THE IMPACT OF DIGITAL CURRENCIES ON TRADITIONAL BANKING SYSTEMS, EVIDENCE FROM LIRA DISTRICT

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UGANDA CHRISTIAN UNIVERSITY

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DECLARATION

I hereby certify that the dissertation was written by me and it is entirely original and has not been submitted anywhere else previously for any academic purpose.

Signature _____

Date 15/05/2026

TOLI LARRY ANDREW

APPROVAL

This dissertation has been submitted for consideration with my approval as a university supervisor.

Signature.....

Date.....15/05/2026.....

ARYAMANYA ASTON

ACADEMIC SUPERVISOR

DEDICATION.

This assignment is in honor of my mother, Helen Awidi, who showed me nothing but unrelenting support throughout the whole process. Without her sacrifice, paying for my education and encouraging me every step of the way, I would not have been able to reach where I am today. I will forever be in debt to her trust and kindness.

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As I make my way through writing this dissertation, it is important that I should thank from the bottom of my heart the One Who has been the source of inspiration and strength in everything that I have done-God Almighty. It is through His guidance that I have made what has now come into being. Without His blessings, my efforts would be meaningless and purposeless.

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LIST OF ACRONYMS

FSDU - Financial Sector Deepening Uganda

UN - United Nations

PDM - Parish Development Model

BOU - Bank of Uganda

Fintech - Financial Technologies

PWDs - People with Disabilities

AFI - Alliance for Financial Inclusion

MTN - Mobile Telecommunications Network

ABSTRACT

The emergence of numeral coins including cryptocurrencies apart from numerical coins issued by the central banks, has brought about some form of change in the monetary environment. The paper analyzes the complicated impact of digital currency on conventional financial systems while considering the opportunities and challenges. The paper starts by examining the history behind the development of numeral coins with focus being placed on its technological foundations as well as the dynamic role of adoption.

While analyzing the advantages of numerals coin to the financial industry, it includes increased financial inclusion, efficient and cheaper cross-border transactions, and better transparency courtesy of the mass data analytics. On the downside, this paper critically analyzes the difficulties experienced by conventional financing institutions as a result of the introduction of numeral coins. This includes the disintermediation issue, operational risks, and potential machine malfunctions vis-à-vis monetary policies. In essence, the focus of the paper is on the dynamics of the numeral coin revolution and its context within the need for stability, security, and healthy competition. The analysis undertaken is balanced since it considers actual occurrences in different nations as well as some financial institutions.

Insights gained from interactions with the manufacturers, strategists, and experts on investments help contribute to knowledge on how the interaction between the two takes place. Furthermore, future considerations on how the relationship between digital currencies and the investment market will develop are included in the syllabus of this course. Both the relationship and interaction of both currencies are studied, including the evolution of lending platforms because of the disruptive nature of the digital currency. Overall, it is intended that this paper contributes to findings to help generate a reliable analysis of the effects of digital currencies on traditional investments. This topic falls under the larger question of how to deal with investment in the age of digital currency.

CHAPTER ONE

1.0 INTRODUCTION

Digital currencies represent a paradigm shift which has taken place in the realm of finance, making significant alterations to the conventional model of banking. One of the primary distinctions between digital currencies and conventional currencies is that whereas the former is produced by the government, the latter includes cryptocurrencies such as Bitcoin and Ethereum, alongside the central bank digital currency. The critical characteristic of these digital currencies is the use of advanced technology for decentralization and encryption, thus ensuring enhanced levels of security and efficiency as compared to traditional banking systems.

The increasing use of digital currencies can be attributed to their capacity to reduce costs, facilitate quick transactions across borders, and enhance financial inclusion among those without access to banking services. For instance, the quick settlement features offered by cryptocurrencies eliminate the delays usually associated with the operations of conventional banking institutions. As such, digital currencies have changed the face of finance through compelling conventional banks to adapt to the changing times characterized by new technologies and evolving customer demands. Considering future changes in the digital currencies space, their impact on the direction taken by conventional banks and financial regulators will definitely increase.

1.1 Background of the study

It is safe to say that there have been many changes in the financial sector in recent years. The reason for such changes has been technological advancements. For instance, cryptocurrencies became one of the most popular developments in the sphere. Bitcoin was introduced in 2009 by an anonymous developer, who used the pseudonym Satoshi Nakamoto. This cryptocurrency was created to become a decentralized digital currency based on block chain technology, which makes it possible to conduct transactions directly between peers without the need for central authorities (Nakamoto, 2008).

The development of digital currencies continues to evolve very rapidly. As of 2023, the number of cryptocurrencies is estimated to be thousands, while the total market capitalization amounts to more than two trillion dollars (CoinMarketCap, 2023). Digital currencies may be used for different purposes, including peer-to-peer transactions and conducting smart contracts facilitated by block

chain-based systems like Ethereum (Yermack, 2015). What is more important, transactions conducted with the help of cryptocurrencies cannot be tampered with or falsified, which provides high security and trustworthiness of the process.

Digital currency development creates an opportunity and a challenge for the banking system. One such opportunity is the possibility of extending financial inclusivity in nations with underdeveloped banking systems. The adoption of digital currencies will allow individuals living in nations such as Uganda, where most people lack bank accounts, to gain access to financial services and participate in economic activities globally (Bank of Uganda, 2021). The use of block chain technology in banking operations will increase efficiency, reduce costs, and provide transactional security.

However, the adoption of digital currencies creates challenges for the conventional banking model. Conventional financial institutions, acting as intermediaries in financial transactions, find themselves in competition with alternative systems that do not require the intervention of banks in the transfer of funds. This problem affects the income of banks because they earn from transaction fees (Bofondi & Gobbi, 2017). Furthermore, the regulation of cryptocurrencies is another problem because they develop fast and cannot be regulated according to existing legal systems.

Consequently, the impact of digital currency on banks is rather complicated because while there is certainly a necessity to deal with potential dangers associated with areas of volatility and security, there is also a question of research into how digital currency can be utilized in bank products. The approaches taken in dealing with this phenomenon range from a conservative strategy to an embracement of innovation.

