FACULTY OF BUSINESS AND ECONOMICS SCHOOL OF COMMERCE DEPARTMENT OF FINANCE AND ACCOUNTING GRADUATE PROGRAMME

THE ROLE OF DIGITAL BANKING IN IMPROVING ACCESS TO FINANCIAL SERVICES: THE CASE OF SELECTED COMMERCIAL BANKS IN ETHIOPIA

A RESEARCH PAPER

By: Yonathan Yimer

GSR/2338/16

Advisor: Tenkir Seifu (PhD)

FOR PARTIAL FULFILLMENT OF THE REQUIREMENT FOR MASTER OF SCIENCE IN CORPORATE FINANCE SPECIALTY IN INVESTMENT MANAGEMENT

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Declaration

I declare that the research titled *"The Role of Digital Banking in Improving Access to Financial Services"* is my original work. It has not been submitted to Addis Ababa University or any other institution for any academic purpose. All sources and materials used in the research have been properly acknowledged.

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This is to certify that the thesis entitled **"THE ROLE OF DIGITAL BANKING IN IMPROVING ACCESS TO FINANCIAL SERVICES"** has been carried out by **YONATHAN YIMER** under my supervision. This thesis is submitted for the fulfillment of the requirements for the **Master of Science in Corporate Finance (With Specialty in Investment Management)** program at Addis Ababa University. I confirm that the candidate has met the necessary academic requirements and recommend the thesis for submission and defense.

Name of Advisor: Tenkir Seifu (PhD)

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Date: _____

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ACRONYMS

ATM- Automated Teller Machine

CS- Customer Satisfaction

Cov.- Covariance

Cum.- Cumulative percent

DB-Digital Banking

Freq.- Frequency

G2P -Government to Private

KMO-Keiser Meyer Olkin

MFIs-Microfinance Institutions

Min-Minimum

Max-Maximum

Obs.-Observations

P2G-Private to Government

POS-Point of Sale

SACCOs-Saving and Credit Cooperative society

Std.dev- Standard Deviation

TAM- Technology Acceptance Model

NBE-National Bank of Ethiopia

USSD-Unstructured Supplementary Service Data

VIF- Variance Inflation Factor

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ABSTRACT

This study, *The Role of Digital Banking in Improving Access to Financial Services: The case of selected commercial Banks in Ethiopia*, investigates how digital banking improves access to financial services in Ethiopia by concentrating on three commercial banks in Addis Ababa. Employing a quantitative explanatory design, the study gathered 215 valid responses—drawn via purposive sampling from customers and staff—through structured questionnaires and analyzed the data in STATA 15.1 using descriptive statistics, factor analysis, and regression. Results show that digital channels, especially mobile applications, markedly expand access by offering convenience, 24/7 availability, and remote reach, though lower transaction costs are not widely perceived and obstacles such as limited digital literacy and infrastructure deficits remain. While the Addis Ababa-only sample constrains generalizability, the research underscores the need for targeted literacy initiatives, infrastructure investment, and user-centered platform design to close inclusion gaps. As one of the few empirical studies on Digital Banking's contribution to financial access in Ethiopia, it offers original insights for banks, policymakers, and development agencies seeking to leverage digital finance for broader economic empowerment.

Keywords: digital banking; financial inclusion; Ethiopia; factor analysis; regression.

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CHAPTER 1
INTRODUCTION

1.1.Background of the study

The rapid advancement of technology in recent years has revolutionized various industries, with the banking sector standing at the forefront of this digital transformation. Digital Banking, which refers to the delivery of banking services through online platforms and mobile applications, has emerged as a game-changer in the way financial services are accessed and consumed. By enabling customers to perform financial transactions without the need for physical bank visits, Digital Banking has created new opportunities for individuals to manage their finances efficiently and conveniently (Singh & Srivastava, 2020; PwC, 2017).

Digital Banking refers to the use of digital platforms, such as websites, mobile applications, and online tools, to offer banking services and conduct financial transactions. It allows customers to access a wide range of banking services, such as managing accounts, transferring money, paying bills, applying for loans, and even investing, all through electronic devices like smart phones, tablets, and computers (Mishkin, F. S., & Eakins, S. G. ,2018).

Access to finance refers to the ability of individuals, businesses, and organizations to obtain financial resources to meet their needs. This includes access to credit, loans, savings accounts, investments, insurance, and other financial services. It's essential for personal financial growth, business development, and overall economic stability (World Bank, 2025).

Access to finance is closely linked to digital banking in several important ways. First, digital banking significantly increases the reach of financial institutions by enabling them to serve individuals in remote or underserved areas where physical bank branches may be absent.

This expanded reach opens up financial services to a broader segment of the population. Second, the use of digital platforms enhances cost efficiency by reducing the need for costly physical infrastructure, which in turn allows banks to offer more affordable financial products such as loans and savings accounts. Third, digital banking improves convenience by allowing users to access credit, savings, and other financial services anytime and anywhere, removing the need for in-person visits to bank branches. This ease of access particularly benefits those who have historically been excluded from formal financial systems. Lastly, digital banking plays a vital role in promoting financial inclusion by enabling underbanked or unbanked individuals to access essential financial services through mobile apps and online platforms. These tools empower users to perform transactions, save money, and apply for credit without the need for a traditional bank account or branch visit, thus bridging the gap between financial institutions and marginalized communities (Demirgüç-Kunt et al., 2018; GSMA, 2022; PwC, 2017).

However, while Digital Banking has made banking services more accessible to a broader audience, it also raises important questions regarding its impact on financial inclusion, particularly in underserved or rural populations. The widespread adoption of Digital Banking has the potential to bridge the gap in access to financial services, particularly for those who were previously excluded due to geographic, socio-economic, or infrastructural barriers. This study delves into The Role of Digital Banking in improving access to financial services, exploring its benefits, challenges, and the role it plays in promoting financial inclusion (PwC, 2017).

A study by Narayan and Singh (2020) explores how digital financial services (DFS), such as mobile banking and online financial platforms, can enhance financial inclusion by providing access to financial resources for individuals and small businesses, particularly in developing countries. The study finds that Digital Banking can significantly reduce barriers such as geographic location, cost, and paperwork, thus improving access to finance for underserved populations.

A study by Mbiti and Weil (2016) focuses on how mobile banking has impacted financial inclusion in Sub-Saharan Africa in their study on "The Impact of Mobile Banking on Financial Inclusion in Sub-Saharan Africa".

It highlights the role of mobile financial services in providing access to finance for individuals without bank accounts, especially in rural areas. It suggests that digital banking, particularly through mobile phones, can increase access to financial services by overcoming barriers like distance to physical banks and the cost of maintaining a bank branch.

Jack and Suri (2014) in their study on “Digital Platforms and Access to Financial Services” examine the impact of mobile money platforms in providing access to financial services for the unbanked. The research shows how digital platforms can enable individuals to save, transfer money, and receive payments in ways that were previously impossible, thus enhancing access to finance. It highlights the role of Digital Banking in transforming the financial ecosystem in developing countries.

Unlike traditional banking, which requires physical visits to a bank branch, Digital Banking makes financial services available 24/7, offering convenience and accessibility. It can be broadly categorized into two main types, such as Online Banking, which involves accessing banking services through a bank's website or online portal. It generally requires a computer or mobile device with internet connectivity and the other one is Mobile Banking, which is delivered via mobile apps, allowing customers to perform financial transactions on the go using their smartphones or tablets (Shaikh & Karjaluoto, 2015; Zgonec & Debevec, 2020).

Digital Banking has grown significantly due to advancements in technology, offering greater efficiency, enhanced customer experience, and broader access to financial services. It has also played a crucial role in promoting financial inclusion by reaching individuals who may not have easy access to traditional banking infrastructure.

Financial services refer to a broad range of services provided by the finance industry to help individuals, businesses, and organizations manage their money, investments, and financial needs. These services are designed to support people in saving, borrowing, investing, and protecting their wealth. Financial services are typically offered by banks, insurance companies, investment firms, and other financial institutions (Fabozzi, F. J., & Modigliani, F., 2009).

Key categories of financial services include: first **Banking Services that** includes services such as savings and checking accounts, personal loans, credit cards, and mortgages. Banks also offer services like DIGITAL BANKING withdrawals, online banking, and mobile banking. The second financial services is **Loans and Credit which** financial institutions offer such as personal loans, home loans, auto loans, and business loans, as well as credit lines and credit card services to individuals and companies in need of financing and lastly **Payment Services which** include services that enable individuals and businesses to make payments, transfer money, and manage transactions, such as mobile payment systems, wire transfers, and payment gateways (Mishkin, F. S., & Eakins, S. G. ,2018).

Overall, financial services play a vital role in the economy by facilitating the flow of money, supporting economic growth, and helping individuals and organizations plan for financial stability and success.

1.2. Statement of the problem

In recent years, Digital Banking has emerged as a transformative force in the financial sector, enabling individuals to access banking services through online platforms and mobile applications (World Bank, 2022).

This technological shift promises to enhance the convenience, efficiency, and accessibility of financial services. However, despite the growing adoption of Digital Banking across the globe, significant disparities still exist in terms of access to these services, particularly in rural, underserved, and low-income communities.

While Digital Banking has the potential to bridge gaps in financial inclusion, ensuring that more people, especially those in remote or marginalized areas, can benefit from basic financial services such as savings accounts, loans, and payments, challenges persist. Issues such as limited internet connectivity, lack of digital literacy, cyber security concerns, and unequal access to digital devices can hinder the widespread adoption and effective use of digital banking.

Given these challenges, it is crucial to understand the true impact of Digital Banking on access to financial services. This study aims to explore how Digital Banking has influenced access to financial services, examining both its potential benefits and barriers. The findings will provide valuable insights into the effectiveness of Digital Banking as a tool for improving financial inclusion and inform policy decisions to ensure equitable access for all segments of society.

A study on "Fintech, Digital Banking, and Credit Access" undertaken by Chen and Khanna in 2021 examines the rise of fintech companies and digital banks and how they have disrupted traditional lending practices. It discusses how Digital Banking platforms, using alternative data and machine learning algorithms, can offer credit to individuals and small businesses that may not have a traditional credit history. The study concludes that this shift has improved access to credit for individuals who previously struggled to obtain loans from traditional financial institutions.

A study on "Barriers to Digital Banking and Financial Inclusion" highlights some of the challenges related to Digital Banking and access to finance, such as digital literacy, internet access, and trust in digital systems (Nizam, K. & Rashidi, M. Z., 2024). The authors argue that while Digital Banking has the potential to expand financial access, these barriers must be addressed to ensure that all individuals, including those in remote or underserved regions, can fully benefit from digital financial services.

While significant progress has been made in understanding the relationship between Digital Banking and access to finance**,** several gaps still exist in recent literature. These gaps represent areas where further research can contribute to a deeper understanding of the subject and help shape future policy and business strategies.

There are several key gaps in the current research on Digital Banking and access to finance, particularly in terms of understanding the long-term effects on vulnerable populations, addressing regulatory challenges, long-term financial behavior changes, digital literacy and financial literacy and exploring the role of emerging technologies. Filling these gaps could provide valuable insights into how Digital Banking can better serve consumers, businesses, and economies while ensuring financial inclusion and security for all.

1.3.Basic research questions

Here are some basic research questions that the study of the role of Digital Banking in improving access to financial services will try to answer:

1. **To what extent does Digital Banking increase the availability and affordability of financial services (e.g., loans, savings accounts, bill payments) for users?**
2. **In what ways can Digital Banking services be improved to further promote financial inclusion and access to financial services?**
3. **What is the relationship between Digital Banking and its impact on improving financial inclusion and access to financial services?**

These questions provide a broad framework to explore how Digital Banking affects access to financial services across different populations and contexts.

1.4.Objectives of the study

1.4.1. *General Objective*

The general objective of the study is:

"To examine the role of Digital Banking technologies on enhancing access to financial services, focusing on how digital platforms influence customer engagement, financial inclusion, service availability, and overall satisfaction within the banking sector."

This objective seeks to explore various aspects such as convenience, accessibility, and inclusivity of Digital Banking in improving or changing the way financial services are delivered and accessed by different demographic groups.

1.4.2. *Specific objectives*

Here are some specific objectives for the study on "The role of Digital Banking in improving access to financial services ":

1. **To assess the impact of digital banking platforms on customer engagement and interaction with financial services.**
2. **To examine the contribution of digital banking technologies to improving financial inclusion, particularly among underserved or unbanked populations.**
3. **To evaluate the effect of digital banking on the availability, accessibility, and customer satisfaction of financial services within selected commercial banks.**

This study seeks to empirically test the following hypotheses:

- **Null Hypothesis (H_0):** Digital Banking does not have a significant role in improving access to financial services.
- **Alternative Hypothesis (H_1):** Digital Banking has a significant role in improving access to financial services.

1.5. Significances of the study

The significance of the study on "The Role of Digital Banking in Improving Access to Financial Services" is multifaceted. First, it promotes financial inclusion by offering insights into how Digital Banking can help bridge the gap in access to financial services. Second, the study improves service delivery by analyzing the impact of Digital Banking on service accessibility, demonstrating how digital platforms make financial services more convenient, efficient, and available to a broader audience.

Third, the findings have policy implications, assisting policymakers in developing regulations that foster the growth of digital banking, while also providing recommendations to enhance its effectiveness as a tool for economic empowerment. Fourth, the study contributes to enhancing financial literacy by highlighting how Digital Banking platforms can educate customers on managing personal finances through online tools and resources. Finally, the research provides financial institutions with valuable insights into the benefits and challenges of adopting Digital Banking models, offering guidance on innovation, customer base expansion, and identifying key factors influencing The Role of Digital Banking and loyalty in the Digital Banking environment. In essence, the study will highlight the transformative potential of digital banking, not only in making financial services more accessible but also in reshaping the financial landscape for individuals, businesses, and relevant government bodies.

1.6. Scope of the study

This study delimits its investigation to the impact of digital banking on access to core financial services—savings, loans, payments, and money transfers—within three medium-sized private banks in Addis Ababa: Hibret Bank S.C., Bank of Abyssinia S.C., and Dashen Bank S.C. Geographically, the inquiry centers on select urban branches in the capital, allowing for a granular assessment of local factors shaping digital-banking adoption and usage, yet necessarily excluding insights from other regions of Ethiopia.

The target population comprises customers who actively use these banks' mobile apps, internet-banking portals, or related digital channels; traditional, non-digital services and specialized sectors such as investment banking or stock trading fall outside the study's scope. Data was gathered during the past five years—when digital banking has expanded most rapidly—through self-administered questionnaires distributed to account holders of the three banks, a method that yielded a modest sample size due to resource limitations and thus affects broader generalizability. While the analysis touches on prevailing regulatory frameworks, it does not exhaustively examine every legal nuance of digital finance. Cultural, economic, and cross-regional variations are likewise only partially captured, as the focus remains on Addis Ababa's urban context rather than national or international comparisons. Finally, although current trends are mapped in detail, longer-term projections of future technological innovations are beyond the study's time horizon.

1.7.Limitations of the study

The study has several limitations: first, its participant pool may introduce sample bias, as respondents are more likely to be digitally literate and possess smartphones and reliable internet access, thereby excluding perspectives from the elderly and residents of remote areas with connectivity challenges. Second, limited and uneven data availability on digital-banking outcomes constrains the depth of cross-demographic comparisons. Third, the diversity of digital-banking technologies—from mobile apps to browser-based platforms—makes it difficult to generalize findings across services. Fourth, because digital banking evolves rapidly, today's conclusions may soon be outpaced by new features, innovations, and shifting market dynamics. Finally, although the study touches on security and trust, these aspects are hard to quantify fully; cyber threats and users' confidence in digital platforms may influence adoption and usage in ways not captured comprehensively here.

