship between geographical coverage and financial inclusion (r = 0.581, p 0.000) implying that if geographical coverage of agency banking increases, financial inclusion also increases. It is also noted that a moderate positive significant relationship exists between agent transaction volume and financial (r= 0.362, p 0.04) implying that efforts made to increase agent transaction volumes, financial inclusion also increases. Finally, table 10 also reveals that there is a weak positive significant relationship between number of banking agents engaged and financial inclusion r = 0.295, p 0.022), this also implies that efforts made to increase the number of banking agents engaged will lead to an increase in financial inclusion.

Basing on the above findings, the independent variables relate with the dependent variable and therefore further regression analysis can be done to examine the effect of agency banking on financial inclusion.

4.5 Multiple regression analysis

A multiple regression was conducted in order to address the three study objectives. The multiple regression analysis is conditioned to normal distribution of error terms and it also requires the linearity between the dependent variable and the independent variables. These tests were first conducted before running the regression as already indicated in table 8,9 and table 10 above to ensure that all the assumptions for regression analysis to be conducted were satisfied. The results of the multiple regression are revealed in the table 4.9, 4.10 and 4.11 below

Table 4. 9: Model summary of the multiple regression analysis

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.614[a]	.378	.344	.465	.378	11.325	3	56	.000

a. Predictors: (Constant), Geographical coverage, Agent transaction volumes and Number of banking agents engaged

b. Dependent Variable: Financial Inclusion

Source: Primary data 2020

The results of the model summary in Table 4.9 above indicate that the regression model was statistically significant with F value of 3,56=11.325 and P value of 0.000 which implies that the

model was fit for the data. The three variables explain 34.4 percent variance in financial inclusion (adjusted R-square =0.344)

Table 4. 10: ANOVA model summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.331	3	2.444	11.325	.000[b]
	Residual	12.085	56	.216		
	Total	19.416	59			

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Geographical coverage, Agent transaction volumes and Number of banking agents engaged

Source: Primary data 2020

In testing the significance of the model, the value obtained was 0.000 which was less than 0.025 at 5% level in a two tailed test this indicates that the model was statistically significant in predicting the effect of the predictor variables of agency banking on financial inclusion. Findings also indicate the calculated F-value as 11.325 which is greater than the F critical at 5% level of significance.

Table 4. 11: Results of the multiple regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.331	.545		2.444	.018
Geographical coverage	.518	.118	.503	4.381	.000
Agent transaction volume	.163	.102	.184	1.599	.116
Number of banking agents engaged	.345	.131	.258	2.637	.010

a. Dependent Variable: Financial Inclusion

Source: Primary data 2020

The overall equation as suggested in the model can be represented by use of standardized coefficients as follows: Y = 1.331+ 0.503 GC +0.184 ATV+ 0.258NBA

Where: Y = Financial Inclusion, GC = Geographical coverage, ATV = Agent transaction volume and NBA= Number of banking agents engaged

According to the regression equation established, taking all factors into account with constant at zero, financial inclusion would be 1.331. The model also shows that geographical coverage and number of banking agents engage were significant predictors of financial inclusion ($p<.05$). While agent transaction volume was not a significant predictor of financial inclusion ($p>.05$).

Geographical coverage emerged to be the strongest predictor of financial inclusion (Beta =0.503, p value =0.000). This implies that any efforts made by banks to improve geographical coverage of agency banking would increase financial inclusion by 0.503.

Number of banking agents engaged also emerged to be a significant predictor of financial inclusion (Beta =0.258, p value =0.010). This means that any efforts made by banks to increase the number of banking agents involved in agency banking in form agency outlets would increase financial inclusion by 0.258.

Despite having positive coefficients, agent transaction volumes (Beta =0.184, p value =0.116) was not a significant predictor of financial inclusion ($p>0.05$)

4.6 Chapter Summary

Background information about the respondents included in the study was presented. Descriptive statistics of the variables included on the study of geographical coverage of agency banking, agent transaction volumes and number of banking agents involved in agency banking were also presented and interpreted. Preliminary analyses were performed to ensure that data is normally distributed, linear and not highly correlated. A Multiple regression analysis was later performed in order to address the research objectives and questions and based on the results, geographical coverage, and number of banking agents engaged were significant predictors of financial inclusion While agent transaction volumes was not a significant predictor of financial inclusion.

CHAPTER FIVE

SUMMARY, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of key findings, discussion of findings of the study in relation to the study objectives, conclusions, recommendations and areas for future research. The summary of key findings, regarding the effect of geographical coverage on financial inclusion in Mukono Municipality, the effect of agent transaction volumes on financial inclusion in Mukono Municipality and the effect of number of banking agents engaged on financial inclusion in Mukono Municipality are presented first and conclusions and recommendations presented in the last two sections.