1.2 Problem statement

The emergence of virtual currencies, including Bitcoin and Ethereum, has brought about numerous opportunities as well as threats to conventional banks all around the world. While virtual currency keeps on becoming increasingly popular, its effects on established financial institutions are considered an important issue. Previous literature provides insights into various aspects of the effect, such as those related to financial stability and regulations, technology, and others. Nevertheless, despite the existing body of literature on the matter, it seems that there is no study dedicated to understanding the effect on developing countries like Uganda specifically.

Most of the literature reviewed concentrates primarily on advanced countries, whose financial system, technology, and regulatory framework are entirely different from that of developing countries. Consequently, the problems associated with banks in developing nations like Uganda have been understudied. Some of these concerns include low levels of financial literacy, poor regulation, and insufficient technological resources. Although scholars such as Gomber et al. (2018) and Zohar (2015) provide generic insights regarding the impact of crypto currency around the world, they fail to consider the challenges and limitations that face financial institutions in developing nations. It is therefore necessary to have more focused literature that will enable us to determine the impact of crypto currencies on traditional banks in areas such as Lira district.

1.3 Purpose of the Study.

The objective of the present research study is to analyze the impact that digital currency has on conventional banking systems by analyzing how these new forms of finance technology are impacting the operations and strategies of the banks operating in Uganda. This research study seeks to understand the impact that digital currencies have had on the operations of the banking sector within Lira District.

1.4 Study Objectives

To study the influence of digital currencies towards financial inclusion of marginalized communities.
To study the influence of digital currencies on conventional means of payments and how these currencies may disrupt the present banking payment systems.
To study technological advancements brought about by digital currencies in the conventional banking industry.

1.5 Research Questions

How do digital currencies affect the promotion of financial inclusion and empower underrepresented groups?
How are digital currencies affecting traditional payments, and what disruptions could they bring to banking payment systems?
What technological advances are being enabled through digital currencies in traditional banking?

1.6 Content Scope

This study investigates the impact of digital money on traditional banks, focusing particularly on Uganda. This paper addresses the consequences of digital currency in terms of financial inclusion, payments, and technology for banks.

1.6.1 Geographical Scope

The research will be carried out in Uganda, with a focus on the district of Lira. Urban as well as peri urban settings will be studied. This is important since it will allow us to investigate the effect of the introduction of the digital money on the local banks.

1.6.2 Time Scope

This study examines the impact of digital currencies during the years between 2010 and 2024, including the rise and development of these currencies. It also helps analyze the influence of digital currencies on the conventional banking system and the gradual transformation of banks to adapt to these innovations.

1.7 Significance of the Study

This study has numerous advantages that impact many people in the finance sector of Uganda as well as other areas. These include the economic, technological, social, and academic implications of digital currency on conventional banking institutions.

1.7.1 Economic Implications

It is vital to appreciate how digital currencies affect conventional banks in order to formulate policies that are effective in managing the implications for economies. The research findings will be important in formulating measures that capitalize on the advantages offered by digital currencies while addressing the possible negative impacts. For instance, the use of digital currencies may result in more financial inclusion especially in areas that do not have access to conventional banking services (Munyambonera, 2019).

1.7.2 Technological Advancement

Technology advancements have been discussed through the lens of this study due to the use of digital currencies. The research has analyzed the role played by block chain technology and other related innovations when banks adopt such technological advances. As a result, the study has demonstrated that through these innovations, efficiency can be achieved (Nassali, 2021).

1.7.3 Social Impact

Digital currencies' societal impacts will also be assessed in this study. For instance, in Uganda, since there is a considerable number of people who cannot afford access to banking facilities, digital currency comes in handy for such populations because they can access banking through mobile/digital technology, empowering them economically and contributing to economic growth (Kyeyune, 2020).

1.7.4 Academic Contribution

Academically speaking, this paper adds to the body of knowledge regarding the modernization of finances and the implications thereof for conventional banks. By exploring the subject in a developing nation setting, it presents evidence that is frequently unavailable in international research. This information may be used as a basis for further inquiry and inform policymakers of potential ways to bridge the gap between theory and reality (Ssekandi, 2022).

1.8 Justification of the Study

The development of digital currencies like Bitcoin and Ethereum has led to a heated discussion about whether they will disrupt banking practices. The need for this research is well founded due to various reasons.

1.8.1 Technological Advancement

The quick advancement of financial systems necessitates that there be an understanding on how digital currency could improve financial services. The need to incorporate new technology in banking is crucial for banks to compete effectively within the evolving financial world (Narayanan, Bonneau, Felten, Miller, & Goldfeder, 2016).

1.8.2 Financial Inclusion

The usage of digital currency presents opportunities for improving financial inclusion in developing nations such as Uganda because the majority of citizens in the country lack access to banks. For example, according to World Bank (2017), about 66% of Ugandans lack a bank account.

1.8.3 Regulatory Frameworks

Knowledge on the impact of digital money on the conventional banking sector will be instrumental in developing policies and measures to make sure the financial sector remains stable and efficient. Indeed, the Central Bank of Uganda is already developing policies for digital currencies. This makes the study very topical.