1.8.Structure of the thesis

This report is organized into several sections to provide a comprehensive analysis of the role of Digital Banking in improving access to financial services in selected commercial banks in Ethiopia. The Introduction outlines the research context, objectives, significance, research questions, and limitations. The Literature Review explores global trends in digital banking, its impact on financial access, and the challenges faced. The Research Methodology section details the study's design, data collection instruments, sampling methods, and ethical considerations. In the Results and Discussion section, quantitative findings are presented and analyzed, with interpretations related to the research questions. The Conclusion summarizes key findings and discusses the implications for stakeholders, while also acknowledging study limitations and suggesting areas for future research. The Recommendations section offers practical advice for banks, policymakers, and customers to enhance the role of Digital Banking in financial inclusion. The References section lists all cited sources, and the Appendices include supplementary materials such as the questionnaire and additional data.

CHAPTER 2
LITERATURE REVIEW

2.1. General introduction

Digitalization has significantly transformed markets, particularly in the financial sector, by addressing traditional issues such as information asymmetry and agency problems (Stiglitz & Weiss, 1981; Grossman & Hart, 1986). Technological innovations, particularly in digital banking, have created new opportunities to enhance access to finance, especially for underserved populations. Mobile and internet banking technologies are now pivotal in facilitating financial inclusion, allowing customers to engage with financial services without needing to visit physical bank branches. Despite these advances, challenges remain, including security concerns and the digital divide in some regions.

The evolution of Digital Banking has transformed the global financial landscape by expanding the frontiers of financial inclusion and improving access to financial services. Digital banking, encompassing mobile banking, internet banking, and digital payment systems, leverages technology to deliver banking services remotely and cost-effectively. This literature review provides a comprehensive examination of existing studies on the role of Digital Banking in enhancing access to financial services. The review is categorized into two main sections: theoretical and empirical literature.

2.1.1 Financial Services and Financial Inclusion in Ethiopia

Financial inclusion has emerged as a cornerstone for sustainable development, economic resilience, and social equity. Defined as the access to and use of affordable and responsible financial products and services by all individuals and businesses, it facilitates poverty reduction, promotes economic growth, and fosters social inclusivity (World Bank, 2015). Ethiopia, as one of Africa's most populous and rapidly developing countries, has recognized the importance of financial inclusion and has undertaken strategic reforms to expand access to financial services nationwide.

This review synthesizes insights from Ethiopia's national strategies and recent developments, emphasizing the progress made, persistent challenges, and strategic opportunities aimed at achieving inclusive financial growth from 2016 through 2025.

2.1.1.1. *The Evolution of Financial Inclusion in Ethiopia*

Ethiopia's initial efforts commenced with the adoption of the **National Financial Inclusion Strategy (NFIS) 2016**, which set ambitious targets to enhance access to payments, savings, credit, and insurance services across the country (NBE, 2016). By 2020, these initiatives contributed to increasing financial inclusion from approximately 22% in 2016 to an estimated 45% in 2020 (NBE, 2020). The strategy emphasized a multi-stakeholder approach involving government agencies, financial institutions, and the private sector to foster an enabling environment for expanded service delivery.

Building on this progress, the **NFIS 2021–2025** aims to deepen and broaden financial access, particularly focusing on rural underserved populations, women, and digitally marginalized groups. The revised strategy underscores the importance of technological innovation, infrastructure development, and regulatory reforms as pivotal drivers of inclusion (NBE, 2021).

2.1.1.2. *Challenges to Achieving Financial Inclusion*

Despite notable advancements in digital banking, Ethiopia continues to face a range of complex and interconnected barriers that hinder inclusive financial access. Geographical challenges remain significant, as banking infrastructure is heavily concentrated in urban areas, leaving vast rural populations underserved. This spatial imbalance necessitates the expansion of alternative delivery channels such as agent banking and mobile money services (Tibebe et al., 2021).

Gender disparities also persist, with women facing limited access to formal financial services due to socio-cultural norms, lower financial literacy, and reduced control over assets, requiring gender-sensitive interventions (Ministry of Women and Children Affairs, 2019).

The potential of digital financial services (DFS), particularly mobile money, is constrained by low smartphone penetration, digital illiteracy, and regulatory hurdles; additionally, the lack of sharia-compliant financial products limits inclusion for Muslim communities (Alemayehu & Tizita, 2020).

Moreover, product gaps—such as the absence of financial solutions tailored to smallholder farmers and MSMEs—prevent rural and underserved groups from fully engaging with formal financial systems (NBE, 2021). A general lack of trust and financial literacy further impedes adoption and responsible usage of digital banking services (Yineger et al., 2020). Finally, regulatory and infrastructure constraints pose ongoing challenges; there is a pressing need for policy reforms that balance innovation with consumer protection to effectively scale inclusive financial services (NBE, 2021).

2.1.2. *Strategic Interventions and Emerging Opportunities*

The Ethiopian government's strategic outlook reflects a multifaceted approach to advancing financial inclusion and digital transformation. A key priority is digital transformation, focusing on expanding mobile money platforms and agent banking networks to reach remote populations by leveraging the growing penetration of mobile phones across the country (NBE, 2021). In line with this, efforts toward financial deepening promote a broader range of financial services—including savings, credit, insurance, and sharia-compliant products—to cater to diverse consumer needs and enhance economic resilience (Tibebe et al., 2021).

The government also emphasizes targeted inclusion programs, introducing gender-specific and location-based initiatives to close participation gaps, especially in rural and marginalized communities (Ministry of Women and Children Affairs, 2019). Furthermore, financial education and consumer protection are prioritized through the rollout of digital literacy campaigns and the establishment of strong legal frameworks to build public trust and ensure responsible usage of financial services (Yineger et al., 2020).

Regulatory reforms are being pursued to enable innovation while safeguarding consumer rights and fostering the development of inclusive financial products (NBE, 2021).

Lastly, the strategy underscores the importance of stakeholder collaboration, advocating coordinated efforts among government institutions, financial service providers, development partners, and local organizations to build a sustainable and inclusive financial ecosystem (Tibebe et al., 2021).

Financial inclusion is a national priority for Ethiopia and a long-standing focus area for the Government of Ethiopia (GoE). The development of Ethiopia's first National Financial Inclusion Strategy in 2016 was a historic milestone for these efforts, achieving ground-breaking regulatory and financial infrastructure improvements and a doubling of financial inclusion levels. The implementation period for the first strategy ended in 2020. With this refresh of Ethiopia's National Financial Inclusion Strategy in 2020, the NBE builds on these achievements and re-affirms its commitment to drive national financial inclusion efforts and coordinate implementation across the public and private sector (National Financial Inclusion Strategy-II 2021-2025, September 2021, NBE)

Scaling financial inclusion Four strategic priorities for scaling financial inclusion have been identified. First, digital financial inclusion – especially via mobile money and agent networks – will be a key priority going forward, and will be essential in unlocking not only urban, but most peri-urban and rural areas. Second, dedicated solutions will be developed for the most underserved, least developed parts of Ethiopia, likewise leveraging digital where possible. Third, financial inclusion for women will be prioritized, and a gender specific lens is incorporated into all major elements of this Strategy. This will intersect with the focus on digital and the most underserved areas to ensure that new digital approaches include a gender lens as an essential element (NBE, 2021).

A particular attention is paid to women in rural Ethiopia, who tend to be doubly disadvantaged. Fourth, a program has been charted to promote sharia compliant financial products and services. Actions to achieve these four priorities have been defined and grouped into corresponding Programs. The Programs and individual Actions within them are designed to jointly reinforce each other and ensure truly inclusive basic financial services at scale across the country. Program A1: Drive digital payments by scaling mobile money Digital finance and mobile money at scale have been a key driver of financial inclusion across Africa and Asia, but are still at an emerging stage in Ethiopia, with a very limited number of agents and less than 10% of adults using mobile money. Thus, driving non-cash payments with a focus on digital finance and mobile money is a key priority, including dense agent networks built on the backbone of robust branch network coverage. Work in response to the NFIS 2016 has laid crucial regulatory foundations, including the Payment Instrument Issuers Directive and Use of Agents Directive (National Financial Inclusion Strategy-II 2021-2025, September 2021, NBE).

The report from National Financial Inclusion Strategy-II 2021-2025, September 2021 of NBE stated that actions defined by the National Digital Payment Strategy will expand those foundations, with respect to payments infrastructure, regulatory improvements and licensing of Payments Instrument Issuers. In addition, existing and planned improvements with respect to basic infrastructure – such as electricity, mobile coverage and penetration, and national ID – are crucial enablers. Considering these achievements and plans, this Program identifies four priority actions and two initiatives:

1. Enable sustainable digital payment agent network expansion by leveraging and supporting viable business cases.
2. Roll out digital payment agency service for SACCOs and MFIs.
3. Integrate and roll out digital payments (focused on mobile money) across priority G2P/P2G and social/humanitarian payments.
4. Develop and implement targeted and responsible awareness campaign on mobile money and agent use.

5. Expand payment schemes such as real time, national payment gateway, interoperability, and QR code (initiative); and

6. Expand DIGITAL BANKINGs, POS devices and internet banking services (initiative).

Program A2: Drive financial inclusion in underserved areas Challenges and opportunities for financial inclusion vary heavily with location-specific factors. Expanding financial inclusion in severely underserved areas poses a particular challenge due to fundamental disadvantages relating to wealth, infrastructure and economic activity.

Unlocking the potential of financial inclusion to contribute to a broader uplift of such areas requires targeted solutions for financial inclusion at regional and woreda-level. Developing these solutions is another key priority. This Program therefore identifies six priority Actions:

1. Expand "traditional" financial infrastructure11, especially bank and MFI branches, to cover severely underserved woredas as key enablers for agent networks and digital finance.

2. Design and pilot dedicated financial access approach for low-readiness areas to improve economic viability, including dedicated capability building.

3. Conduct studies to promote and expand traditional financial products and services that meet the needs of respective regions.

4. Establish Regional Council for Financial Inclusion (RCFI);

5. Establish Regional Financial Inclusion Task Forces and design and publish Financial Inclusion Framework. and

6. Formulate and implement financial inclusion framework that is conducive and aligned to the circumstances of the regions.

Program A3: Drive financial inclusion for women the financial inclusion gender gap in Ethiopia has been growing over the past six years and now stands at 19 Percentage Points (up from 2PP in 2014). This is the second highest gender gap among benchmarked countries in Sub-Saharan Africa.

The development in Ethiopia as well as in benchmarked countries – with some countries' gaps continuing to close, others continuing to grow – shows that Ethiopia's gender gap is unlikely to be closed by generic actions aimed at financial inclusion.

The report also specified that Gender intentional action (action designed specifically for reducing the existing gender gap, potentially including advocacy, regulatory interventions, policy design and more) therefore is a strategic priority.

The report from National Financial Inclusion Strategy-II 2021-2025, September 2021 of NBE stated that the Strategy takes gender intentionality as an overall focus, and specific actions and lenses are included throughout all Programs to ensure that all products, services, & channels (across savings, credit, and insurance), and general initiatives are designed with women in mind from the beginning. The overarching task of this Program, therefore, is to ensure and coordinate gender-intentional actions across all Programs and outside the NFIS, encompassing all efforts for scaling and deepening financial inclusion. In addition to this cross-cutting coordinating function, the Program identifies four priority Actions and three Initiatives:

1. Establish a knowledge base on women's unmet financial needs and barriers to financial inclusion.
2. Launch women's account enrollment and educational outreach campaigns with a prioritized focus on youth, linking to NFES;
3. Promote at least ¼ of the Senior Management (VP and Directors) of the financial institutions to be women, who will be mainly dedicated to promoting women financial inclusion;
4. Promote at least one woman to have a seat on the board of the financial institutions.
5. Study and formulate a policy to encourage and motivate women financial inclusion, such as allowing increased saving interest rate (Initiatives);
6. Study and establish credit guarantee scheme dedicated to women financing (Initiatives); and
7. Study and establish wholesale funding dedicated to women financing (to address liquidity issues of lending institutions, (Initiatives).

According to the *National Financial Inclusion Strategy-II 2021–2025* report released by the National Bank of Ethiopia (NBE) in September 2021, Ethiopia has achieved significant milestones in expanding financial inclusion through both traditional and digital channels. One of the key accomplishments is the growth in transaction accounts, which rose from 68 per 100 adults in 2015 to an impressive 159 per 100 adults—an increase by a factor of approximately 2.4. Over the six-year period, the percentage of financially included adults more than doubled, rising from 22% in 2014 to around 45% in 2020. The physical banking infrastructure has also improved, with bank branches increasing from seven to twelve per 100,000 adults, surpassing the initial target of 8.8. A particularly notable development has been the rapid expansion of the agent network, which grew from virtually non-existent levels (three agents per 100,000 adults in 2016) to 77 agents per 100,000 adults by 2020—a more than 25-fold increase. The digital finance footprint also expanded considerably: debit card usage quadrupled, mobile banking transactions surpassed 9 million, and online banking transactions reached 1.4 million. Mobile money, which was previously negligible, saw a dramatic rise with mobile wallets increasing tenfold to approximately 8 million accounts by mid-2020. Furthermore, formal savings behavior improved significantly, with the share of Ethiopians saving in regulated institutions rising from 14% to about 30%. Meanwhile, the proportion of adults with loans from formal institutions experienced a modest increase from 10% to 11%. These developments reflect a strong trajectory toward broader financial inclusion, driven by both regulatory support and technological advancements.

2.2. Theoretical Review

2.2.1. *Financial Inclusion Theories*

Financial inclusion theories offer a foundational understanding of how financial systems can be designed to include underserved populations. Beck, Demirgüç-Kunt and Levine (2007) conceptualized financial inclusion as the process of ensuring access to appropriate financial products and services needed by vulnerable groups at affordable costs.

Digital banking, under this lens, serves as a tool for reducing barriers related to distance, cost, and documentation. Several theories help explain the role of Digital Banking in financial services, emphasizing its impact on accessibility, efficiency, and inclusivity.

Innovation Diffusion Theory (Everett Rogers, 1962) explains how new ideas and technologies spread within a society. In the context of digital banking, it suggests that the adoption of Digital Banking services (such as mobile banking, online banking, and digital lending platforms) follows a predictable pattern, influenced by factors like perceived benefits, compatibility with existing systems, and ease of use.

Digital banking's success depends on how quickly these technologies are adopted by both consumers and financial institutions. The diffusion of Digital Banking can enhance access to financial services, especially for underserved populations, by overcoming barriers like geographical limitations and physical bank branches. Technology Acceptance Model (TAM) (Davis, 1989) explains how users come to accept and use new technologies. According to TAM, perceived ease of use and perceived usefulness are key determinants of whether a consumer will adopt Digital Banking services. As Digital Banking platforms are designed to be user-friendly and offer significant advantages, such as convenience, efficiency, and lower transaction costs, they increase the likelihood of adoption, which ultimately drives financial inclusion.

Financial Intermediation Theory (Diamond &Dybvig, 1983) explains the role of banks as intermediaries between savers and borrowers. Digital Banking enhances this role by enabling more efficient matching of borrowers and lenders, lowering costs, and increasing transparency. Digital platforms can expand access to financial services by improving service delivery, particularly in regions with limited physical banking infrastructure. This makes financial services more accessible, especially to the unbanked and underbanked populations.

Disruptive Innovation Theory (Clayton Christensen, 1997) suggests that new technologies or services can disrupt existing markets by offering more affordable and accessible alternatives. Digital banking, particularly through mobile banking and online platforms, is seen as a disruptive force that challenges traditional banking models.