5.2 Summary of key findings

The main purpose of the study was to examine the effect of agency banking on financial inclusion in Mukono Municipality. Basing on the study findings in the previous chapter, results revealed that most of respondents agreed that geographical coverage had an effect on financial inclusion. This was revealed by a grand mean of 4.21 and average variance in the responses of 0.921 indicating that geographical coverage was accorded much importance in explaining financial inclusion by the respondents included in the study. Additionally, majority of the respondents on a scale of 1 to 5 also agreed that agent transaction volume explained financial inclusion with a grand mean of .023 and an average standard deviation of 0.970. Lastly respondents were still in agreement that number of banking agents engaged in agency banking effect financial inclusion with a grand mean of 4.065 and an average standard deviation of 0.974.

In order to address the study objectives, the research were questions answered using a multiple regression analysis. Basing the study findings, the three measures of agency banking of geographical coverage, agent transaction volumes and number of banking agents engaged explain 34.4% of the variation's financial inclusion. However, geographical coverage was observed to be a strong significant predicator of financial inclusion (Beta =0.503, p value =0.000). This was followed by number of banking agents engaged that also emerged to be a significant predictor of financial inclusion (Beta =0.258, p value =0.010).

Notwithstanding having positive coefficients, agent transaction volumes (Beta =0.184, p value =0.116) was not a significant predictor of financial inclusion ($p>0.05$)

5.3 Discussion of findings

Under this section the study findings are being discussed in relation to the literature reviewed and whether the study findings are in agreement or disagreement with what other previous researchers investigated.

5.3.1 Geographical coverage and financial inclusion

The first specific objective of the study analyzes the effect of geographical coverage on financial inclusion in Mukono Municipality. A multiple regression analysis was applied to determine this effect and it was found that there was positive significant effect of geographical coverage of agency banking on financial inclusion. This was in line with the study conducted by Afande & Mbugua, (2015) that explored the extent to which banks were able to partner with Agents and commercial entities with a primary objective of provision of financial services using of a descriptive research design on data that was collected by use of questionnaires, that were administered to bank branch managers and appointed Agents of Equity Bank, Co-operative Bank

and Kenya Commercial Bank. The findings of the study revealed that the four factors (availability of liquidity, geographical coverage, costs and security of agent banking services) had a positive and significant relationship to financial inclusion with geographical coverage being the highest contributor to financial inclusion.

Similarly, Ndegwa (2017) evaluated role of agent banking services in promoting financial inclusion in Kenya by analyzing the extent to which geographical coverage and liquidity affect agency banking as a financial inclusion strategy. Based on the results, geographical coverage ($p=0.037$) and liquidity ($p=0.028$) were found to be statistically significant at a 95% confidence level.

In the same vain, Lotto, (2017) assessed the leverage provided by agency banking in promoting the financial inclusion in Tanzania. The study was descriptive in nature and utilized primary data collected from bank Agents' outlets in Dares Salaam. The analytical results of the study showed that agency banking had helped to simplify banking service by reducing distance for customers to reach service point.

In the follow up interview, one bank manager had this to say;

'The long distance between the bank branches and the rural homes is the reason for poor financial inclusion in remote and rural areas, it may be cost ineffective for customers to travel to a distant bank branch only to make bank transactions whose cost may be closer to the cost of transport and upkeep"

5.3.2 Agent transaction volumes and financial inclusion

The second specific objective of the study was to the effect of agent transaction volumes on financial inclusion in Mukono Municipality. A multiple regression analysis was applied to determine this effect and it was found that there was a non-significant effect of agent transaction volumes on financial inclusion. The findings of the study were however, not in agreement with related literature where different authors assert that agent transaction volumes effect financial inclusion. For instance, in 2018, Boston Consulting Group conducted a study on the economics of financial services agent networks, with a particular focus on those that support mobile money platforms. The work demonstrates that agent networks can flourish in areas that support healthy numbers of transactions. In those locales, the transaction fees earned by Agents more than compensate for the financial costs and operational burdens of the business (Unnikrishnan et al., 2019).

The quantitative results were in agreement with follow up interviews on how agent transaction volume of agency banking effect financial inclusion, one bank agent had this to say;

"A good number of the banks and other financial institutions think that a lot of agents do not have capacity to hold larger sums of cash because they are worried of security issues this ultimately affects the customers who sometimes require larger sums of money in form withdraws and deposits hence the agents end up performing less transactions because they do not have enough float

5.3.3 Number of banking agents engaged and financial inclusion

The third specific objective of the study was to assess effect number of banking agents engaged on financial inclusion in Mukono Municipality. A multiple regression analysis was applied to

determine this effect and it was found that there was positive significant effect of number of banking agents engaged in agency banking on financial inclusion. The findings were in agreement with a study conducted by Kitaka (2001) that showed that the operation of banking agents relieves the commercial banks from attending long queues at their branches and, therefore, increases the convenience of serving their customers. The study concluded that, in a situation where the establishment of a bank branch is economically not viable, banking Agents may serve so much these segments of underserved population at a relatively lower operating cost.