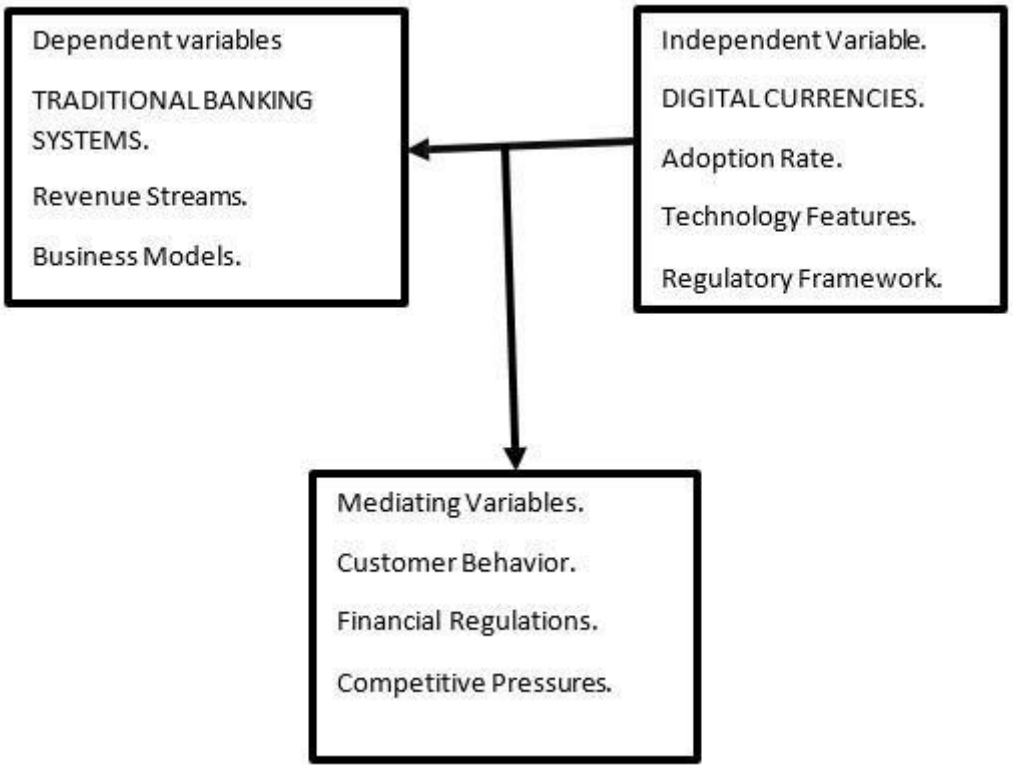
1.8.4 Economic Impact

An analysis of the impact that digital currency might have on conventional banks may shed light on any possible effects on the economy, including transaction costs, effectiveness of payment processes, and financial development in general (Tapscott & Tapscott, 2016).

1.8.5 Security and Fraud Prevention

Digital money uses the technology of block chain, which provides better security than the traditional banking system. Knowledge of such technologies will not only improve the functioning of banks but also eliminate the possibilities of frauds (Nakamoto, 2008).

1.9 Conceptional Framework



Source: *Modified from fiction on fiscal expertise influences on lending such as the influence of numerical coins on the fiscal segment by the IMF and Numerical Cash and Investment Schemes by the Panel for Worldwide Reimbursements.*

1.9.1 Conclusion

The development of digital currencies has created a new era in the financial industry, greatly impacting the structure and functions of existing banking systems. This paper examines the influence of digital currencies, such as Bitcoin, on the functioning of banks, alongside other financial technologies that are currently revolutionizing the way traditional banks function. Although there are many challenges presented by this revolution, namely competition and technology adaptation, there is also great potential for innovation.

In the case of Lira District, the rise of digital currencies is seen as an indication of a new era in which people use digital platforms to perform financial activities. The implementation of digital platforms

will make it possible for many people who have been deprived of services from the banking industry to transact using digital platforms.

Looking ahead to the future of finance, the future is likely to adopt a model that combines the traditional methods in the banking industry with those of digital currency. Such an amalgamation will definitely aid in making the whole process efficient, easily accessible, and boost the overall financial system. The banks, through such measures, will be able to adjust accordingly to remain relevant in finance sustainability.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The emergence of digital money has revolutionized the world of finance and posed new problems for existing traditional banks. Digital money, which includes crypto currencies such as Bitcoin and Ethereum and Central Bank Digital Currencies (CBDCs), has introduced various ways of transacting business and storing money that differ from those used by traditional financial institutions for centuries. The research intends to identify the impact of digital money on traditional banks through an analysis of current theory and empirical knowledge of financial inclusion, payment systems, and innovation technology. Additionally, the gap in the literature will be determined, particularly in relation to developing nations.

2.1 Literature Review Based on Objective One

Role of Digital Currencies in Promoting Financial Inclusion and Empowering Underserved Populations

Introduction

There are several types of digital currencies available in today's world, ranging from privately created digital currencies to central bank-created digital currencies. Several topics related to digital currencies have been investigated, but one thing that stands out among them all is the role that they can play in increasing financial inclusiveness for underserved communities.

Financial Inclusion and Digital Currencies

Financial inclusion refers to the provision of affordable and appropriate financial services. It is possible that the traditional financial system does not meet the requirements of certain sections of society, particularly those from economically weaker backgrounds or rural settings.

Accessibility and Reduced Entry Barriers

Use of digital currency will significantly reduce reliance on banking infrastructure because the digital currencies will be accessible through mobile devices, and thus such digital currencies will benefit individuals who cannot access banking infrastructure. For example, in cases where there is no adequate banking infrastructure, but there is high mobile device penetration, digital currencies will play an important role in enhancing accessibility. The application of digital currencies is evidenced through the successful mobile money schemes such as M-Pesa in Kenya, as argued by Jack and Suri (2011).

Lower Transaction Costs

Conventional banking organizations tend to have high costs of transacting, making it very hard for the poor to take part in such financial transactions. However, digital currencies can help reduce transaction costs due to their high level of decentralization (Nian & Chuen, 2015). Most digital currencies, like Bitcoin and Ethereum, tend to offer cheaper alternatives when compared to banks. According to Narayanan et al. (2016), decentralization tends to reduce intermediary costs, hence enabling the poor economically to enjoy cheaper financial services.

Identity and Financial Inclusion

Inability to prove one's identity through conventional identification processes is a critical factor hindering financial inclusion among many people. Digital currencies demand very little information to be provided by the individual, making it possible for persons without proper identification to engage in financial transactions (Frost, Gambacorta, & Shin, 2020). Digital identity systems powered by block chain technology, such as ID2020, have been developed to offer secure digital identities.

Empowerment of Underserved Populations

Financial Independence

Digital currency promotes financial independence since it gives individuals the opportunity to be financially independent regardless of traditional banking institutions. Financial independence is particularly crucial in regions where banks are not trusted (Casey &Vigna, 2018). Individuals may use digital wallets to store money that is independent from bank accounts.

Participation in the Global Economy

It is easier for individuals to transact from one country to another due to the emergence of digital currency. Digital currency may be helpful to migrants who transfer their remittances because they have alternatives that are more cost-effective and quicker than traditional remittance systems (Mohapatra, Ratha, &Silwal, 2011). A good example of how digital currency is used is through the company called Ripple.

Defense Against Inflation

When inflation is high or the economy is unstable, cryptocurrencies may also be used to save money. Bitcoin, which is a type of cryptocurrency, is regarded as a hedge against currency depreciation (Narayanan et al., 2016). Instances of this have been observed in countries such as Venezuela where hyperinflation exists.