By offering low-cost, easily accessible financial services, Digital Banking is reshaping the competitive landscape, forcing traditional banks to innovate and adopt digital solutions to stay relevant.

Information Asymmetry Theory (Stiglitz, 1975) in financial markets, information asymmetry refers to unequal access to information between buyers and sellers. Digital Banking platforms can reduce information asymmetry by providing consumers with easy access to financial data and transparent pricing. This increases trust in the financial system, allowing for more informed decision-making and broadening access to financial services, especially in areas where information was previously scarce or difficult to access.

2.2.2. *Inclusive Finance and Digital Ecosystems*

The role of digital financial services in enhancing financial inclusion is also discussed through the lens of inclusive finance theory. According to Sarma and Pais (2011), financial inclusion not only involves access but also the quality and usage of financial services.

Digital Banking contributes to this by enabling continuous engagement with banking platforms through mobile applications, interactive websites, and AI-based advisory tools. Scholars such as Allen et al. (2016) stress the importance of digital ecosystems that combine mobile technology, regulatory frameworks, and financial literacy initiatives. The ecosystem approach theorizes that Digital Banking can only thrive and expand financial access when there is an enabling environment comprising policy support, technological infrastructure, and user education.

Financial Inclusion Theory emphasizes providing affordable, accessible, and useful financial services to all individuals, particularly those excluded from traditional banking. Digital Banking plays a key role in this theory by offering services such as mobile banking, digital wallets, and online loans, which can serve people in remote areas or those with limited access to brick-and-mortar financial institutions.

Digital Banking systems lower transaction costs and remove geographical barriers, improving financial inclusion.

Network Effects Theory suggests that the value of a service increases as more people use it. In digital banking, the more individuals and businesses adopt Digital Banking solutions, the more valuable these services become due to enhanced convenience, the larger customer base, and improved data for financial institutions. As more consumers use digital banking, the network grows, creating a feedback loop that further encourages adoption and strengthens financial inclusion (Katz & Shapiro, 1985).

Some literature refers to digitalization as the integration of digital technologies into everyday life, fundamentally altering how businesses operate and deliver services. In finance, it includes mobile banking, internet banking, and digital lending systems that improve accessibility and reduce costs for customers. While defining what financial inclusion is literatures define it as the provision of affordable, accessible, and useful financial services to all segments of society, particularly those excluded from traditional banking systems. It is widely recognized as a driver of economic development and poverty alleviation (Demirgüç-Kunt&Klapper, 2012). Some scholars in the area of Digital Banking refer access to finance as the ability of individuals and businesses to obtain financial products and services, such as savings, loans, and insurance. Digitalization is seen as a tool to reduce barriers to access, particularly in developing economies.

Several theories explain the relationship between digitalization and financial inclusion. The Innovation Diffusion Theory suggests that digital technologies spread through social systems and can bridge gaps in service delivery. Information Asymmetry Theory in finance explains how digital platforms can reduce barriers to access by improving the transparency and availability of financial information (Stiglitz, 1975). Similarly, Financial Intermediation Theory (Diamond &Dybvig, 1983) emphasizes the role of banks in mitigating market imperfections, which digitalization can enhance by improving financial service accessibility.

Digitalization directly supports financial inclusion by providing underserved populations with access to financial services. Technologies like mobile banking break down geographic and economic barriers, allowing users to engage with banking services from remote or rural locations, thus expanding access to credit, savings, and payments.

The theoretical frameworks applied to Digital Banking help explain its profound impact on financial services. Theories like Innovation Diffusion, Technology Acceptance, and Disruptive Innovation highlight how Digital Banking transforms service delivery, improves accessibility, and fosters financial inclusion. By overcoming barriers such as geographical limitations and reducing costs, Digital Banking has become a catalyst for change in the financial sector, benefiting both consumers and financial institutions.

2.3. Empirical review

Recent studies have highlighted the significant impact of Digital Banking on financial inclusion. For instance, Adhing'a& Gatauwa (2023) discuss how Digital Banking has reshaped the financial sector, compelling financial institutions to adopt new technologies to remain competitive. Similarly, Kemboi (2018) and Mbuthia& Gatauwa (2022) note that these technologies not only enhance operational efficiency but also reduce costs for customers.

Kalif (2020) emphasizes the role of mobile and internet banking in increasing financial access, allowing individuals to conduct transactions without visiting bank branches. In the broader context, studies like Misati et al. (2019) and Huebner et al. (2019) explore the evolution of digital financial services and their impact on banking systems, while Ntwiga (2020) investigates the influence of digital technologies on customer behavior and market dynamics. These studies collectively demonstrate the positive effects of digitalization on financial access, though challenges such as digital illiteracy and security concerns remain prevalent.

Financial inclusion, or the provision of financial services at affordable costs to the disadvantaged and low-income segments of society, is currently considered to be one of the major enablers of economic development (Demirgüç-Kunt& Klapper, 2012; World Bank, 2017). However, approximately two billion adults internationally have no access to the financial services delivered by formal financial institutions (World Bank, 2014, 2017). At the World Bank Group-IMF meetings in 2015, global multi-stakeholders across the public and private sectors pledged their commitment to the promotion of financial inclusion and announced a new global development goal of achieving Universal Financial Access by 2020 (UFA, 2020).

Notably, mobile devices have become an important tool to promote financial inclusion for the previously unbanked population in developing countries (Kanobe, Alexander, & Bwalya, 2017). Owing to their unique features such as mobility, always-on availability, and personalized small devices, mobile phones have rapidly diffused not only in developed countries but also in most developing countries to overcome geographical and socio-economic barriers. However, while the number of mobile-based financial services (MFS) is increasing, many of them are far from reaching a stage of sustainable value and profit, as they fail to offset the cost of setting up infrastructure and maintenance (Evans &Pirchio, 2014).

2.3.1. *Global Evidence on Digital Banking and Financial Access*

Empirical studies from various regions highlight the positive impact of Digital Banking on financial access. A cross-country study by Demirgüç-Kunt et al. (2018) using Global Findex data showed that mobile money services significantly increase the percentage of people with access to formal financial services, particularly in Sub-Saharan Africa. Countries like Kenya, with innovations like M-Pesa, have seen substantial improvements in account ownership and usage of financial products.

Jack and Suri (2014) found that access to mobile money in Kenya lifted 2% of households out of extreme poverty by facilitating easier access to savings, remittances, and small loans. Their study highlights that mobile banking can be an effective poverty reduction tool by enhancing financial capabilities.

In India, Digital Banking initiatives such as the Pradhan Mantri Jan Dhan Yojana (PMJDY) coupled with mobile banking solutions have been empirically shown to increase formal banking penetration among rural and low-income populations (Chakravarty & Pal, 2013).

2.3.2. *Digital Banking and MSMEs*

Micro, Small, and Medium Enterprises (MSMEs) benefit significantly from digital banking. A study by Beck and Cull (2014) found that mobile and internet banking platforms improve access to credit and transactional services for small businesses that traditionally face high exclusion rates from formal financial systems. Digital tools enable these enterprises to build credit profiles and gain access to financial products through data-driven credit scoring.

In Nigeria, Okoye et al. (2017) used survey data to assess the impact of Digital Banking on small business operations and found a strong correlation between mobile banking use and access to credit facilities, financial planning tools, and customer reach.

2.3.3. *Gender and geographic dimensions*

Gender disparities in financial access have also been examined in empirical studies. The World Bank (2018) noted that Digital Banking reduces gender gaps in financial inclusion by offering women more secure and private access to financial tools.

For instance, in Bangladesh, mobile banking allowed women to manage finances without needing to visit male-dominated bank branches (Riley, 2019). Geographic disparities are similarly addressed. In rural areas with limited banking infrastructure, Digital Banking bridges physical gaps.

A study in Indonesia by Hidayat and Lestari (2019) demonstrated that Digital Banking services significantly improved access to financial services among rural populations, helping reduce regional financial disparities.

2.3.4. *Challenges and limitations*

Despite its potential, empirical literature also documents challenges. The digital divide, characterized by unequal access to technology, remains a barrier. Aker and Mbiti (2010) noted that in regions with poor network infrastructure or low digital literacy, Digital Banking adoption remains low, perpetuating exclusion. Issues of cybersecurity, fraud, and low trust in digital systems are also documented as limiting factors (Bongomin et al., 2018).

2.3.5. *Synthesis and discussion*

Theoretical frameworks such as TAM and the Diffusion of Innovation Theory provide robust explanations for the adoption and impact of digital banking. Empirical findings from multiple countries confirm that Digital Banking enhances access to financial services by reducing costs, increasing convenience, and improving security.

The studies also suggest that policy interventions, infrastructural investment, and digital literacy programs are critical to maximizing the impact of digital banking. However, literature also highlights persistent challenges.

While Digital Banking contributes to financial inclusion, structural issues such as gender inequality, digital illiteracy, and infrastructural deficits continue to hinder its universal effectiveness. Thus, Digital Banking should be viewed as a component of a broader financial inclusion strategy rather than a standalone solution.

2.4. Gaps in the Existing Literature

While numerous studies have examined the impact of Digital Banking on financial inclusion, there are gaps in understanding the long-term sustainability of digital financial services (DFS), particularly in developing economies. Many studies focus on the short-term benefits of digital banking, but there is limited research on the challenges

associated with infrastructure, cost-effectiveness, and the ability of financial institutions to scale DFS.

Additionally, there are several key gaps in the current research on Digital Banking and access to finance, particularly in terms of understanding the long-term effects on vulnerable populations, addressing regulatory challenges, long-term financial behavior changes, digital literacy and financial literacy and exploring the role of emerging technologies. Filling these gaps could provide valuable insights into how Digital Banking can better serve consumers, businesses, and economies while ensuring financial inclusion and security for all.

2.5. Conceptual framework

The conceptual framework for this study integrates Digital Banking technologies, financial inclusion, and access to finance. The framework posits that Digital Banking innovations (mobile banking, internet banking, and digital lending) directly influence financial inclusion by providing wider access to financial products and services, particularly for the unbanked and under-banked populations. The effectiveness of these technologies in promoting financial inclusion is mediated by factors such as customer awareness, digital literacy, and infrastructure availability. Furthermore, the framework highlights the role of financial institutions as intermediaries in facilitating this process and the regulatory environment that governs Digital Banking innovations.

Here's a conceptual framework that illustrates the key elements:

1. Digital Banking (Dependent Variable)

Digital Banking refers to the use of digital technologies (mobile apps, websites, internet banking, digital wallets, etc.) to provide banking services. It can include both fully digital banks and traditional banks that offer online services.

- **Core Features**:
  - **Online Banking Services**: Access to accounts, transactions, transfers, bill payments.
  - **Mobile Banking**: Banking apps and services on mobile devices.
  - **Digital Wallets**: Tools for storing and transacting money digitally.

- **FinTech Solutions**: Innovations like peer-to-peer lending, crowdfunding, blockchain technology.
- **Digital Payments**: Mobile money, QR code payments, etc

2. Access to Financial Services (independent Variable)

This refers to individuals' or businesses' ability to use financial products and services such as savings accounts, loans, insurance, and payment systems. It is the outcome variable that Digital Banking seeks to improve.

- **Key Dimensions**:
- **Geographical Access**: Availability of banking services in remote or underserved regions.
- **Affordability**: Lower costs of accessing banking services through digital platforms.
- **Ease of Use**: User-friendly interfaces and accessibility for non-tech-savvy individuals.
- **Availability of Credit**: Easier access to loans and credit through alternative data sources.
- **Financial Literacy**: Ability to understand and use digital financial services effectively.

3. Financial inclusion

Banks have a commercial interest and a social responsibility to ensure financial inclusion and provide access to – and education about – their products and services for underserved banking customers. According to the *Sustainability Guidelines for Banks in Ethiopia* (Ethiopian Bankers Association, 2025), several best practices can be adopted by financial institutions to promote inclusive finance. First, banks are encouraged to expand access to financial products and services for underserved populations, including low-income individuals, youth, women and women-led businesses, microenterprises, smallholder farmers, and SMEs. Second, they should develop innovative financial solutions, particularly digital and mobile banking services, that address the specific needs of vulnerable groups. Third, banks are advised to invest in customer education and financial literacy, integrating these efforts into broader corporate social responsibility (CSR) programs to ensure that clients are informed and protected.

Finally, institutions should carefully assess the potential exclusionary impacts of their sustainability policies and operational practices on marginalized populations and economically disadvantaged sectors, ensuring that no group is unintentionally left behind in the pursuit of sustainable banking.

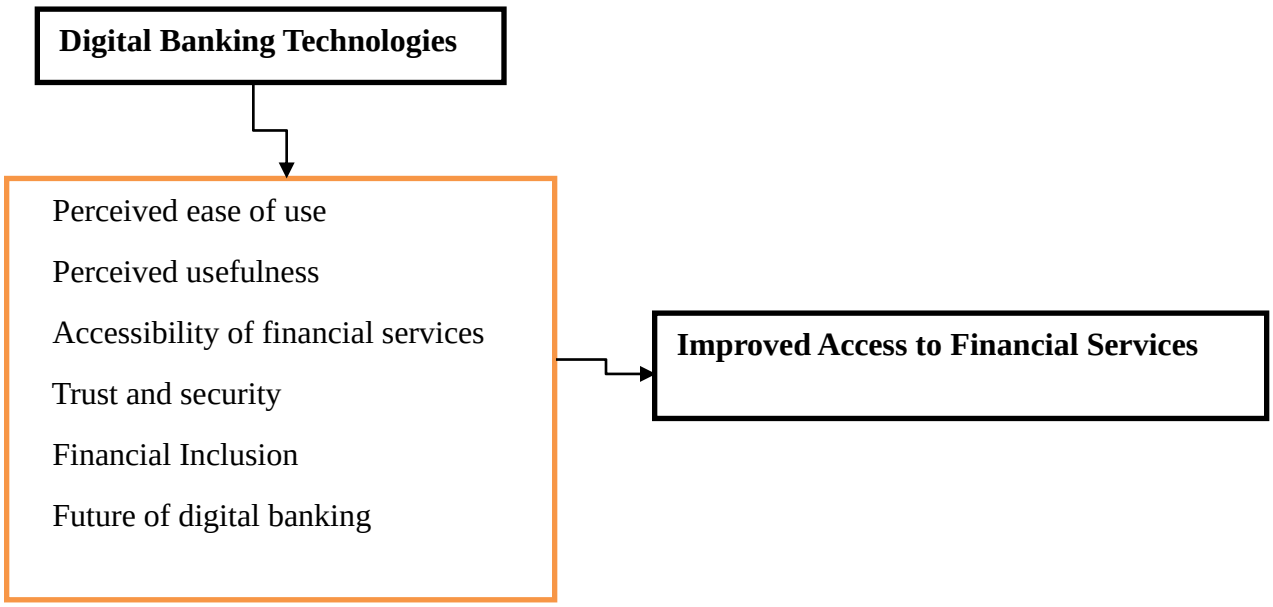
4. Mechanisms/Processes (Mediators/Moderators)

Digital banking significantly enhances access to financial services through several key mechanisms. Improved outreach allows financial institutions to transcend traditional geographical limitations, enabling service delivery to remote and underserved populations. Cost reduction is another critical factor, as digital platforms lower operational expenses, making financial services more affordable and accessible to low-income individuals. Through automation and efficiency, digital banking streamlines processes such as account opening, fund transfers, and loan approvals, resulting in faster and more reliable service delivery. Additionally, the use of data analytics, including insights from mobile phone usage and transaction histories, enables banks to assess credit worthiness and offer tailored services to previously excluded individuals, particularly those without formal financial histories. Finally, advancements in trust and security, such as biometric verification and encrypted transactions, foster confidence among users, promoting the safe and responsible use of digital financial services. Collectively, these factors position digital banking as a powerful tool for driving financial inclusion.