In the same vein, follow up interviews on how the number of agents involved in agency banking effect financial inclusion, one bank agent noted that setting up a large number of outlets providing agency services helps to reduce operational costs that would be incurred by commercial banks that always require high branch set-up cost which would result in increase in cost of services to customers.

Contrary, the study findings are not in line with Kamau (2012) who studied the relationship between agency banking and financial performance of banks in Kenya. Through review of secondary data, the study used regression analysis to find the relationship between agency banking (in terms of number of Agents and number of deposit and withdrawals transactions undertaken through Agents) and the financial performance of banks as measured by return on equity and the results revealed that all the independent variables were found to have either negative or weak correlation to the dependent variable.

5.4 Conclusions

The aim of this study was to examine the effect of agency banking on financial inclusion in Mukono Municipality. More specifically, the study evaluated the effect of geographical coverage on financial inclusion in Mukono Municipality, examine the effect of agent transaction volumes on financial inclusion in Mukono Municipality and assess effect number of banking agents engaged on financial inclusion in Mukono Municipality.

The study found that geographical coverage of agency banking influences financial inclusion. It is therefore concluded from this study that greater geographical coverage of agency banking is a stronger promoter of financial inclusion because services follow people closer to where they leave and hence reduce the travelling costs and other hassles involved like time wasted in long queues at bank branches.

Additionally, the study also found that the number of banking agents engaged in agency banking also effect financial inclusion. It can therefore be concluded that an increase in the number of banking agents engaged in agency banking promotes financial inclusion as it reduces the cost of services to customers when the agency outlets are brought near to customers. Agency banking model is therefore a success as regards to deepening financial inclusion.

5.5 Recommendations

Geographical coverage of agency banking was found to effect financial inclusion, the study thus recommends that efforts have to be made to increase geographical coverage and this can be done through increasing the number of outlets providing bank agency services in various areas in order to deepen financial inclusion and tap both the banked and un banked population.

Number of banking agents engaged was also found to affect financial inclusion it is therefore recommended that the number of banking agents engaged in agency banking need to be increased in order to increase financial inclusion, this can be done by limiting operational costs on bank agents by commercial banks so as to increase the number of banking agents to avoid the increase in cost of services to customers, banks ought to observe this because the higher branch set-up cost is considered to be the limiting factor to extend the banking services to local people in areas where bank agents operate.

5.6 Areas for further research

This study was restricted to Mukono Municipality thus, the extent to which these findings can be generalized to all other parts of Uganda is not clear. Therefore, there is a need to conduct further research in other areas of Uganda.

Future review should also increase the sample size to check the robustness of this study

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APPENDIX I: QUESTIONNAIRE

Dear respondent:

I am **Nabatanzi Ritah** pursuing a Degree of Masters of Business Administration at Kyambogo University (Finance and Accounting option). I am undertaking a study on Agency Banking and Financial Inclusion in Uganda: A case of Mukono Municipality. You have been selected as a resourceful person to provide data on this study. Information will be treated in the strictest confidence and the findings from the questionnaire will be used for academic purposes only.

Thank you for accepting to provide the data needed to analyse this topical issue. For any inquiries or further information:

Ms. Ritah Nabatanzi. Tel: +756 785086645/ +756 702920107

Email: nabatanzir2013@gmail.com

Kindly provide answers to the following questions by ticking (√) against the most suitable alternative of your choice.

SECTION ONE: BACKGROUND INFORMATION

1. Gender 1 ( ) Female 2 ( ) Male

2. Age In which age bracket are you?

1 ( ) 20 – 25 years

2 ( ) 26– 30 years

3 ( ) 31 – 40 years

4 ( ) Over 40 years

3. Designation What is your Position**?**

1 ( ) Bank manager

2 ( ) Bank Agent

3 ( ) Bank supervisor

4 ( ) Bank employee

4. Education What is your highest level of education?

1 ( ) Certificate

2 ( ) Diploma

3 ( ) Degree

4 ( ) Masters

5 ( ) Ph.D

Others (please specify) ……....

SECTION TWO: GEOGRAPHICAL COVERAGE

Please Indicate how much you agree or disagree with each sentence, by ticking the option which best represents your personal feelings and understanding towards geographical coverage of agency banking in Mukono Municipality.Use: SD – Strongly Disagree (1), D – Disagree (2), NS – Neutral (3), A – Agree (4) and SA – Strongly Agree (5)

Code	**Statement on geographical coverage**	**Responses**				
		SA	**A**	**N**	**D**	**SD**
Gc1	Agent banking has reduced overcrowding in banking halls					
Gc2	Banks take their services closer to their customers in areas with potentially less number and volume of transactions.					