Obstacles and Constraints

While there is tremendous potential for digital currency to foster financial inclusion, challenges cannot be overlooked.

Technological Competency

Limited technical knowledge may create difficulties when utilizing digital currency in less privileged regions. Information dissemination about digital financial transactions is crucial (Nian&Chuen, 2015).

Legal and Security Issues

Inadequacies in the laws governing cryptocurrencies and risks including cybercrimes and scams are significant barriers. Consumer safety and secure transactions are important in order to increase confidence in cryptocurrencies (Frost et al., 2020).

Digital Divide

Internet connectivity and mobile phones are requirements for accessing digital currencies. Overcoming digital divides is crucial to unlocking the true inclusivity of digital currencies (Auer et al., 2021).

Conclusion

Digital currencies have great prospects when it comes to fostering greater financial inclusion by enabling cheaper, more convenient, and safer banking services for disadvantaged communities. Nevertheless, solving problems with literacy, regulation, and digital divides is key to making that happen.

2.2 Literature Review Based on Objective Two

Impact of Digital Currencies on Traditional Payment Systems

Introduction

In recent times, digital currency, such as cryptocurrency and stablecoin, has seen exponential growth. Their increased usage has resulted in fears regarding their possible disruption of the conventional banking payment system. This paper will look into previous studies on the influence of digital currency on payment mechanisms.

Disruption of Traditional Payment Systems

Decrease in Transaction Costs

Digital money entails lower transaction costs than the existing financial institutions because intermediaries are not involved (PwC, 2021). According to studies conducted by Catalini and Gans (2016), decentralized payment systems involve reduced costs of operation, which make digital money more competitive than banks.

Speed and Efficiency

With block chain technology, transactions will be able to process faster and become more efficient, even for international money transfer transactions. This is because the traditional banking system uses different intermediaries that delay transaction processing time (Nakamoto, 2008). According to Tapscott and Tapscott (2016), block chain-based payment is almost instantaneous and therefore poses a threat to payment mechanisms like SWIFT (Ali et al., 2020).

Accessibility and Financial Inclusion

The use of digital currency gives anyone without a bank account a chance to make financial transactions (Narayanan et al., 2016). This improves the access to payment systems by individuals that have been underrepresented before, posing a serious threat to traditional banks (Demir et al., 2020).

Payment Innovation

One of the most important innovations that digital currency has brought is the ability to implement smart contracts which help to automate transactions without intermediation (Buterin, 2013).

Implications for Traditional Banking Systems

Revenue Threat to Banks

Digital currencies pose a potential threat to the traditional revenue model of banks, mainly through transactions and interchange fees (Chiu & Koeppl, 2019). Banks could see their revenues decline if they fail to adjust to their business practices (Adrian &Mancini-Griffoli, 2019).

Regulatory Difficulties

Banks function within a rigid regulatory framework that was not considered when digital currencies were first created. Such an issue poses difficulties for banks since regulators are trying to design a way to oversee them (Arner et al., 2017).

Integrating and Competing

Many banks today have had to integrate blockchain technology and digital currencies to compete effectively. Some have even managed to create their digital currency or partner with fintechs (BIS, 2021; Carstens, 2021).

Risk Management

The introduction of digital currencies raises questions about risks associated with volatility, cyber security, and fraudulent activities. The banking sector should find ways of managing these new risks (Gandal et al., 2018; Hileman & Rauchs, 2017).

Conclusion

Digital currencies are revolutionizing the conventional payments system, which is characterized by speed, cost-effectiveness, and inclusivity. Although they pose some challenges to conventional banking systems, banks have found ways of coping.

2.3 Literature Review Based on Objective Three

Technological Innovation Brought About by Digital Currency

The emergence of digital currency has spurred technological innovation in conventional banks. Banks are increasingly implementing digital technologies to improve their performance.

Block Chain Technology

The block chain technology makes transactions more secure, efficient, and transparent. Research shows that implementation of block chain in cross-border transactions can greatly reduce both processing time and cost (Guo & Liang, 2016). Banks including JPMorgan and HSBC have adopted block chain technology to enhance efficiency in operations and processing time (JPMorgan, 2018; HSBC, 2019).

Smart Contracts

Smart contracts refer to computer protocols designed in block chain technology. They help in automating execution of contractual agreements with no possibility of errors or any intermediaries involved (Szabo, 1997; Buterin, 2013). Banks including Barclays are using smart contracts to enhance efficiency in derivatives trading (Barclays, 2016).

Decentralized Finance (DeFi)

The decentralized finance is the use of financial services without intermediaries. Though at the infant stage, banks are trying to find ways through which DeFi can be used together with the conventional financial services like lending and asset management (Gudgeon et al., 2020; Citigroup, 2021).

Central Bank Digital Currencies (CBDCs)

CBDCs blend the stability of fiat money with digital innovations. As per Boar and Wehrli (2021), CBDCs enhance the efficiency of monetary policy and upgrading payment methods. Examples of initiatives include China's Digital Currency Electronic Payment project and the digital euro initiative by the European Central Bank (ECB, 2021; PBoC, 2021).

Cybersecurity Improvements

Digital currencies have brought significant improvement in cybersecurity among banks due to advancements in encryption and multi-factor authentications (Conti et al., 2018; Wells Fargo, 2020).

Real-time Payment Systems

Innovation in digital currencies has spurred real-time payment systems where transactions occur instantly. The development of FedNow and TARGET Instant Payment Settlement System is one example (Federal Reserve, 2022; ECB, 2018).

Conclusion

In summary, the emergence of digital money has been instrumental in encouraging innovations within the traditional banking system architecture. Innovations such as block chains, smart contracts, and CBDCs are transforming the banking industry and financial service delivery.

Research Gaps in Emerging Literature

CBDC's Role in Interbank Payments

Even though several studies have been conducted regarding digital currency, the literature regarding the influence of CBDC on inter-bank payments and settlement systems is limited. While there are many potential benefits to the use of CBDC, very few have actually been put into practice (BIS, 2021; IMF, 2021).

Significance of Bridging the Gap

With further research, many more discoveries may be made in regard to possible efficiencies, associated risks such as cyber-attacks, and the necessity of introducing new regulatory frameworks for implementing CBDCs in interbank systems (Narula & Fassio, 2021).