5. Expected Outcomes (Results)

Improving access to financial services through digital banking is expected to yield several important outcomes. One of the primary goals is increased financial inclusion, enabling more individuals and businesses—particularly those in rural or underserved areas—to participate in the formal financial system. This, in turn, contributes to improved economic empowerment, as access to savings, credit, and insurance products enhances financial stability and opportunities for growth. Digital banking also promotes financial literacy and informed inclusion by increasing public awareness and understanding of financial services, encouraging more responsible and effective usage.

Moreover, it strengthens economic resilience, as individuals and enterprises with access to financial tools are better equipped to manage risks, cope with economic shocks, and plan. Collectively, these outcomes support broader socio-economic development and contribute to poverty reduction.



Conceptual framework developed by the researcher based on survey data collected in 2025 Methodology

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

In this chapter research design, sample and sampling techniques, sample size, participants of the study, source of data, validity and reliability, data collection instruments, procedures of data collection and methods of data analysis will be discussed in depth.

3.1. Research Design

The research is mainly about assessing "The Role of Digital Banking in Improving Access to Financial Services" the case of selected commercial Banks in Ethiopia. The study was focused on identifying the effect of Digital Banking on financial services, Digital Banking usage of the Banks' clients, financial inclusion, rate of Digital Banking usage, the various types of Digital Banking platforms, and their effect on access to financial services.

The study was undertaken by using empirical investigation with explanatory design since the major focus of the research is assessing the role of Digital Banking in improving access to financial services most.

3.2. Research Approach

Employing empirical research seems to be noteworthy among other research designs. The survey instrument consists of various items which were identified through a comprehensive review of Digital Banking literature. The instrument was divided into six main sections; the first section was related to demographic information of the respondents and the second related to a survey of Digital Banking overall role on access to financial services. Statements in the second section represented each group of items measuring a particular dimension.

3.2.1 *Population, sample and sampling techniques*

3.2.1.1. *Population*

Digital Banking users in Addis Ababa whose accounts were maintained in selected major branches of three medium-sized banks, Hibret Bank S.C., Dashen Bank S.C. and Bank of Abyssinia, were the population of this study.

3.2.1.2. *Participants*

Those Account Holders who would use the Banks' Digital Banking in at least one of the platforms and whose accounts had been maintained in the Banks' major branches were participants of the study (upon their consent to participate in the study).

3.2.1.3. *Sample*

Due to the banks' policy of keeping its customers' list confidential, the samples of this study were selected by purposive sampling method and were limited to the Banks' Digital Banking users of Addis Ababa. Since the number of populations under study continued each day, a cut-off point was made in order to determine the sample size and determined to be 300 bank account holders, which included a total of 120 bank staff and 180 customers of the selected banks by applying purposive sampling from selected major branches.

3.2.1.4. *Sampling techniques*

Selection of the sample from the population was made through purposive sampling. 300 structured questionnaires were distributed to customers and employees of three banks (Hibret Bank, Dashen bank and Bank of Abyssinia) at 30 purposively selected major branches located in different parts of Addis Ababa and the Banks' Head Offices.

3.2.2. *Types of data and tools/ instruments of data collection*

3.2.2.1. *Types of data*

Employing primary data for the study was preferred since the items in the questionnaire were selected by assessing related literature in the field of Digital Banking and financial services for electronic banking. The researcher also believed that in order to collect valid and reliable data making use of primary data was relevant.

3.2.2.2. *Instruments for data collection*

By employing self-administered questionnaire prepared in both English and Amharic languages (see appendices), participants of the study were contacted in-person and through emailing Google Survey. Support was given in time of need to clarify the concepts in the items. A total of 40 items divided into six categories were primarily distributed to employees and customers of three medium-sized banks (Hibret Bank S.C., Bank of Abyssinia S.C. and Dashen Bank S.C.).

3.2.2.3. *Validity and reliability*

Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure while reliability has to do with the accuracy and precision of a measurement procedure (A measuring instrument is reliable if it provides consistent results). The validity of the instrument was established using 30 employees of the three Banks from E-banking Department at the Banks' Head Office and Customer Service officers in three large branches as well as information gathered from related literature. Another approach for the validity of a measuring instrument to be supported is it must be demonstrably reliable.

3.3. Procedures of data collection

In order to remove difficulty to handle, raising problems of interpretation, and interviewer bias; Respondents were asked to give their perception of the role of DIGITAL BANKING services on a 5–point Likert scale (1=Strongly Disagree, 2=disagree, 3=Neutral,4=Agree and 5= Strongly Agree) and 240 questionnaires were collected. A total of 215 surveys, of which 120 from the Banks' staff and 95 from customers, were found usable. The researcher purposively selected the participants (both internal and external customers of the Bank), delivered the questionnaires in person and through Google Survey and collected them from April 12- 30 for analysis.

3.4. Methods of data analysis

STATA version 15.1 was employed to analyze the usable data collected from respondents. Both descriptive and inferential statistics were applied to come up with a better result. Descriptive statistics was used to describe a set of data in terms of its frequency of occurrence, its central tendency, and its dispersion. Factor analysis, regression, correlation analysis and reliability test were examined through employing inferential statistics.

3.4.1. Ethical Considerations

In conducting this research, several ethical considerations were considered to ensure the integrity and responsible conduct of the study. First and foremost, participants' confidentiality and privacy were prioritized. All data collected from participants were anonymized, and personal information was kept secure and used only for the purpose of this study. Consent was obtained from all participants, ensuring they were fully aware of the study's purpose, procedures, and potential risks before their participation. Additionally, participants were informed that they had the right to withdraw from the study at any point without any consequences.

CHAPTER 4
RESULTS AND DISCUSSION

This chapter provides a comprehensive discussion of the results and their analysis, integrating relevant insights from the reviewed literature. Both descriptive and inferential statistical methods have been employed to strengthen the validity of the research findings. General information and survey responses were systematically analyzed using frequencies, percentages, correlation analyses, factor analysis, and multiple regression techniques.

4.1. Results

This section presents the key findings from the analysis of usable questionnaires collected through self-administered primary data. The results obtained from STATA 15.1 are discussed using both tables and figures for clarity and comprehensive interpretation.

Table 4.1. Demographic Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Gender	215	1.4047	0.492	1	2
Age	215	2.6465	1.2918	1	5
Level of Education	215	2.5209	0.9414	1	4
Profession	215	1.8	0.8157	1	3
Monthly Income	215	2.7907	1.1713	1	4
How Often do you use DB	215	2.0884	1.105	1	4
Which device do you use most often for digital banking?					
Smartphone	215	0.493	0.5011	0	1
Laptop/Desktop	215	0.214	0.4111	0	1
Tablet	215	0.293	0.4562	0	1
Other Devices	215	0.1302	0.3373	0	1
Which Digital Banking services do you use most frequently?					
Mobile Banking App	215	0.7767	0.4174	0	1
Internet Banking	215	0.2558	0.4373	0	1
USSD Banking Services	215	0.293	0.4562	0	1
Other services	215	0.0	0.0	0	0

Source: STATA output

4.1.1. *Customer demography*

In this sub section Demographic variables are processed and analyzed using mean, frequencies and percents within a table.

Gender- Table 4.2. describes that out of 215 respondents: 128 (59.53%) identified as Male, making them most of the sample. 87 (40.47%) identified as Female. The cumulative percentage shows that 100% of the respondents accounted for. This distribution suggests that males are more represented in the sample compared to females, with a difference of approximately 19 percentage points.

Table 4.2. Gender

Gender	Frequency	Percent (%)	Cumulative (%)
Male	128	59.53%	59.53%
Female	87	40.47%	100.00%
Total	**215**	**100.00%**	—

Source: STATA output

Age- As depicted in Table 4.3. below**,** the 26–35 age group comprises the largest segment of respondents, accounting for 31.63% of the sample. This is followed by the 36–45 age group (21.86%) and the 18–25 group (20.93%). Respondents aged 46 and above make up 25.58% of the total, with those above 55 representing 12.56%. This distribution indicates that the majority (74.42%) of the participants are between 18 and 45 years old, suggesting that the sample is relatively young to middle-aged.

Table 4.3. Age

Age	Frequency	Percent (%)	Cumulative (%)
18–25	45	20.93%	20.93%
26–35	68	31.63%	52.56%
36–45	47	21.86%	74.42%
46–55	28	13.02%	87.44%
Above 55	27	12.56%	100.00%
Total	**215**	**100.00%**	—

Source: STATA output

Education- As shown in Table 4.4. below the largest group of respondents, 36.28%, hold an undergraduate degree, followed by 32.09% with a postgraduate degree. Only 14.42% completed high school as their highest level of education. The "Other" category includes vocational training, diplomas, and informal education, accounts for 17.21%. Together, respondents with at least an undergraduate degree make up 68.37% of the sample, indicating a relatively well-educated population.

Table 4.4. Level of Education

Level of Education	Frequency	Percent (%)	Cumulative (%)
High School	31	14.42%	14.42%
Undergraduate Degree	78	36.28%	50.70%
Postgraduate Degree	69	32.09%	82.79%
Other	37	17.21%	100.00%
Total	**215**	**100.00%**	—

Source: STATA output

Profession- Table 4.5. shows that the largest proportion of respondents are employed in formal sectors such as banks, accounting for 45.12%. Self-employed individuals make up 29.77%, representing a significant portion likely involved in entrepreneurial or owning various businesses. Retired individuals comprise 25.12% of the sample, indicating that one-fourth of the respondents are no longer active in the workforce.

Table 4.5. Profession

Profession	Frequency	Percent (%)	Cumulative (%)
Employed	**97**	**45.12%**	**45.12%**
Self-employed	**64**	**29.77%**	**74.88%**
Retired	**54**	**25.12%**	**100.00%**
Total	**215**	**100.00%**	—

Source: STATA output

Monthly Income- as per Table 4.6 below, the largest income group consists of individuals earning above 20,000, making up 38.14% of the respondents. Those earning between 10,001 and 20,000 account for 24.65%, while 21.86% earn below 5,000. A smaller portion, 15.35%, earn between 5,001 and 10,000. Overall, the data shows that a majority (62.79%) of respondents earn more than 10,000, suggesting a relatively middle-to-high income profile for the sample.

Table 4.6. Monthly Income

Monthly Income (in local currency)	Frequency	Percent (%)	Cumulative (%)
Below 5,000	47	21.86%	21.86%
5,000–10,000	33	15.35%	37.21%
10,001–20,000	53	24.65%	61.86%
Above 20,000	82	38.14%	100.00%
Total	**215**	**100.00%**	—

Source: STATA output

Table 4.7. General Digital Banking Usage

Variable	Observations	Mean	Std. Dev.	Min	Max
How Often do you use DB	215	2.0884	1.105	1	4
Which device do you use most often for digital banking?					
Smartphone	215	0.493	0.5011	0	1
Laptop/Desktop	215	0.214	0.4111	0	1
Tablet	215	0.293	0.4562	0	1
Other Devices	215	0.1302	0.3373	0	1
Which Digital Banking services do you use most frequently?					
Mobile Banking App	215	0.7767	0.4174	0	1
Internet Banking	215	0.2558	0.4373	0	1
USSD Banking Services	215	0.293	0.4562	0	1
Other services	215	0.0	0.0	0	0

Source: STATA output

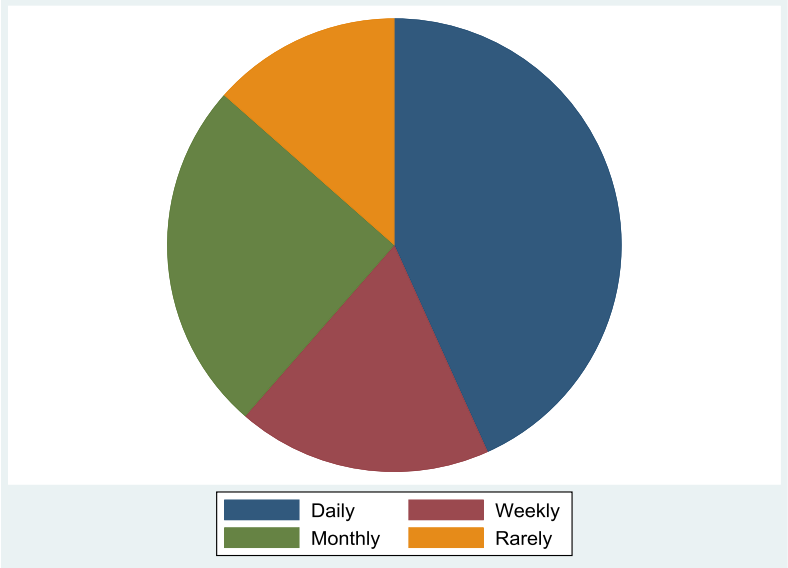
Frequency of DIGITAL BANKING usage- this variable indicates how frequently the respondents used DIGITAL BANKING since they were registered for using the service. The following Table 4.7 and Fig 4.1 clearly show that the majority (86.51%) of respondents use Digital Banking services at least monthly, showcasing a strong Digital Banking presence. A significant percentage (43.26%) are daily users, suggesting Digital Banking is an integral part of their financial activities. The relatively smaller proportion of rare users indicates that Digital Banking adoption is widespread, though some individuals may still prefer traditional banking methods.

Table 4.8. Frequency of DIGITAL BANKING usage

Usage Frequency	Frequency	Percent (%)	Cumulative (%)
Daily	93	43.26%	43.26%
Weekly	39	18.14%	61.40%
Monthly	54	25.12%	86.51%
Rarely	29	13.49%	100.00%
Total	**215**	**100.00%**	—

Source: STATA output

Fig.4.1. Frequency of DIGITAL BANKING usage



Source: STATA output

Devices used for DIGITAL BANKING services- this variable shows what devices respondents used for DIGITAL BANKING services. The analysis of device usage for accessing Digital Banking shows that:

As Table 4.9 and Figure 4.2 show smartphones are the most used devices, with approximately 54.0% of respondents using them. This suggests that mobile access is a key enabler of digital banking, likely due to convenience, portability, and widespread smartphone adoption.

Tablets are the second most used device, though at a lower rate of 29.3%, indicating moderate reliance on larger touch-screen devices for banking tasks. Laptops or desktops are used by 21.4% of the respondents. This shows that while some users still rely on traditional computing platforms, possibly for more secure or complex transactions—they are not the primary channel. Other devices (which may include smartwatches, ATMs with digital interfaces, or other internet-connected devices) are used by only 13.0%, making them the least common method for accessing digital banking.

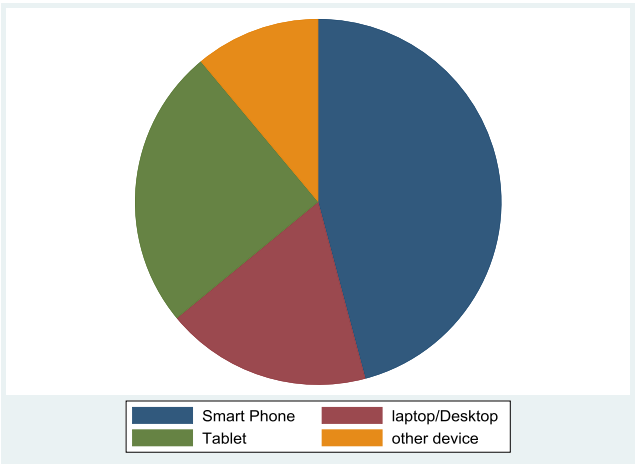
Table 4.9. Devices used for DIGITAL BANKING

Device Type	Observations (Obs)	Mean	Std. Dev.	Min	Max
Smartphone	**215**	**0.540**	**0.500**	**0**	**1**
Laptop/Desktop	**215**	**0.214**	**0.411**	**0**	**1**
Tablet	**215**	**0.293**	**0.456**	**0**	**1**
Other Device	**215**	**0.130**	**0.337**	**0**	**1**

Source: STATA output

Note: The values for each device are binary (1 = selected; 0 = not selected). The mean represents the proportion of respondents who use each type of device.