Gc3	Clients are willing to pay more at agent outlets since they are near their premises					
Gc4	Customers don't have to travel far and then queue on ATM and banking halls to make payments or withdrawals.					
Gc5	There is proximity Agents to residential areas					

SECTION TWO: AGENT TRANSACTION VOLUMES

Please Indicate how much you agree or disagree with each sentence, by ticking the option which best represents your personal feelings and understanding towards agent transaction volumes of agency banking in Mukono Municipality.Use: : SD – Strongly Disagree (1), D – Disagree (2), NS – Neutral (3), A – Agree (4) and SA – Strongly Agree (5)

Code	**Statements on agent transaction volumes**	**Responses**				
		SA	**A**	**NS**	**D**	**SD**
ATV1	Agent account is credited when there is cash out transaction and debited when there is cash in transaction.					
ATV2	The agent collects compliance materials from users before performing any transaction					
ATV3	Setting rates and calculating bank interest is done through agent transaction volumes					
ATV4	The agent has to maintain sufficient cash float and e-money float to meet volumes of transaction requirements at business					

	times.					
ATV5	The agent selects the type of transaction on personal device and enters the amount after swiping the client's card through the device.					
ATV6	The bank client requests the specific transaction and the amount to be withdrawn, deposited or transferred through Agents.					
ATV7	The agent's device prints the client's receipt once the transaction has been authorized.					
ATV8	The volume of transactions depends on how long the agent has already been working with the bank.					

SECTION D: NUMBER OF BANKING AGENTS ENGAGED

Please Indicate how much you agree or disagree with each sentence, by ticking the option which best represents your personal feelings and understanding towards number of banking Agents engaged in agency banking in Mukono Municipality.Use: : SD – Strongly Disagree (1), D – Disagree (2), NS – Neutral (3), A – Agree (4) and SA – Strongly Agree (5)

Code	Statements on banking Agents engaged	Responses				
		SA	A	NS	D	SD
BAI1	There is usually regulation that sets minimum requirements that Agents must fulfill, such as number of years in business or a credit record from the agent.					
BAI1	The banks have to continuously do a cost-benefit analysis to ensure that the optimal number of Agents is maintained to avoid incurring unnecessary losses.					
BAI2	The bank sets strict requirements that limit the ability of financial institutions to expand into areas where there are fewer qualified businesses to act as Agents					
BAI3	The Agents engaged by the commercial banks are paid pre-agreed commissions on the various transactions they carry out on behalf the commercial banks.					
BAI4	The optimal number of Agents is maintained to avoid incurring unnecessary losses.					
BAI5	Banks are held fully liable for the services delivered by their Agents.					

SECTION E: FINANCIAL INCLUSION

Please Indicate how much you agree or disagree with each sentence, by ticking the option which best represents your personal feelings and understanding towards financial inclusion in terms of flexibility, affordability and usage by both banked and unbanked households in Mukono Municipality. Use: : SD – Strongly Disagree (1), D – Disagree (2), NS – Neutral (3), A – Agree (4) and SA – Strongly Agree (5)

Code	Statements on financial inclusion	Responses				
		SA	A	NS	D	SD
FI1	Individuals in Mukono municipality have access to savings, credit, payment, and risk management products to meet their wide range of needs					
FI2	Entrepreneurs in Mukono municipality have timely and adequate access to credit which can be invested in their small scale income generating activities					
FI3	Proper financial institutions are established to cater for the needs of the poor.					
FI4	The biggest percentage of adult population in Mukono Municipality have bank accounts					
FI5	There is availability and equality of opportunities to access financial products and services.					
FI6	There is an effort to make every day financial services available to people at a reasonable cost.					
FI7	People save their cash so that they can make future investments or respond to unforeseeable risks in Mukono Municipality					

Thank you for your contribution!!

APPENDIX I1: INTERVIEW GUIDE

AGENCY BANKING AND FINANCIAL INCLUSION IN UGANDA

The purpose of the interview is to gather personnel views on the geographical coverage of agency banking, agent transaction volumes, number of Agents involved in agency banking and they effect financial inclusion in Mukono municipality.

1. Do people in your area have accessibility to financial services?
2. How are the bank customers included in financial services?
3. What are the benefits of agency banking to bank customers?
4. What are the challenges of achieving financial inclusion in your area?
5. How does geographical coverage contribute to the financial inclusion in Mukono Municipality?
6. What effectdoes agent transaction volume have on the financial inclusion in Mukono Municipality?
7. How can the banking Agents engaged be related to financial inclusion in Mukono Municipality?
8. What should be done to achieve financial inclusion in in Mukono Municipality?

Thank you for your participation!

APPENDIX 11I: SIZE DETERMINATION USING KREJCIE AND MORGAN TABLE (1970)

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*