Conclusion

Exploring these research gaps through empirical studies would improve knowledge on how CBDCs could revolutionize conventional banking operations, especially in developing nations.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The current chapter provides details regarding the methodology used in analyzing the effect of digital currencies on the traditional banking system in the Lira district. Methodology includes research design, geographical location where the research is undertaken, study population, methods of selecting samples, sample size, data sources, methods of data collection, data analysis techniques, ethical issues, and limitations of the study. This methodology will enhance the validity and reliability of findings of the research as well as meeting the objectives of this study.

There are many forms of digital currencies which have developed across the world in the recent years (Nakamoto, 2008). Examples include the Bitcoin and Ethereum among others. They bring various benefits in terms of reduced cost of transaction, high level of security and provision of financial access (Swan, 2015). On the other hand, there are challenges that are associated with the adoption of digital currencies which have led to concerns about their legitimacy and financial implications (Yermack, 2015).

In light of all this, this study tries to find out about the interaction of all these factors in relation to the socio-economic background of Lira district where such phenomena as digital currencies and the banking system exist simultaneously. Indeed, Mazzone (2018) stresses that a knowledge of local conditions is crucial in developing any sensible financial policy that could take into account new opportunities and minimize risks. In particular, considering the specifics of Lira district economically and socially, this research attempts to produce insights concerning the role of digital currency in banks' functioning and customers' behavior.

3.1 Research Design

A mixed method strategy which consists of both qualitative and quantitative research designs will be employed. Mixed methods assist in gathering more information about the influence of cryptocurrencies on traditional banking institutions. Quantitative research shall be done by means of structured questionnaires, while qualitative research will be undertaken using interviews and discussions (Creswell & Creswell, 2017).

3.2 Area of Study

The research will be conducted in Lira District, which is situated in northern Uganda. This selected area was chosen owing to the presence of greater economic activities, advancements in the banking sector, mobile money transfers, and growing interest in digital money transactions.

3.3 Study Population

The research will be conducted on a number of people associated with digital currency as well as traditional banking systems in Lira District. This includes:

3.3.1 Commercial Bank Employees

This category refers to the staff working in the conventional banking system that exists in the jurisdiction of Lira district. It is important to note that the individuals who fall under this category can significantly contribute to the findings since they understand the effect that digital currency has on banks and their operations. They may come from different departments including Retail Banking, IT department, Customer Care department, Risk Management department and many others.

3.3.2 Customers of Traditional Banks

These include the people and firms that have been accessing the traditional banking services within the Lira district. They play a critical role in the analysis of the effects that cryptocurrencies have on the service delivery process, customer satisfaction, and the financial behavior of the people. The research has taken into account both individuals and SMEs who access different services such as savings, loans, and payments services (UBOS, 2022).

3.3.3 Digital Currency Users

This pertains to individuals or organizations based in the Lira district who have been using cryptocurrency like Bitcoin or Ethereum. Their perspectives will help us assess the extent of cryptocurrency acceptance, strengths, and weaknesses compared to traditional banking. The data is gathered by administering surveys on their experience with both conventional banking and cryptocurrency usage.

3.3.4 Technology Providers

The actors that fit under this classification include business organizations and individuals that work with digital money, such as digital wallet service providers and block chain services. The technical skills and knowledge of these actors help in understanding the challenges and possibilities of using digital currencies within the banking system. Interviews will be conducted on selected firms in the financial technology sector as well as technology organizations (Fintech Association of Uganda, 2023).

3.4 Sampling Techniques

For instance, the research will employ a combination of purposive sampling and stratified random sampling techniques. Purposive sampling technique will be used to select important respondents like managers of banks, technocrats, and skilled users of digital currencies. Stratified random sampling will ensure that each demographic stratum of respondents is equally represented in the study region, Lira district.

3.5 Sample Size

The study employs a sample size of 50 respondents, made up of staff members of commercial banks, consumers of traditional banking systems, holders of digital currencies, technology firms, and mobile money providers in Lira district.

3.6 Sources of Data

3.6.1 Primary Sources

Primary sources of data consist of obtaining direct information about respondents' views and experiences regarding digital currency and traditional banking systems using surveys, interviews, and focus groups.

3.6.2 Secondary Sources

Secondary sources of data include existing materials on digital currencies and banking systems, such as literature reviews, financial reports, academic books, government policies, journals, and previous studies (Kothari, 2004).

3.7 Methods of Data Collection and Instruments

Quantitative data is collected using structured questionnaires involving large samples of respondents. Structured questionnaires are mostly made up of closed-ended questions so as to facilitate consistency and ease of analysis (Dillman, Smyth & Christian, 2014). On the other hand, interview guides will be used to collect qualitative data.

3.8 Data Processing, Analysis, and Presentation

3.8.1 Data Processing

Data collected is cleansed, coded, and entered into statistical packages to make them accurate and suitable for analysis (Miles, Huberman & Saldaña, 2014).

3.8.2 Data Analysis

Quantitative data are analyzed employing descriptive and inferential statistics to detect any trends and patterns that exist, while qualitative data are thematically analyzed and their underlying concepts noted (Braun & Clarke, 2006).

3.8.3 Data Presentation

The results will be presented through tables, charts, and graphs in case of quantitative data, while qualitative data will be presented narratively along with any thematic analysis (Tufte, 2001).

3.8.4 Ethical Considerations and Research Procedure

This research follows all set ethical standards, such as obtaining informed consent, ensuring confidentiality, anonymity, and voluntariness. Ethical clearance is sought from the necessary bodies

at the institutions. Participants will be provided with information on the objectives of the study, the processes used in collecting data, and their rights.

3.9 Limitations of the Study

However, although this research on the effects of cryptocurrencies on the operations of banks in Lira District is quite important, there were a number of challenges that affected its completion.

3.9.1 Rapidly Changing Landscape

Digital currency economics operate in a highly dynamic setting that is marked by constant advancements in technology, innovation in platforms, and modifications in the mode of use. Likewise, laws and policy frameworks are constantly evolving, and as such, certain findings from the study may be rendered obsolete in coming years due to their temporary nature.

3.9.2 Limited Historical Data

Digital cash usage in Uganda is relatively recent, including in Lira District. The absence of an extensive history in the region makes it hard to gather information that can be used to analyze trends. Therefore, the study is predominantly dependent on the collection of data.