Fig.4.2. **Devices used for DIGITAL BANKING**



Source: STATA output

Most frequently used DIGITAL BANKING platform - Table 4.10. and Figure 4.3 depict that Mobile banking apps are the most widely used channel, with 77.7% of respondents indicating usage. This suggests strong smartphone adoption among Digital Banking users. USSD services (29.3%) and internet banking via web browsers (25.6%) are less frequently used, possibly due to device limitations or data access issues. Other methods (e.g., ATM-based or assisted services not listed) show 0% usage, indicating no respondents reported use of unlisted channels.

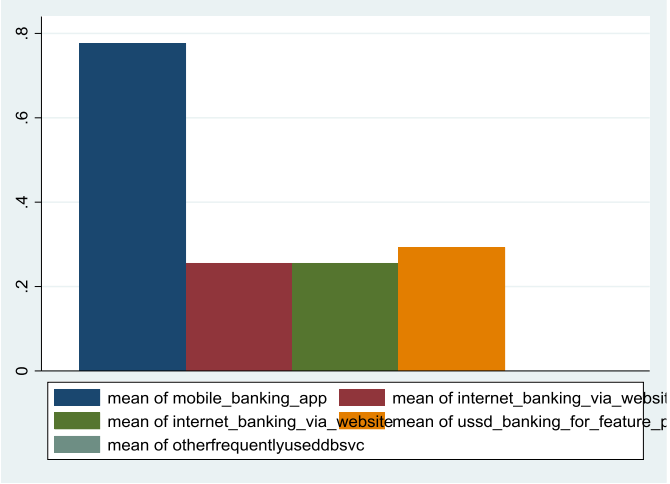
Table 4.10. Most frequently used DIGITAL BANKING platform

Digital Banking Channel	Observations	Mean	Std. Dev.	Min	Max
Mobile Banking App	215	0.7767	0.4174	0	1
Internet Banking (Web)	215	0.2558	0.4373	0	1
USSD Banking Services	215	0.2930	0.4562	0	1
Other Methods	215	0.0000	0.0000	0	0

Source: STATA output

Note: These are binary variables (1 = used, 0 = not used). The **mean** indicates the **proportion of respondents** using each service

Fig.4.3. **Most frequently used DIGITAL BANKING platform**



Source: STATA output

Experience of First bank account opening using DIGITAL BANKING service- Table 4.11 shows that 41.40% of respondents said Digital Banking helped them open their first bank account, indicating a significant role of digital channels in financial inclusion. 30.23% said No, suggesting they opened their first account through traditional methods. 28.37% marked Not Applicable, which could include individuals who already had an account before Digital Banking was available.

Table 4.11 Experience of First bank account opening using DIGITAL BANKING

Response	Frequency	Percent (%)	Cumulative (%)
Yes	89	41.40%	41.40%
No	65	30.23%	71.63%
Not Applicable	61	28.37%	100.00%
Total	**215**	**100.00%**	—

Source: STATA output

4.1.2. *Survey questions*

Under this subsection, outputs of the analysis regarding items in six dimensions are analyzed and interpreted.

4.1.2.1 Frequency and percentage

I. Perceived ease of use

Table 4.12. Using digital banking services is comfortable for me

Response	Frequency	Percent (%)	Cumulative (%)
Strongly Disagree	21	9.77%	9.77%
Disagree	27	12.56%	22.33%
Neutral	28	13.02%	35.35%
Agree	67	31.16%	66.51%
Strongly Agree	72	33.49%	100.00%
Total	215	100.00%	—

Source: STATA Output

Table 4.12 shows a majority (64.65%) of respondents agree or strongly agree that they are comfortable using Digital Banking services, indicating broad user confidence and positive experiences. 22.33% of respondents disagree or strongly disagree, pointing to a minority who are uncomfortable—possibly due to lack of digital literacy, trust issues, or usability concerns. 13.02% remain neutral, which may suggest limited exposure or mixed feelings.

Table 4.13. Digital Banking is more convenient than traditional banking

Response Category	Frequency (Freq.)	Percent (%)	Cumulative (%)
Strongly Disagree	10	4.65%	4.65%
Disagree	8	3.72%	8.37%
Neutral	24	11.16%	19.53%
Agree	55	25.58%	45.12%
Strongly Agree	118	54.88%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

The data in Table 4.13 reveals a **strongly positive perception** of Digital Banking convenience compared to traditional banking among the respondents: A significant majority, **54.88%**, *strongly agree* that Digital Banking is more convenient, and an additional **25.58% agree* with this statement. Collectively, **over 80%** of respondents perceive Digital Banking as more convenient than traditional banking. Only a small fraction—**4.65% strongly disagree** and **3.72% disagree**—express a negative perception. **11.16%** of respondents remain *neutral*, indicating a minority who either do not perceive a significant difference or are undecided.

Table 4.14. The Digital Banking platform I use is easy to use

Response	Frequency	Percent	Cumulative Percent
Strongly disagree	**7**	**3.26%**	**3.26%**
Disagree	**12**	**5.58%**	**8.84%**
Neutral	**16**	**7.44%**	**16.28%**
Agree	**82**	**38.14%**	**54.42%**
Strongly agree	**98**	**45.58%**	**100.00%**
Total	**215**	**100%**	

Source: STATA Output

Table 4.14 demonstrates a large majority of respondents (180 out of 215, or 83.72%) either agree or strongly agree that the Digital Banking platform they use is easy to use. Strong agreement (45.58%) is the most common response, indicating a high level of satisfaction with usability. Only 8.84% of respondents expressed disagreement (either strongly disagree or disagree), suggesting a low level of dissatisfaction. A small portion (7.44%) remained neutral, possibly indicating indifference or uncertainty about usability.

Table 4.15. I am willing to use only Digital Banking in the future, without physical branches

Response	Frequency	Percent (%)	Cumulative (%)
Strongly agree	138	64.19%	64.19%
Agree	51	23.72%	87.91%
Disagree	26	12.09%	100.00%
Total	**215**	**100.00%**	—

Source: STATA Output

Table 4.15 portrays that a clear majority (64.19%) of respondents are fully open to transitioning to digital-only banking, showing dedicated support for the shift toward digital financial services. 23.72% are open but conditional, indicating they would consider digital-only banking if improvements are made—possibly in areas like security, user experience, or accessibility. Only 12.09% express a clear preference for traditional physical banking, suggesting that resistance to Digital Banking is low.

Table 4.16. I use Digital Banking because it is convenient

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**17**	**7.91%**	**7.91%**
Disagree	**15**	**6.98%**	**14.88%**
Neutral	**73**	**33.95%**	**48.84%**
Agree	**22**	**10.23%**	**59.07%**
Strongly Agree	**88**	**40.93%**	**100.00%**
Total	**215**	**100%**	

Source: STATA Output

Table 4.16 shows that out of 215 respondents, 88 individuals (40.93%) strongly agreed and 22 (10.23%) agreed that they use Digital Banking because it is convenient, totaling 111 respondents (51.16%) who expressed a positive view of digital banking's convenience. Meanwhile, 73 respondents (33.95%) were neutral, possibly indicating uncertainty or indifference regarding convenience as a key motivator. A smaller portion of respondents, 17 (7.91%) strongly disagreed and 15 (6.98%) disagreed. A combined 14.88%—did not find convenience to be a compelling reason for using digital banking.

Table 4.17. I use Digital Banking because transactions are faster

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**22**	**10.23%**	**10.23%**
Disagree	**35**	**16.28%**	**26.51%**
Neutral	**49**	**22.79%**	**49.30%**
Agree	**54**	**25.12%**	**74.42%**
Strongly Agree	**55**	**25.58%**	**100.00%**
Total	**215**	**100%**	

Source: STATA Output

The above Table 4.17 illustrates that out of 215 respondents, 109 individuals (50.70%) either agreed (25.12%) or strongly agreed (25.58%) that they use Digital Banking because transactions are faster. This indicates that half of the respondents positively associate Digital Banking with transaction speed. On the other hand, 22 respondents (10.23%) strongly disagreed and 35 (16.28%) disagreed, totaling 57 individuals (26.51%) who do not view faster transactions as a key reason for using digital banking. Additionally, 49 respondents (22.79%) were neutral, suggesting some uncertainty or mixed feelings on the issue.

Table 4.18. I use Digital Banking because it is available 24/7

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**14**	**6.51%**	**6.51%**
Disagree	**17**	**7.91%**	**14.42%**
Neutral	**44**	**20.47%**	**34.88%**
Agree	**70**	**32.56%**	**67.44%**
Strongly Agree	**70**	**32.56%**	**100.00%**
Total	**215**	**100%**	

Source: STATA Output

Out of 215 respondents, 140 individuals (65.12%) either agreed (32.56%) or strongly agreed (32.56%) that they use Digital Banking because it is available 24/7. This indicates that round-the-clock accessibility is a key motivator for most users. Meanwhile, 44 respondents (20.47%) were neutral, possibly reflecting indifference or that 24/7 availability is not a primary consideration for them. A smaller group—14 (6.51%) strongly disagreed and 17 (7.91%) disagreed—totaling 31 individuals (14.42%)—do not consider 24/7 access a reason for using digital banking.

Table 4.19. I use Digital Banking because it offers lower transaction fees

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**18**	**8.37%**	**8.37%**
Disagree	**85**	**39.53%**	**47.91%**
Neutral	**61**	**28.37%**	**76.28%**
Agree	**51**	**23.72%**	**100.00%**
Strongly Agree	**0**	**0.00%**	
Total	**215**	**100%**	

Source: STATA Output

Table 4.19 shows that among 215 respondents, only 51 individuals (23.72%) agreed that they use Digital Banking because it offers lower transaction fees, and no one strongly agreed. This indicates a relatively low level of positive association between Digital Banking use and reduced fees. In contrast, a substantial portion—85 respondents (39.53%)—disagreed, and 18 (8.37%) strongly disagreed, totaling 103 individuals (47.91%) who do not view lower fees as a reason for using digital banking. Additionally, 61 respondents (28.37%) were neutral, suggesting uncertainty or indifference on this factor.

Table 4.20. I use Digital Banking because it is accessible from remote areas

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**33**	**15.35%**	**15.35%**
Disagree	**15**	**6.98%**	**22.33%**
Neutral	**56**	**26.05%**	**48.37%**
Agree	**49**	**22.79%**	**71.16%**
Strongly Agree	**62**	**28.84%**	**100.00%**
Total	**215**	**100%**	

Source: STATA Output

As can be seen in Table 4.20 out of the 215 respondents, 111 individuals (51.63%) either agreed (22.79%) or strongly agreed (28.84%) that they use Digital Banking because it is accessible from remote areas. This indicates that more than half view geographic accessibility as a major advantage of digital banking. At the same time, 56 respondents (26.05%) were neutral, suggesting that a sizable portion may not have strong feelings about this benefit—possibly because they do not frequently face access issues based on location. Meanwhile, 33 respondents (15.35%) strongly disagreed and 15 (6.98%) disagreed, totaling 22.33% who do not see remote accessibility as a reason for using digital banking.

II. Access to Financial Services/perceived usefulness

Table 4.21. Access to financial services since using Digital Banking has improved

Response	Frequency	Percent (%)	Cumulative (%)
Strongly Disagree	14	6.51%	6.51%
Disagree	22	10.23%	16.74%
Neutral	29	13.49%	30.23%
Agree	83	38.60%	68.84%
Strongly Agree	67	31.16%	100.00%
Total	215	100.00%	—

Source: STATA Output

Table 4.21 describes that a combined 69.76% of respondents (Agree or Strongly Agree) believe that access to financial services has improved since they started using digital banking, indicating positive user experience and enhanced financial inclusion. 16.74% of respondents (Disagree or Strongly Disagree) did not feel any improvement, suggesting that Digital Banking may not be addressing all accessibility challenges. 13.49% remain neutral, possibly reflecting limited impact or uncertainty about the benefits.

Table 4.22. Digital Banking has made transactions easier for me

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	21	9.77%	9.77%
Disagree	29	13.49%	23.26%
Neutral	36	16.74%	40.00%
Agree	19	8.84%	48.84%
Strongly Agree	110	51.16%	100.00%
Total	215	100%	

Source: STATA Output

Table 4.22 highlights that out of 215 respondents, 129 individuals (60.00%) either agreed (8.84%) or strongly agreed (51.16%) that Digital Banking has made transactions easier for them. This demonstrates a positive majority perception of Digital Banking on transactional ease. On the other hand, 50 respondents (23.26%) either disagreed (13.49%) or strongly disagreed (9.77%), indicating that nearly a quarter of users do not find Digital Banking easier for transactions. Meanwhile, 36 respondents (16.74%) were neutral, neither agreeing nor disagreeing.

Table 4.23. Digital Banking has helped me save money

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**14**	**6.51%**	**6.51%**
Disagree	**71**	**33.02%**	**39.53%**
Neutral	**96**	**44.65%**	**84.19%**
Agree	**22**	**10.23%**	**94.42%**
Strongly Agree	**12**	**5.58%**	**100.00%**
Total	**215**	**100%**	

Source: STATA Output

It is shown in Table 4.23 that out of 215 respondents, only 34 individuals (15.81%) agreed (10.23%) or strongly agreed (5.58%) that Digital Banking has helped them save money. This suggests that a small minority perceive Digital Banking as a tool for saving money. A large portion, 96 respondents (44.65%), were neutral, indicating uncertainty or mixed feelings about the impact of Digital Banking on their savings. Additionally, 85 respondents (39.53%) either disagreed (33.02%) or strongly disagreed (6.51%) with the statement, showing that many users do not feel Digital Banking has helped them save money.

Table 4.24. Digital Banking has improved my access to credit and loans

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	25	11.63%	11.63%
Disagree	17	7.91%	19.53%
Neutral	109	50.70%	70.23%
Agree	50	23.26%	93.49%
Strongly Agree	14	6.51%	100.00%
Total	215	100%	

Source: STATA Output

Table 4.24 shows that among the 215 respondents, just 64 individuals (29.77%) agreed (23.26%) or strongly agreed (6.51%) that Digital Banking has improved their access to credit and loans. This shows that fewer than one-third perceive a clear benefit in this area. Notably, the majority—109 respondents (50.70%)—were neutral, suggesting a high level of uncertainty or lack of experience with accessing credit through Digital Banking platforms. Meanwhile, 42 respondents (19.53%) disagreed (7.91%) or strongly disagreed (11.63%), indicating that nearly one-fifth do not feel Digital Banking has enhanced their access to credit or loans.

Table 4.25. Digital Banking has contributed to greater financial inclusion

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	9	4.19%	4.19%
Disagree	8	3.72%	7.91%
Neutral	36	16.74%	24.65%
Agree	95	44.19%	68.84%
Strongly Agree	67	31.16%	100.00%
Total	215	100%	

Source: STATA Output

Table 4.25 illustrates that out of 215 respondents, a clear majority—162 individuals (75.35%)—either agreed (44.19%) or strongly agreed (31.16%) that Digital Banking has contributed to greater financial inclusion. This indicates a strong overall perception that Digital Banking is playing a significant role in broadening access to financial services. Only 17 respondents (7.91%) disagreed with the statement, while 36 (16.74%) were neutral, suggesting a small minority remain uncertain or skeptical about digital banking's impact on inclusion.

Table 4.26. Digital Banking has helped me manage my finances better

Response	**Frequency**	**Percent**	**Cumulative Percent**
Strongly Disagree	13	6.05%	6.05%
Disagree	8	3.72%	9.77%
Neutral	13	6.05%	15.81%
Agree	104	48.37%	64.19%
Strongly Agree	77	35.81%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

As table 4.26 shows among the 215 respondents, a strong majority, 181 individuals (84.18%)—either agreed (48.37%) or strongly agreed (35.81%) that Digital Banking has helped them manage their finances better. This reflects a high level of satisfaction and perceived utility in the financial management features of Digital Banking platforms. Only 21 respondents (9.77%) disagreed (3.72%) or strongly disagreed (6.05%), while another 13 respondents (6.05%) were neutral.

Table 4.27. Perceptions of Digital Banking's Role in Supporting Underserved Communities

Response Category	Frequency	Percent (%)	Cumulative (%)
Strongly disagree	27	12.56%	12.56%
Disagree	31	14.42%	26.98%
Neutral	42	19.53%	46.51%
Agree	57	26.51%	73.02%
Strongly agree	58	26.98%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.27 describes that a combined 53.49% of respondents (26.51% Agree, 26.98% Strongly Agree) believe that Digital Banking has helped underserved communities gain better financial services. 19.53% remained neutral, possibly indicating limited knowledge or experience with how Digital Banking affects underserved groups. On the other hand, 26.98% expressed disagreement (14.42% Disagree, 12.56% Strongly Disagree), suggesting a significant minority does not perceive Digital Banking as beneficial for underserved communities.

Table 4.28. Customer support for Digital Banking services is obtained on time

Response Category	Frequency	Percent (%)	Cumulative (%)
Strongly disagree	25	11.63%	11.63%
Disagree	33	15.35%	26.98%
Neutral	42	19.53%	46.51%
Agree	94	43.72%	90.23%
Strongly agree	21	9.77%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

As depicted in table 4.28 the majority (53.49%) of respondents agree or strongly agree that customer support for Digital Banking is obtained online, indicating a positive perception of accessible support services. 19.53% are neutral, suggesting that a notable segment may not have engaged with support services or has had mixed experiences. 26.98% of participants disagree or strongly disagree, pointing to a gap in support effectiveness or awareness among more than a quarter of users.

Table 4.29. Digital Banking has an impact on financial inclusion (access to banking services)

Response Category	Frequency	Percent (%)	Cumulative (%)
Strongly disagree	19	8.84%	8.84%
Disagree	18	8.37%	17.21%
Neutral	42	19.53%	36.74%
Agree	77	35.81%	72.56%
Strongly agree	59	27.44%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.29 shows that a clear majority (63.25%) of respondents agree or strongly agree that Digital Banking has had a positive impact on financial inclusion and access to banking services. 19.53% are neutral, suggesting a portion of users may be undecided or unaware of the broader implications. 17.21% of participants disagree or strongly disagree, indicating that some users may not have experienced improved access, or may view the impact as insufficient.

III. Accessibility of Financial Services

Table 4.30. Opening a bank account is accessible through Digital Banking

Response	Frequency	Percent	Cumulative Percent
Not Accessible	11	5.12%	5.12%
Slightly Accessible	8	3.72%	8.84%
Neutral	21	9.77%	18.60%
Accessible	115	53.49%	72.09%
Highly Accessible	60	27.91%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.30 depicts that out of 215 respondents, a large majority, 175 individuals (81.40%)—rated opening a bank account through Digital Banking as either accessible (53.49%) or highly accessible (27.91%). This shows strong confidence in the ease and user-friendliness of digital onboarding processes. In contrast, only 19 respondents (8.84%) felt it was not or only slightly accessible, suggesting minimal dissatisfaction. Meanwhile, 21 respondents (9.77%) remained neutral, possibly indicating a lack of direct experience or a neutral perception of the process.

Table 4.31. Applying for and accessing loans is accessible through Digital Banking

Response	Frequency	Percent	Cumulative Percent
Not Accessible	14	6.51%	6.51%
Slightly Accessible	14	6.51%	13.02%
Neutral	12	5.58%	18.60%
Accessible	104	48.37%	66.98%
Highly Accessible	71	33.02%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.31 shows that Among the 215 respondents, a strong majority—175 individuals (81.39%)—perceived applying for and accessing loans through Digital Banking as either accessible (48.37%) or highly accessible (33.02%). This suggests a high level of user confidence in the digital loan application process, indicating successful integration of lending services into digital platforms. Only 28 respondents (13.02%) viewed the process as not or only slightly accessible, and 12 respondents (5.58%) were neutral, potentially reflecting limited exposure or experience with digital lending.

Table 4.32. Paying bills is accessible through Digital Banking

Response	**Frequency**	**Percent**	**Cumulative Percent**
Not Accessible	8	3.72%	3.72%
Slightly Accessible	17	7.91%	11.63%
Neutral	8	3.72%	15.35%
Accessible	86	40.00%	55.35%
Highly Accessible	96	44.65%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.32 depicts that out of 215 respondents, an overwhelming majority—182 individuals (84.65%)—rated bill payment through Digital Banking as either accessible (40.00%) or highly accessible (44.65%). This reflects a high level of satisfaction with the convenience and functionality of Digital Banking services for managing regular payments. Only a small fraction—25 respondents (11.63%)—considered bill payment to be not or slightly accessible, while another 8 respondents (3.72%) were neutral.

Table 4.33. Money transfer is accessible through Digital Banking

Response	Frequency	Percent	Cumulative Percent
Accessible	24	11.16%	11.16%
Highly Accessible	191	88.84%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.33 portrays that among the 215 respondents, all participants (100%) agreed that money transfer through Digital Banking is accessible, with a substantial majority—191 individuals (88.84%)—rating it as highly accessible.

IV. Challenges and Barriers/ Trust and Security

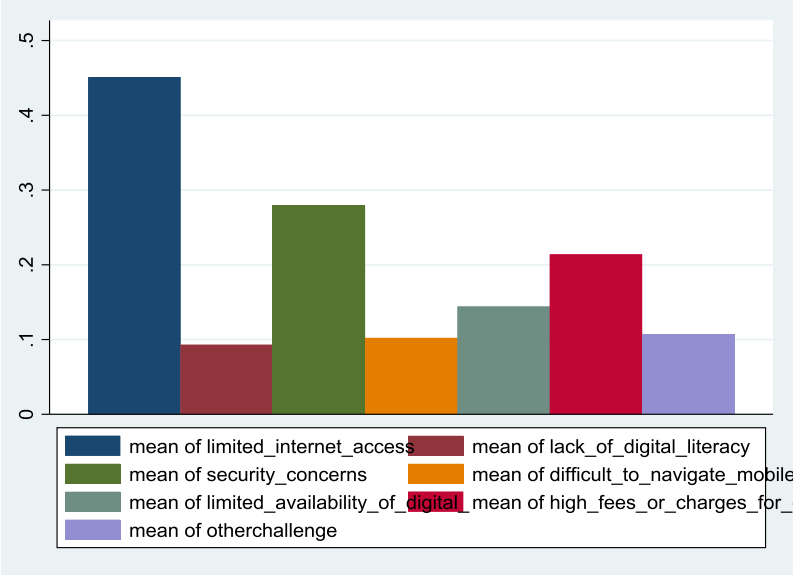
Table 4.34. Challenges faced while using Digital Banking

Challenge	Obs	Mean	Std. Dev.	Min	Max
Limited internet access	215	0.4512	0.4988	0	1
Lack of digital literacy	215	0.0930	0.2911	0	1
Security concerns	215	0.2791	0.4496	0	1
Difficult user platforms	215	0.1023	0.3038	0	1
Limited availability of Digital Banking in rural areas	215	0.1442	0.3521	0	1
High fees or transaction costs	215	0.2140	0.4111	0	1
Other (unspecified) challenges	215	0.1070	0.3098	0	1

Source: STATA Output

Note: All variables are binary **(1 = Selected, 0 = not selected).** The **mean** indicates the **proportion of respondents** using the service for that purpose.

Fig.4.4. **Challenges faced while using digital banking**



Source: STATA Output

Table 4.34 and Figure 4.4 show Limited internet access is the most reported barrier (mean = 0.4512, or 45.1% of respondents). This indicates a significant infrastructural barrier that could hinder the broader adoption of digital banking. Security concerns are also notable, selected by 27.9% of respondents. This reflects trust and safety issues with digital financial platforms. High transaction fees were identified by 21.4%, which could affect cost-sensitive users, especially in lower-income brackets. Lack of digital literacy (9.3%) and difficult user platforms (10.2%) suggest that most users are relatively comfortable with the technology, or that these issues are less commonly perceived as barriers. Limited availability of support (14.4%) and other challenges (10.7%) suggest some demand for better customer support or clarity**.**

Table 4.35. I have limited internet access that affects my use of digital banking

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	33	15.35%	15.35%
Disagree	58	26.98%	42.33%
Neutral	34	15.81%	58.14%
Agree	81	37.67%	95.81%
Strongly Agree	9	4.19%	100.00%
Total	215	100.00%	

Source: STATA Output

Table 4.35 depicts out of 215 respondents, 90 individuals (41.86%) indicated that limited internet access does not affect their use of digital banking, with 33 (15.35%) strongly disagreeing and 58 (26.98%) disagreeing. However, a slightly larger proportion—90 respondents (41.86%)—agreed or strongly agreed that limited internet access does affect their usage, with 81 (37.67%) agreeing and 9 (4.19%) strongly agreeing. Another 34 respondents (15.81%) were neutral, indicating uncertainty or occasional internet access issues.

Table 4.36. My lack of digital skills makes it difficult to use digital banking

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	13	6.05%	6.05%
Disagree	21	9.77%	15.81%
Neutral	76	35.35%	51.16%
Agree	38	17.67%	68.84%
Strongly Agree	67	31.16%	100.00%
Total	215	100.00%	

Source: STATA Output

Table 4.36 shows among the 215 respondents, a notable 105 individuals (48.83%) either agreed (17.67%) or strongly agreed (31.16%) that their lack of digital skills makes it difficult to use digital banking. In contrast, only 34 respondents (15.81%) disagreed with the statement, and a large segment—76 respondents (35.35%)—remained neutral.

Table 4.37. I have concerns about the security of digital banking

Response	**Frequency (Freq.)**	**Percent**	**Cumulative Percent (Cum.)**
Strongly disagree	11	5.12%	5.12%
Disagree	25	11.63%	16.74%
Neutral	54	25.12%	41.86%
Agree	82	38.14%	80.00%
Strongly agree	43	20.00%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.37 portrays a combined 58.14% of respondents (38.14% Agree + 20.00% Strongly Agree) believe that Digital Banking services are secure for financial transactions, indicating general trust in the security of these platforms. 25.12% of respondents are neutral, possibly reflecting uncertainty or limited personal experience with Digital Banking security features. 16.75% (5.12% Strongly Disagree + 11.63% Disagree) express concern or distrust, showing that a minority still has reservations about security.

Table 4.38. The Digital Banking platforms I use are difficult to navigate

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	10	4.65%	4.65%
Disagree	17	7.91%	12.56%
Neutral	26	12.09%	24.65%
Agree	100	46.51%	71.16%
Strongly Agree	62	28.84%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

As can be seen in Table 4.38, out of 215 respondents, 100 individuals (46.51%) either agreed or strongly agreed (28.84%) that Digital Banking services are not readily available in their area. In contrast, 12.56 % disagreed or strongly disagreed, suggesting Digital Banking platform is difficult for them, while 12.09% were neutral.

Table 4.39. Digital Banking services are not readily available in my area

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**13**	**6.05%**	**6.05%**
Disagree	**61**	**28.37%**	**34.42%**
Neutral	**19**	**8.84%**	**43.26%**
Agree	**96**	**44.65%**	**87.91%**
Strongly Agree	**26**	**12.09%**	**100.00%**
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.39 describes that out of 215 respondents, 122 individuals (56.74%) either agreed (44.65%) or strongly agreed (12.09%) that Digital Banking services are not readily available in their area. In contrast, 34.42% disagreed or strongly disagreed, suggesting these services are available for them, while 8.84% were neutral.

Table 4.40. Digital Banking has high fees or transaction costs

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	46	21.40%	21.40%
Disagree	19	8.84%	30.23%
Neutral	27	12.56%	42.79%
Agree	58	26.98%	69.77%
Strongly Agree	65	30.23%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

As illustrated in Table 4.40, among the 215 respondents, 123 individuals (57.21%) either agreed (26.98%) or strongly agreed (30.23%) that Digital Banking services have high fees or transaction costs. In contrast, 65 respondents (30.23%) either disagreed or strongly disagreed with this perception, while 27 individuals (12.56%) remained neutral.

Table 4.41. Digital Banking services are secure for my financial transactions

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	**16**	**7.44%**	**7.44%**
Disagree	**13**	**6.05%**	**13.49%**
Neutral	**26**	**12.09%**	**25.58%**
Agree	**152**	**70.70%**	**96.28%**
Strongly Agree	**8**	**3.72%**	**100.00%**
Total	**215**	**100.00%**	

Source: STATA Output

It is portrayed in Table 4.41, out of 215 respondents, 160 individuals (74.42%) expressed confidence in the security of digital banking, with 70.70% agreeing and 3.72% strongly agreeing that Digital Banking services are secure for their financial transactions. In contrast, only 29 respondents (13.49%) expressed disagreement, while 26 (12.09%) remained neutral.

Table 4.42. I have experienced security issues with digital banking

Response	Frequency	Percent	Cumulative Percent
Strongly Disagree	41	19.07%	19.07%
Disagree	113	52.56%	71.63%
Neutral	61	28.37%	100.00%
Total	215	100.00%	

Source: STATA Output

Table 4.42 shows that among 215 respondents, a majority of 113 individuals (52.56%) disagreed with the statement that they have experienced security issues with digital banking, and an additional 41 respondents (19.07%) strongly disagreed, totaling 71.63% who indicated no personal experience with security issues. Meanwhile, 28.37% of respondents chose a neutral stance, and no respondents agreed or strongly agreed with the statement.

Table 4.43. I trust my bank's digital platform to protect my personal and financial information

Response	Frequency	Percent	Cumulative Percent
Neutral	90	41.86%	41.86%
Agree	40	18.60%	60.47%
Strongly Agree	85	39.53%	100.00%
Total	215	100.00%	

Source: STATA Output

Table 4.43 dictates that Out of 215 respondents, a significant portion—85 individuals (39.53%)—strongly agreed that they trust their bank's digital platform to protect their personal and financial information. Additionally, 40 respondents (18.60%) agreed, resulting in a combined positive trust level of 58.13%. Meanwhile, 41.86% of respondents remained neutral, and notably, none expressed disagreement or distrust.