Market Volatility:

Not only cryptocurrencies but also all other types of digital currency suffer from great fluctuations. The fluctuations may have an impact on the actions and responses of consumers, as well as of the banks. Thus, it becomes difficult to foresee the future consequences with certainty.

Regulatory Uncertainty

There exists no framework that regulates the use of digital money in Uganda. There have been inconsistent policies, and there are no guidelines that can be used. This makes it hard for this research to come up with any conclusions in relation to the institutionalization of digital currency.

Data Privacy and Security Concerns

There is a possibility that the problems of security concerns, data theft, and misuse of information could have impacted the willingness of the participants to give honest responses. There may be some individuals who would not be very forthcoming in sharing their opinions.

Generalizability Issue

The current study is confined to Lira District, which exhibits unique socio-economic characteristics and levels of technology adoption. The findings of this study cannot be generalized to other parts of Uganda or other countries because the study is specific to Lira District within Uganda.

Access Issues

It is worth noting that a number of respondents lack access to technological devices, Internet connection, and the necessary skills to operate those tools effectively. As a result, this can influence their understanding of the topic being studied and affect the quality of data collected from them.

Behavioral Issues

The respondents' attitude, trust, and perception towards the digital currency vary considerably from one customer to another. This factor results in bias during the research process because the information provided by the respondent is subjective.

Operational Risks

The operational risks of using digital currencies are, among others, incidents of hacking, systems failure, and platform security problems. This problem is likely to affect both respondents' behavior and the attitude of banks toward digital currencies.

Limited Cross-Sector Cooperation

There were restrictions in cooperation and exchange of information among traditional banks, online financial services, and the government in the Lira District during the research process. The restrictions limited the opportunity to access information and expert opinions on institutions, which limited the scope of the research in some areas. It is imperative that such limitations be recognized for the consequences of the research outcomes to be understood.

CONCLUSION

In conclusion, it should be noted that the effect of digital currency on traditional banking systems is a complicated and dynamic issue which is crucially important for the development of the financial sector. The research carried out considered various aspects of the influence of digital currency on traditional banks.

Among the conclusions made one should point out the transformation of financial intermediation in connection with a reduction in the number of traditional banks involved in the process. It can be stated that there are not only positive, but also negative consequences of such changes.

There is a need for innovative approaches to regulation which will help to create a stable environment and provide for the effective functioning of both traditional and digital banks. There is an urgent need for adaptation of traditional banks to the new conditions through implementing innovations and establishing cooperation with fintech companies.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS.

4.0 Introduction.

Data obtained through the survey conducted among 50 participants is presented and analyzed in this chapter concerning the effect of digital currency on the traditional banking system in the Lira district. The analysis of the data obtained from the survey conducted among bank customers and mobile money handlers will be provided in this chapter.

4.1 Presentation of Findings.

Adoption Rates of Digital Currencies.

The highest level of adoption was observed for people aged between 25-34 years (52%), followed by those in the age bracket of 18-24 (22%). The adoption rates dropped significantly for the older age brackets, whereby only 12% were over the age of 45.

Table 1: Adoption Rates of Digital Currencies by Age Group.

Age group

Age group	Frequency	Percent	Valid Percent	Cumulative Percent
18-24	11	22.0	22.0	22.0
25-34	26	52.0	52.0	74.0
Valid 35-44	7	14.0	14.0	88.0
45 and above	6	12.0	12.0	100.0
Total	50	100.0	100.0	

4.1.2 Demographic Information.

Table 2: Demographic Information of Respondents.

Demographic Variable

Age group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	11	22.0	22.0	22.0
	25-34	26	52.0	52.0	74.0
	35-44	7	14.0	14.0	88.0
	45 and above	6	12.0	12.0	100.0
	Total	50	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	20	40.0	40.0	40.0
	Male	30	60.0	60.0	100.0
	Total	50	100.0	100.0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	24	48.0	48.0	48.0
	Selfemployed	13	26.0	26.0	74.0
	Student	13	26.0	26.0	100.0
	Total	50	100.0	100.0	

Analysis: The majority of those who participated in the survey fall between the age bracket of 25-34 years (52%), while 22% belong to the age group of 18-24 years. With regard to employment status, 48% have employment, 26% are self-employed, and 26% are students.

Table 3: Awareness and Usage of Digital Currencies. Awareness of Digital Currencies.

Awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not aware	2	4.0	4.0	4.0
	Somewhat aware	25	50.0	50.0	54.0
	Very aware	23	46.0	46.0	100.0
	Total	50	100.0	100.0	

Analysis: It is found that a vast majority of respondents have heard about digital money, where 46% are extremely knowledgeable while 50% have some knowledge about digital money. Just 4% do not know about digital money.

Table 4: Frequency of Digital Currency Usage.

Usage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	3	6.0	6.0	6.0
	Monthly	5	10.0	10.0	16.0
	Rarely	29	58.0	58.0	74.0
	Weekly	13	26.0	26.0	100.0
	Total	50	100.0	100.0	

Analysis: It is clear from the above results that most of the respondents make little use of digital currency (58%). Only 26% of the participants utilize digital currency on a weekly basis, and a mere 6% use it on a daily basis.

4.1.3 Market dynamics.

Table 5: Review of market dynamics.

Market trends

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	4	8.0	8.0	8.0
	Frequently	10	20.0	20.0	28.0
	Never	7	14.0	14.0	42.0
	Occasionally	13	26.0	26.0	68.0
	Rarely	16	32.0	32.0	100.0
	Total	50	100.0	100.0	

Analysis: In regard to review of market trends, most users seldom (32%) or sometimes (26%) monitor them, but 20% monitor trends often, while only 8% monitor them all the time.

4.1.4 Technology Features.

Table 6: Extent of Technology use.

DC related technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	12	24.0	24.0	24.0
	Low	11	22.0	22.0	46.0
	Moderate	11	22.0	22.0	68.0
	Very high	3	6.0	6.0	74.0
	Very low	13	26.0	26.0	100.0
	Total	50	100.0	100.0	

Analysis: The technology adoption associated with digital currency usage is either very high (24%), high (22%), moderate (22%), or low (22%). On the other hand, 26% indicated that their technology adoption was very low.

4.1.5 Adoption rate of digital currencies.

Table 7: Adoption of Digital Currencies.