V. Future of Digital Banking/Adoption intention

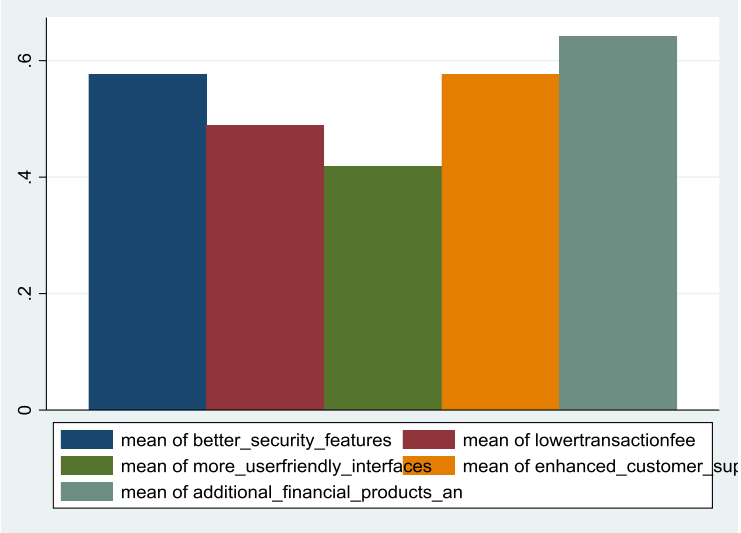
Table 4.44. Digital Banking Improvements

Digital Banking Improvements	Obs	Mean	Std. Dev.	Min	Max
Better Security Features	215	0.3023	0.4603	0	1
lower transaction costs	215	0.2651	0.4424	0	1
more user-friendly services	215	0.4186	0.4945	0	1
enhanced customer support	215	0.2977	0.4583	0	1
additional banking functions	215	0.2605	0.4399	0	1

Source: STATA Output

Note: All variables are binary **(1 = Selected, 0 = not selected).** The **mean** indicates the **proportion of respondents** using the service for that purpose.

Fig. 4.5. **Digital Banking Improvements**



Source: STATA Output

Table 4.44 and Figure 4.5 reveal that more user-friendly services (Mean = 41.86%) had the highest proportion of agreement. Suggests that ease of use and interface design is a key improvement users recognize or desire in digital platforms. Better security features (Mean = 30.23%) Security is the second most mentioned improvement, indicating its continued importance in user satisfaction and adoption. Banks should continue to strengthen and communicate security enhancements. Enhanced customer support (Mean = 29.77%) A significant number of users value improved support, hinting at a possible prior dissatisfaction with customer service channels. Lower transaction costs (Mean = 26.51%) Cost-saving is an expected benefit, but its lower mean suggests that either it has not been clearly felt by users or isn't prioritized as highly as other factors. Additional banking functions (Mean = 26.05%) Indicates some demand for expanded digital capabilities beyond basic functions.

Table 4.45. Digital Banking needs better security features

Response	Frequency	Percent	Cumulative Percent
Neutral	15	6.98%	6.98%
Agree	131	60.93%	67.91%
Strongly Agree	69	32.09%	100.00%
Total	215	100.00%	

Source: STATA Output

Table 4.45 states that out of 215 respondents, 131 individuals (60.93%) agreed and 69 (32.09%) strongly agreed that Digital Banking needs better security features. Combined, an overwhelming 93.02% of the sample expressed a clear demand for improved digital security. Only 15 respondents (6.98%) remained neutral, and none disagreed with the statement.

Table 4.46. Digital Banking needs more user-friendly interfaces

Response	Frequency	Percent	Cumulative Percent
Strongly disagree	11	5.12%	5.12%
Disagree	10	4.65%	9.77%
Neutral	14	6.51%	16.28%
Agree	39	18.14%	34.42%
Strongly agree	141	65.58%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.46 dictates that among the 215 respondents, 141 individuals (65.58%) strongly agreed and 39 (18.14%) agreed that Digital Banking platforms need more user-friendly interfaces. This results in a combined agreement level of 83.72%, indicating a strong consensus in favor of improving usability.

Meanwhile, only a small portion of respondents disagreed (4.65%) or strongly disagreed (5.12%), and 6.51% remained neutral. This clearly suggests that while Digital Banking is widely adopted, a majority of users find the platforms not intuitive enough or unnecessarily complex, signaling a critical area for improvement in user experience design.

Table 4.47. Digital Banking needs enhanced customer support

Response	Frequency	Percent	Cumulative Percent
Strongly disagree	**57**	**26.51%**	**26.51%**
Disagree	**104**	**48.37%**	**74.88%**
Neutral	**54**	**25.12%**	**100.00%**
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.47 states that among the 215 respondents, 104 (48.37%) disagreed and 57 (26.51%) strongly disagreed with the statement that Digital Banking needs enhanced customer support, making a combined majority of 74.88% who do not see a need for improvement in this area. Meanwhile, 54 respondents (25.12%) remained neutral, and none agreed or strongly agreed. This indicates that most users are satisfied with the current level of customer support offered through Digital Banking platforms, with only a minority expressing uncertainty or no strong opinion.

Table 4.48. Digital Banking needs additional banking functions

Response	**Frequency**	**Percent**	**Cumulative Percent**
Strongly agree	**55**	**25.58%**	**25.58%**
Agree	**132**	**61.40%**	**86.98%**
Neutral	**28**	**13.02%**	**100.00%**
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.48 illustrates that out of 215 respondents, a substantial majority, 187 individuals (87%)—either agreed (132 respondents, 61.40%) or strongly agreed (55 respondents, 25.58%) that Digital Banking needs additional banking functions. Only 28 respondents (13.02%) were neutral on the matter.

Table 4.49. Digital Banking will continue to improve access to financial services

Response	**Frequency**	**Percent**	**Cumulative %**
Strongly Disagree	15	6.98%	6.98%
Disagree	15	6.98%	13.95%
Neutral	27	12.56%	26.51%
Agree	75	34.88%	61.40%
Strongly Agree	83	38.60%	100.00%
Total	**215**	**100%**	

Source: STATA Output

Table 4.49 portrays that 73.48% (Agree + Strongly Agree) believe Digital Banking will continue to enhance financial inclusion. This high level of agreement reflects strong confidence in the long-term value and potential of digital banking. 12.56% are undecided, possibly reflecting a wait-and-see attitude or lack of sufficient information. A combined 13.95% (Disagree + Strongly Disagree) are skeptical about digital banking's future role in improving access. These may represent individuals who have faced challenges or have concerns about digital exclusivity or infrastructure.

Table 4.50. I intend to continue using Digital Banking in the future

Response	Frequency	Percent	Cumulative %
Strongly disagree	**23**	**10.70%**	**10.70%**
Disagree	**21**	**9.77%**	**20.47%**
Neutral	**54**	**25.12%**	**45.58%**
Agree	**58**	**26.98%**	**72.56%**
Strongly agree	**59**	**27.44%**	**100.00%**
Total	**215**	**100%**	

Source: STATA Output

The above Table 4.50 presents how respondents feel about continuing to use Digital Banking services in the future:

54.42% (Agree + Strongly Agree) intend to continue using digital banking. This suggests that over half the users have confidence and satisfaction with Digital Banking platforms. 25.12% selected Neutral, indicating a significant portion are undecided, possibly due to mixed experiences, uncertainty about future features, or ongoing challenges with access or usability. 20.47% (Disagree + Strongly Disagree) express unwillingness or hesitation to continue using digital banking. This resistance may stem from security concerns, preference for traditional banking, digital literacy issues, or negative past experiences.

Table 4.51. Recommendation of Digital Banking to Others

Response	Frequency	Percent	Cumulative %
Strongly disagree	**39**	**18.14%**	**18.14%**
Disagree	**7**	**3.26%**	**21.40%**
Neutral	**21**	**9.77%**	**31.16%**
Agree	**78**	**36.28%**	**67.44%**
Strongly agree	**70**	**32.56%**	**100.00%**
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.51 summarizes how likely respondents are to recommend Digital Banking to others as a method for accessing financial services:

68.84% (Agree + Strongly Agree) of respondents would recommend digital banking. This indicates a strong level of satisfaction and perceived value, showing trust in Digital Banking platforms. 9.77% remain undecided, potentially due to limited experience or mixed outcomes with digital banking. A combined 21.40% (Strongly Disagree + Disagree) would not recommend digital banking. The 18.14% strongly disagreeing is significant and may reflect concerns around trust, security, or usability issues.

Table 4.52. Digital Banking's Role in Improving Access to Financial Services

Response	Frequency	Percent	Cumulative %
Strongly disagree	16	7.44%	7.44%
Disagree	20	9.30%	16.74%
Neutral	37	17.21%	33.95%
Agree	80	37.21%	71.16%
Strongly agree	62	28.84%	100.00%
Total	**215**	**100.00%**	

Source: STATA Output

Table 4.52 captures respondents' perceptions of whether Digital Banking has played a role in improving access to financial services. 66.05% of respondents (Agree + Strongly Agree) believe that Digital Banking has improved access. This majority indicates that most users recognize tangible benefits, such as convenience, reach, and speed of service. 17.21% hold a neutral position, which might suggest uncertainty or lack of noticeable change in their personal experience. A combined 16.74% (Strongly Disagree + Disagree) do not believe Digital Banking has improved access. These respondents might face barriers such as poor digital literacy, infrastructure challenges, or distrust in digital systems.

4.1.2.2. Reliability analysis

Cronbach's alpha reliability test was used to assess the validity of the survey items. According to Hendrickson et al. (1993) and McGraw and Wong (1996), a scale should have an alpha coefficient greater than 0.700 for its items to be considered reliable as a group. Therefore, a minimum Cronbach's alpha value of 0.700 was accepted to confirm the validity of the items. As shown in Table 4.53 all dimensions have appropriate reliability.

Table 4.53 Reliability Statistics for respective Dimensions

Dimensions in the Questionnaire	Cronbach's Alpha Based on unstandardized Items	Cronbach's Alpha Based on Standardized Items	Number of Items
Perceived Ease of Use	0.6988	0.7052	6
Access to Financial Services/perceived usefulness	0.6634	0.7244	13
Challenges and Barriers/ Trust and Security	0.7021	0.7329	4
Future of Digital Banking/Adoption intention	0.7043	0.7052	2

Source: STATA Output

The reliability statistics for respective dimensions indicate acceptable overall internal consistency among the items representing each dimension. In deciding which item to retain or delete, the 0.33 criterion can be used (an item-total correlation of 0.33 indicates that approximately 10% of the variance in the scale is accounted for by that item). Based on this criterion, all the items in each dimension will be retained.

Table 4.54. Scale Item Reliability- Perceived Ease of Use

Item Name	**Obs**	**Sign**	**Item-Test Corr.**	**Item-Rest Corr.**	**Avg. Interitem Cov.**	**Alpha if Deleted**
Using Digital Banking services is comfortable for me	215	+	0.4375	0.2019	0.2297	0.6376
Digital Banking is more convenient than traditional banking	215	+	0.2477	0.0409	0.2673	0.6652
The Digital Banking platform I use is easy to use	215	–	0.1917	-0.0016	0.2756	0.6696
I am willing to use only Digital Banking in the future, without physical branches	215	–	0.3590	0.2340	0.2458	0.6243
I use Digital Banking because it is convenient	215	+	0.5438	0.3345	0.2038	0.6013
I use Digital Banking because transactions are faster	215	–	0.5714	0.3655	0.1969	0.5927
I use Digital Banking because it is available 24/7	215	+	0.7301	0.5944	0.1643	0.5325
I use Digital Banking because it offers lower transaction fees	215	–	0.5594	0.4181	0.2090	0.5875
I use Digital Banking because it is accessible from remote areas	215	+	0.8099	0.6820	0.1348	0.4906
Test scale (overall)					**0.2141**	**0.6342**

Source: STATA Output

As is shown in Table 4.54 two items in the scale demonstrate weak performance based on their low item-rest correlations and the increase in Cronbach's alpha if they were removed. The item "The Digital Banking platform I use is easy to use" has an item-rest correlation of -0.0016 and removing it would raise the overall alpha to 0.6696, indicating that it is poorly aligned with the overall construct and may be weakening the internal consistency of the scale. Similarly, "Digital Banking is more convenient than traditional banking" shows an item-rest correlation of 0.0409, and its removal would also increase the alpha, suggesting a weak contribution to the overall reliability of the scale.

Table 4.55. Cronbach's alpha- Perceived Ease of Use (unstandardized items)

Test scale = mean (unstandardized items)
Reversed items: I use Digital Banking because transactions are faster
I use Digital Banking because it offers lower transaction fees
Average interitem covariance: .4289865
Number of items in the scale: 6
Scale reliability coefficient: 0.6988

Source: STATA Output

This reliability output refers to a 6-item scale measuring users' Perceived Ease of Use toward using Digital Banking services. The scale is computed using the mean of unstandardized item scores. The Cronbach's alpha = 0.6988, which is borderline acceptable: Suggests the items are reasonably consistent in measuring the same concept.

The item Digital Banking is more convenient than traditional banking. The Digital Banking platform I use is easy to use and I am willing to use only Digital Banking in the future without physical branches have recorded the lowest item-test correlation and needs to be deleted to increase the alpha of the dimension- Perceived Ease of Use.

Table 4.56. Cronbach's alpha- Perceived Ease of Use (standardized items)

Test scale = mean (standardized items) Reversed items: I use Digital Banking because transactions are faster I use Digital Banking because it offers lower transaction fees Average interitem correlation: 0.2850 Number of items in the scale: 6 Scale reliability coefficient: 0.7052

Source: STATA Output

The average inter-item correlation is 0.2850, indicating moderate consistency between the items. This suggests that the items are related and measure a similar underlying construct (Perceived Ease of Use). The scale reliability coefficient (Cronbach's alpha) is 0.7052, which indicates the scale has good internal consistency.

Table 4.57. Cronbach's alpha-Access to Financial Services/perceived usefulness (unstandardized items)

Test scale = mean (unstandardized items) Reversed item: Access to financial services since using Digital Banking has improved Average interitem covariance: .1582493 Number of items in the scale: 13 Scale reliability coefficient: 0.6634

Source: STATA Output

Table 4.58. Cronbach's alpha-Access to Financial Services/perceived usefulness (Standardized items)

Test scale = mean (standardized items)
Reversed item: Access to financial services since using Digital Banking has improved
Average interitem correlation: 0.1682
Number of items in the scale: 13
Scale reliability coefficient: 0.7244

Source: STATA Output

The Cronbach's alpha = 0.7244, is acceptable for research purposes (above the 0.70 threshold) and indicates a good level of internal consistency, especially considering the relatively large number of items (13). This suggests the items collectively form a reliable scale for measuring a common construct.

Table 4.59. Scale Item Reliability- Challenges and Barriers/ Trust and Security

Item Name	Item-Test Corr.	Item-Rest Corr.	Avg. Interitem Cov.	Alpha if Deleted
I have limited internet access that affects my use of digital banking	0.3333	0.1126	0.2381	0.6108
My lack of digital skills makes it difficult to use digital banking	0.8155	0.7128	0.1298	0.4401
I have concerns about the security of digital banking	0.6319	0.3533	0.1638	0.5512
The Digital Banking platforms I use are difficult to navigate	0.3117	0.1145	0.2402	0.6062
Digital Banking services are not readily available in my area	0.6775	0.5254	0.1617	0.4997
Digital Banking has high fees or transaction costs	0.4781	0.2111	0.2079	0.5947
Digital Banking services are secure for my financial transactions	0.4746	0.3180	0.2097	0.5618
I have experienced security issues with digital banking	0.2997	0.1752	0.2403	0.5909
I trust my bank's digital platform to protect my personal and financial information	0.2833	0.1156	0.2431	0.6023
Overall Scale			**0.2038**	**0.5958**

Source: STATA Output

As the above Table depicts, the output evaluates a 9-item scale computed using the mean of unstandardized items. Overall Cronbach's alpha is 0.5958, which falls just below the acceptable threshold of 0.60, indicating low to moderate internal consistency. This suggests the items are somewhat related but do not strongly measure a single, unified construct. A need to remove low-alpha-scored items to strengthen consistency and reliability. My lack of digital skills makes it difficult to use digital banking, I have concerns about the security of digital banking, Digital Banking services are not readily available in my area and Digital Banking has high fees or transaction costs are the strongest items for retention as the below Tables demonstrate.