Adoption digital currencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	10	20.0	20.0	20.0
	Low	10	20.0	20.0	40.0
	Moderate	12	24.0	24.0	64.0
	Very high	3	6.0	6.0	70.0
	Very low	15	30.0	30.0	100.0
	Total	50	100.0	100.0	

Analysis: Adoption of digital money is mostly moderate (24%) with 30% very low adoption. Very high adoption is only 6%. This means that even with the knowledge, total adoption in Lira district is still relatively low.

4.1.6 Effectiveness of digital currency.

Table 8: Perceived effectiveness of digital currency.

Effectiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Effective	19	38.0	38.0	38.0
	Ineffective	6	12.0	12.0	50.0
	Neutral	14	28.0	28.0	78.0
	Very effective	11	22.0	22.0	100.0
	Total	50	100.0	100.0	

Analysis: Most of the respondents believe that digital currencies are quite effective (38%) or highly effective (22%). However, 28% are neither positive nor negative about their effectiveness. Only 12% of the respondents consider them to be ineffective.

4.1.7 Market Dynamics.

Table 9: Factors affecting market dynamics.

Factors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Government policies	26	52.0	52.0	52.0
	International standards	6	12.0	12.0	64.0
	Market competition	5	10.0	10.0	74.0
	Others	1	2.0	2.0	76.0
	Technological advancements	12	24.0	24.0	100.0
Total		50	100.0	100.0	

Analysis: The policies implemented by the government (52%) have the greatest influence on the dynamics of the market, while the other significant influencing factor is technological advancements (24%).

4.1.8 Impact of digital currencies on traditional banking.

Table 10: Impact of digital currencies on traditional banking

Impact

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	18	36.0	36.0	36.0
	Low	6	12.0	12.0	48.0
	Moderate	16	32.0	32.0	80.0
	Very high	10	20.0	20.0	100.0
	Total	50	100.0	100.0	

Analysis: Respondents indicate that digital currency affects traditional banking either highly (36%) or moderately (32%). 20% state that digital currency affects traditional banking very highly. This suggests that digital currency is increasingly affecting the operations of banks within Lira District.

4.2 Traditional Banks.

Table 11: Challenges faced by traditional banks.

Challenges

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competition from digital currencies	9	18.0	18.0	18.0
	Customer retention	7	14.0	14.0	32.0
	Market competition	10	20.0	20.0	52.0
	Outdated technological infrastructure	8	16.0	16.0	68.0
		16	32.0	32.0	100.0
	Regulatory compliance	50	100.0	100.0	
	Total				

Analysis: In addition to this, the key challenges faced include compliance issues (32%), competition in the market (20%) and competition from cryptos (18%). This suggests that conventional banks in the Lira district are encountering regulatory and competitive threats.

4.3 Analysis of Findings

Analysis of Adoption Rates

The following observations can be made from the above findings: the number of individuals below 30 years of age who embrace digital money is significantly higher compared to those who are older. The primary reason for such behavior is their proficiency in terms of digitization, frequent usage of the Internet, and trust in digital finance. Individuals who fall into the younger category are always willing to try new financial approaches that will enable them to take advantage of their benefits.

4.3.1 Analysis of Impact on Traditional Banking

In view of the results obtained, it becomes quite evident that there is an influence exerted by digital money on the routine operations of the conventional banking system in the Lira district. This is as a result of the moderate level of impact brought out by the survey respondents, and that points to the gradual process of change of access to financial services. This is consistent with the findings made by Cheng and Lee (2021).

4.3.2 Customer Preferences and Implications

There has been a new trend among consumers in the Lira District where there has been an increased preference for the adoption of electronic money systems, attributed to their convenience, lower transaction costs, and availability. There have been suggestions that there has been a growing need for fast and adaptable financial service provision. As pointed out by Ndung'u (2023), financial institutions must adapt to customer needs, or they risk becoming obsolete.

4.4 Discussion and Conclusion

4.4.1 Discussion

Conclusions drawn from the study indicate an increasing acceptance of the use of digital currencies in the Lira District. Even though there is heightened awareness of the use of digital currencies, their actual adoption has been inconsistent among some individuals. Banks must learn to cope with the impact of digital currencies as well as exploit any positive attributes that may arise from digital currencies.

Hybrid models would be ideal for banks operating in the Lira District as they can combine conventional bank transactions with those involving digital currencies. Although there is positive reception towards digital currencies, security and regulation pose serious challenges.

4.5 Conclusion

In summary, it can be noted that digital currency is affecting the operations of the traditional banking institutions in Lira district. Although issues such as security and regulation remain a concern, the general outlook for digital currency remains favourable. It is evident from this study that customers

have changed their habits and transaction methods, necessitating a need for change on the part of the traditional banks.

CHAPTER FIVE.

CONCLUSION AND RECOMMENDATIONS.

5.0 Introduction

The current chapter will highlight the major findings obtained from the study conducted regarding the influence of digital currencies on conventional banking systems in Lira District. Conclusion and recommendations of future actions based on findings from the study will be presented. Moreover, this chapter will also address certain areas requiring further research in light of the shortcomings revealed during the study.

5.1 Conclusions on the Findings

From this study, it is found that digital currency is affecting the functioning of the banking system in Lira District. Different conclusions arise based on the findings of this study.

Customer Adoption and Preferences

This research shows that there is an increase in adoption of digital currency by customers. Customers are particularly young and economically active. It is due to many advantages of digital currency like low cost, quickness in transaction, and ease of use. Consequently, there is a reduction in use of traditional banking facilities for certain transactions by customers.

Operating Difficulties Experienced by Banks

Digital currency creates operating challenges for banks in Lira District. There is need for banks to upgrade technology and enhance security measures apart from changing business model. Financial challenges arise out of these changes.

Regulatory Implications

The results show that there are many problems regarding the regulation of digital currencies in relation to protecting consumers, handling fraud, and maintaining financial stability. The dynamic characteristics of digital currency make its regulation very difficult

Market Competition

With the introduction of digital currencies, stiff competition has been witnessed in the finance industry. The traditional banks have no option but to innovate and come up with digital forms of money so that they can retain their clients in the changing finance world.

5.2 RECOMMENDATIONS

According to the results of the research conducted, the following suggestions have been made:

5.2.1 Strengthen Digital Integration

Banks must adapt to technology by improving their digital integration and looking into possible collaborations with fintech firms. In this way, they can integrate services related to digital currencies more effectively.

5.2.2 Enhance Cybersecurity Measures

In light of the challenges faced by banks because of the risks associated with virtual currencies, it is important for them to improve their cybersecurity systems. For this reason, banks should perform regular system audits, train their employees, and deploy technology.

5.2.3 Improve Regulatory Frameworks

The regulatory agencies must formulate regulations that can be used in the application of digital currencies. With a proper regulatory framework, there would be an incentive for innovations without compromising on stability

5.2.4 Promote Customer Education

The banks, in collaboration with the regulatory agencies, must develop consumer education programs in relation to the use of digital currencies. It would help consumers make informed choices related to digital currencies.

5.3 Suggested Areas for Further Research

Areas that could be studied in future include:

Long-term Impact on the Model of Banking

More investigation can be conducted in the area of impact that a long-term implementation of digital currencies would have on the current model of banking operations.

Comparative Studies of Different Regions

Further analysis of various regions or even districts, and comparison of their performance due to the implementation of digital currencies would yield more meaningful results.

Impact of Customer Behaviors and Habits

More insight into customer habits regarding digital currencies and their adoption can also be investigated for more useful findings.

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APPENDICES

RESEARCH QUESTIONAIRE

THE IMPACT OF DIGITAL CURRENCIES ON TRADITIONAL BANKING SYSTEMS: EVIDENCE FROM LIRA DISTRICT

Dear Respondent,

I am Toli Larry Andrew, a student at Uganda Christian University conducting research on the above topic. Your honest responses will be used solely for academic purposes. All information will be treated with strict confidentiality and anonymity. Participation is voluntary.

Thank you

Instructions: Please tick (✓) the most appropriate response.

SECTION A: DEMOGRAPHIC INFORMATION

Question	Response Options
Age group	18-24 ☐ 25-34 ☐ 35-44 ☐ 45 and above ☐
Gender	Male ☐ Female ☐
Marital status	Single ☐ Married ☐ Divorced/Widowed ☐
Highest education level	No formal ☐ Primary ☐ Secondary ☐ Tertiary/University ☐
Occupation	Employed ☐ Self-employed ☐ Student ☐ Unemployed ☐
Monthly income (UGX)	Below 200k ☐ 200k-500k ☐500k-1M ☐ Above 1M ☐

SECTION B: AWARENESS AND USAGE OF DIGITAL CURRENCIES

Question	Response Options
Have you ever heard of digital currencies (e.g., Bitcoin, Ethereum, USDT)?	Yes ☐ No ☐
How aware are you about digital currencies?	Not aware ☐ Somewhat aware ☐ Very aware ☐
Which digital currencies do you know? (Multiple responses allowed)	Bitcoin ☐Ethereum☐ USDT ☐ Others: _____
How often do you use digital currencies?	Daily ☐ Weekly ☐ Monthly ☐ Rarely ☐ Never ☐
What do you primarily use digital currencies for?	Payments ☐ Savings ☐ Remittances ☐ Investment ☐ Others: _____

(optional): If you have used digital currencies, please describe your most recent experience:

_____

_____

SECTION C: FINANCIAL INCLUSION (Objective 1)

Please indicate your level of agreement: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Statement	1	2	3	4	5
Digital currencies help people without bank accounts access financial services					

Digital currencies reduce the cost of sending and receiving money					
Digital currencies have helped me save money more safely					

Digital currencies allow me to receive money from abroad more easily					
Digital currencies empower women, youth, and rural communities financially					

In your opinion, which group (e.g., women, youth, rural poor) benefits most from digital currencies? Why?

SECTION D: IMPACT ON TRADITIONAL PAYMENT SYSTEMS (Objective 2)

Please indicate your level of agreement: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Statement	1	2	3	4	5
Digital currencies offer faster transaction processing than traditional banks					
Digital currencies have lower transaction fees compared to bank transfers					
I prefer using digital currencies over bank transfers for some payments					

Digital currencies are making traditional banks less relevant for payments					
I have reduced my use of bank payment services because of digital currencies					

What specific payment situations (e.g., sending money to family, paying bills) would you choose digital currencies over a bank?

SECTION E: TECHNOLOGICAL ADVANCEMENTS (Objective 3)

Please indicate your level of agreement: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Statement	1	2	3	4	5
Digital currencies have improved the speed of banking transactions					
Banks in Lira District are adopting new technologies because of digital currencies					
Mobile money platforms have improved due to competition from digital currencies					
Block chain technology (used by digital currencies) can improve banking security					
I trust digital currency platforms as much as I trust bank systems					

What technological improvement would you most like to see in traditional banks because of digital currencies?

Question	Response Options
How often do you monitor digital currency market trends?	Always ☐ Frequently ☐ Occasionally ☐ Rarely ☐ Never ☐
What factors most affect digital currency market dynamics? (Select one)	Govt policies ☐ Tech advancements ☐ Market competition ☐ International standards ☐
What is your overall view of digital currency effectiveness?	Very effective ☐Effective ☐ Neutral ☐ Ineffective ☐
What is the biggest challenge traditional banks face due to digital currencies?	Competition from digital currencies ☐ Customer retention ☐ Outdated tech ☐ Regulatory compliance ☐

SECTION F: MARKET DYNAMICS AND CHALLENGES

Please describe any challenge you have personally faced when trying to use digital currencies (e.g., internet failure, lack of knowledge, fraud fears).

Question	Response Options
To what extent have digital currencies impacted traditional banking in Lira?	Very high ☐ High ☐ Moderate ☐ Low ☐
How would you rate the adoption rate of digital currencies in Lira District?	Very high ☐ High ☐ Moderate ☐ Low ☐ Very low ☐

SECTION G: OVERALL IMPACT ON TRADITIONAL BANKING

SECTION H: FINAL OPEN-ENDED QUESTIONS (Please write freely)

What do you see as the **biggest benefit** of digital currencies compared to traditional banks?

What **fears or challenges** prevent you from using digital currencies more?

What **recommendations** would you give to banks in Lira District regarding digital currencies?

Any other comments or observations?

THANK YOU FOR YOUR PARTICIPATION!