Table 4.60. Cronbach alpha - Challenges and Barriers/ Trust and Security (unstandardized items)

Test scale = mean (unstandardized items)
Average interitem covariance: .7701732
Number of items in the scale: 4
Scale reliability coefficient: 0.7021

Source: STATA Output

Table 4.61. Cronbach alpha- Challenges and Barriers/ Trust and Security (standardized items)

Test scale = mean (standardized items)
Average interitem correlation: 0.4068
Number of items in the scale: 4
Scale reliability coefficient: 0.7329

Source: STATA Output

The 4-item standardized scale shows good reliability (α = 0.7329) and coherent internal structure, with a moderately high average inter-item correlation (0.4068). This means the items are well-aligned in measuring a common construct

Table 4.62. Scale Item Reliability-Future of Digital Banking/Adoption intention

Item	Item-Test Corr.	Item-Rest Corr.	Avg. Interitem Cov.	Alpha if Deleted
Digital Banking needs better security features	**0.6221**	**0.5036**	**0.0861**	**0.3149**
Digital Banking needs more user-friendly interfaces	**0.4586**	**0.1502**	**0.1116**	**0.4151**
Digital Banking needs enhanced customer support	**0.3328**	**0.1311**	**0.1258**	**0.4177**
Digital Banking needs additional banking functions	**0.3371**	**0.1685**	**0.1238**	**0.4079**
Digital Banking will continue to improve access to financial services in the future	**0.5470**	**0.2357**	**0.0907**	**0.3673**
I intend to continue using Digital Banking in the future	**0.3962**	**0.0281**	**0.1388**	**0.4945**
I will recommend Digital Banking to others as a means of accessing financial services	**0.6887**	**0.3547**	**0.0556**	**0.2779**
Test Scale			**0.1046**	**0.4280**

Source: STATA Output

This output presents the reliability analysis of a 7-item scale calculated using the mean of unstandardized items. The Cronbach's alpha for the overall scale is 0.4280, which is well below the commonly accepted threshold of 0.70, indicating poor internal consistency. Removing weak-performing items (based on low item-rest correlation and improvement in alpha if deleted) Retaining strong items that contribute to the scale is found to be necessary as the tables illustrate below.

Table 4.63. Cronbach alpha- Future of Digital Banking/Adoption intention (unstandardized items)

Test scale = mean (unstandardized items)
Average interitem covariance: .1905673
Number of items in the scale: 2
Scale reliability coefficient: 0.7043

Source: STATA Output

Table 4.64. Cronbach alpha- Future of Digital Banking/Adoption intention (standardized items)

Test scale = mean (standardized items)
Average interitem correlation: 0.5446
Number of items in the scale: 2
Scale reliability coefficient: 0.7052

Source: STATA Output

The refined scale consists of 2 standardized items with an average interitem correlation of 0.5446, indicating a moderately strong positive relationship between the items. The Cronbach's alpha is 0.7052, which suggests acceptable internal consistency reliability.

4.1.2.3. Correlations analysis

Examination of the **Correlation Matrix** (see Table 4.65) reveals fair correlations among the variables.

Table 4.65. Correlations

Variable	DB has a Role in Improving Access to Financial Services	Willingness to use only DB	DB Conveniency	Improvement of Access to Financial Services through DB	DB has improved access to credit and loans	Enhanced customer support	Security concerns about DB	Need of user-friendly DB interfaces	DB remote accessibility	Lack of DB digital Literacy
DB has a Role in Improving Access to Financial Services	1.0000									
Willingness to use only DB	-0.1778 0.0090	1.0000								
DB Conveniency	-0.1069 0.1182	0.2221 0.0010	1.0000							
Improvement of Access to Financial Services through DB	-0.0539 0.4313	-0.1448 0.0338	-0.1649 0.0155	1.0000						
DB has improved access to credit and loans	-0.0329 0.6314	0.2881 0.0000	0.0677 0.3234	-0.4637 0.0000	1.0000					
enhanced customer support	-0.0274 0.6900	0.1562 0.0220	0.1618 0.0176	0.0540 0.4308	-0.0178 0.7953	1.0000				
Security concerns about DB	-0.0470 0.4929	0.0194 0.7775	0.1394 0.0412	0.1414 0.0383	-0.3261 0.0000	-0.1547 0.0232	1.0000			
Need of user-friendly DB interfaces	0.0151 0.8254	0.4014 0.0000	0.1535 0.0244	0.5392 0.0000	0.0292 0.6708	0.1526 0.0253	0.3499 0.0000	1.0000		
DB remote accessibility	-0.1406 0.0394	0.5346 0.0000	0.0561 0.4127	-0.3390 0.0000	0.4591 0.0000	0.0860 0.2091	0.2974 0.0000	0.4530 0	1.0000	
Lack of DB digital Literacy	-0.1328 0.0519	0.2533 0.0002	-0.0763 0.2655	-0.2207 0.0011	0.0040 0.9531	0.0592 0.3877	0.5807 0	0.2719 0.0001	0.5468 0	1.0000

Correlation is significant at the 0.01 level (2-tailed). N=215

Table 4.66. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.7576
Bartlett's Test of Sphericity	Approx. Chi-Square	7464.34
	(780)	
	Df	630
	Sig.	.000

Source: STATA Output

The KMO test assesses how the data is suited for factor analysis. It evaluates the proportion of variance among variables that might be common variance (i.e., potentially caused by underlying factors).

Overall KMO Value

According to Kaiser's scale KMO (overall) = 0.7576 indicates middling to meritorious sampling adequacy (0.90s – Marvelous, 0.80s – Meritorious, 0.70s – Middling, 0.60s – Mediocre, 0.50s – Miserable, Below 0.50 – Unacceptable). As Table 4.66 shows overall KMO is above 0.70, therefore data is suitable for factor analysis.

Assessment of Factorability: Bartlett's Test of Sphericity and KMO Measure

To evaluate the suitability of the dataset for factor analysis, both Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy were employed. Bartlett's Test of Sphericity assesses whether the correlation matrix significantly differs from an identity matrix, wherein all diagonal elements are equal to 1 and off-diagonal elements are 0, implying no intercorrelation among variables.

In the present study, Bartlett's Test produced a chi-square value of 7464.34, with a p-value less than 0.001, indicating a statistically significant result. This outcome confirms that the correlation matrix is not an identity matrix and that the variables exhibit sufficient correlations to justify the application of factor analysis.

The KMO Measure, which evaluates the proportion of variance among variables that might be common variance, was calculated to be 0.7576. According to Kaiser (1974) and supported by Nancy L. et al. (2005), a KMO value above the threshold of 0.70 suggests that the sample is adequate for factor analysis. Thus, both tests affirm the appropriateness of proceeding with factor extraction, as the data meet the necessary assumptions for exploratory factor analysis.

4.1.2.4. Factor analysis

The major purpose of factor analysis is the orderly simplification of a large number of intercorrelated measures to a few representative constructs or factors. Factor Analysis on the four dimensions was performed to know important factors in DIGITAL BANKING service. Using Principal Components, as an extraction method and followed by varimax rotation of components with Eigenvalue greater than 1.0, the data "unfolded" into six factors. Table 4.67 reveals that, these four factors explained 81.87% of the variance.

Factor Analysis Results (Principal Factors Method)

Number of Observations: 215
Number of Factors Retained: 25
Rotation: Unrotated
LR test (independence vs. saturated): $\chi^2(780) = 7464.34$, $p < 0.001$

Table 4.67. Factor Analysis

Factor	Eigenvalue	Difference	Proportion of Variance	Cumulative Variance
1	7.00442	0.9307	0.2612	0.2612
2	6.07372	2.73289	0.2265	0.4878
3	3.34083	0.34297	0.1246	0.6124
4	2.99786	1.50185	0.1118	0.7242
5	1.496	0.45746	0.0558	0.78
6	1.03855	0.06688	0.0387	0.8187
7	0.97167	0.23292	0.0362	0.8549
8	0.73875	0.04175	0.0276	0.8825
9	0.697	0.05321	0.026	0.9085
10	0.64379	0.1089	0.024	0.9325
11	0.53489	0.05944	0.0199	0.9524
12	0.47545	0.09072	0.0177	0.9702
13	0.38473	0.02593	0.0143	0.9845
14	0.3588	0.02329	0.0134	0.9979
15	0.33551	0.1043	0.0125	1.0104
16	0.23121	0.03898	0.0086	1.019
17	0.19223	0.03251	0.0072	1.0262
18	0.15972	0.02026	0.006	1.0322
19	0.13946	0.02096	0.0052	1.0374
20	0.1185	0.02306	0.0044	1.0418
21	0.09544	0.01857	0.0036	1.0453
22	0.07687	0.05076	0.0029	1.0482
23	0.0261	0.0112	0.001	1.0492
24	0.0149	0.01224	0.0006	1.0497
25	0.00266	0.01348	0.0001	1.0498

Source: STATA Output

The first six factors have eigenvalues > 1 and together explain 81.87% of the total variance, which is very good. Factor 7 onward has eigenvalues < 1 and explains only small portions of variance — generally not retained. Factors 26 through 40 (See annex) have negative eigenvalues, which are expected in principal factor analysis when communalities are estimated. These factors are not useful and are not retained.

Table 4.68. Naming the factors

Factor Number	**Label**	**Key Items**
Factor1	Perceived Ease of Use1	I use Digital Banking because it is convenient
Factor2	Perceived Ease of Use2	I use Digital Banking because it is accessible from remote areas
Factor3	Perceived Ease of Use3	I use Digital Banking because it is available 24/7
Factor4	Perceived Ease of Use4	The Digital Banking platform I use is easy to use
Factor5	Perceived Ease of Use5	Digital Banking is more convenient than traditional banking
Factor6	Perceived Ease of Use6	I use Digital Banking because it offers lower transaction fees
Factor7	Access to Financial Services/perceived usefulness1	Access to financial services since using Digital Banking has improved
Factor8	Access to Financial Services/perceived usefulness2	Digital Banking has made transactions easier for me
Factor9	Access to Financial Services/perceived usefulness3	Digital Banking has helped me save money
Factor10	Access to Financial Services/perceived usefulness4	Digital Banking has improved my access to credit and loans
Factor11	Access to Financial Services/perceived usefulness5	Digital Banking has contributed to greater financial inclusion
Factor12	Access to Financial Services/perceived usefulness6	Digital Banking has helped me manage my finances better
Factor13	Access to Financial Services/perceived usefulness7	Digital Banking has helped underserved communities to get better financial services
Factor14	Access to Financial Services/perceived usefulness8	Customer support for Digital Banking services is obtained on time
Factor15	Access to Financial Services/perceived usefulness9	Digital Banking has an impact on financial inclusion (access to banking services)
Factor16	Access to Financial Services/perceived usefulness10	Opening a bank account is accessible through Digital Banking
Factor17	Access to Financial Services/perceived usefulness11	Applying for and accessing loans is accessible through Digital Banking
Factor18	Access to Financial Services/perceived usefulness12	Paying bills is accessible through Digital Banking
Factor19	Access to Financial Services/perceived usefulness13	Money transfer is accessible through Digital Banking
Factor20	Challenges and Barriers/ Trust and Security1	Digital Banking services are not readily available in my area
Factor21	Challenges and Barriers/ Trust and Security2	My lack of digital skills makes it difficult to use digital banking
Factor22	Challenges and Barriers/ Trust and Security3	Digital Banking has high fees or transaction costs
Factor23	Challenges and Barriers/ Trust and Security4	I have concerns about the security of digital banking
Factor24	Future of Digital Banking/Adoption intention1	Digital Banking needs better security features
Factor25	Future of Digital Banking/Adoption intention2	Digital Banking needs additional banking functions

Source: STATA output

Table 4.69. Total variance Explained

Factor	Variance	Difference	Proportion	Cumulative
Perceived Ease of Use1	6.41	1.89	0.2392	0.2392
Perceived Ease of Use2	4.52	0.47	0.1686	0.4077
Perceived Ease of Use3	4.05	1.87	0.1510	0.5588
Perceived Ease of Use4	2.18	0.26	0.0812	0.6400
Perceived Ease of Use5	1.91	0.67	0.0714	0.7114
Perceived Ease of Use6	1.24	0.17	0.0464	0.7578
Access to Financial Services/perceived usefulness1	1.07	0.06	0.0400	0.7979
Access to Financial Services/perceived usefulness2	1.01	0.19	0.0378	0.8357
Access to Financial Services/perceived usefulness3	0.83	0.28	0.0309	0.8666
Access to Financial Services/perceived usefulness4	0.55	0.00	0.0204	0.8870
Access to Financial Services/perceived usefulness5	0.54	0.03	0.0203	0.9073
Access to Financial Services/perceived usefulness6	0.51	0.06	0.0191	0.9263
Access to Financial Services/perceived usefulness7	0.45	0.02	0.0169	0.9433
Access to Financial Services/perceived usefulness8	0.43	0.01	0.0162	0.9595
Access to Financial Services/perceived usefulness9	0.42	0.02	0.0157	0.9752
Access to Financial Services/perceived usefulness9	0.40	0.06	0.0150	0.9902
Access to Financial Services/perceived usefulness11	0.34	0.05	0.0128	1.0030
Access to Financial Services/perceived usefulness12	0.29	0.03	0.0109	1.0139
Access to Financial Services/perceived usefulness13	0.27	0.02	0.0099	1.0239
Challenges and Barriers/ Trust and Security1	0.25	0.06	0.0092	1.0330
Challenges and Barriers/ Trust and Security2	0.18	0.01	0.0069	1.0399
Challenges and Barriers/ Trust and Security3	0.18	0.13	0.0066	1.0466
Challenges and Barriers/ Trust and Security4	0.05	0.02	0.0019	1.0485
Future of Digital Banking/Adoption intention1	0.03	0.03	0.0011	1.0497
Future of Digital Banking/Adoption intention2	0.00	—	0.0002	1.0498

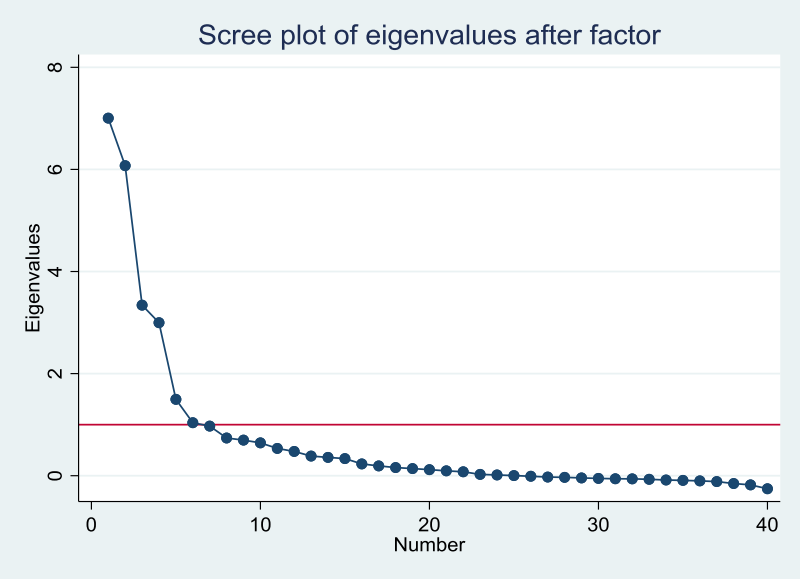
Source: STATA output

Factor	Variance	Difference	Proportion	Cumulative

As illustrated in the above Table 4.69, the first three factors together explain approximately 55.9% of the total variance: Factor 1: 23.9%, Factor 2: 16.9%, Factor 3: 15.1%

By the sixth factor, the cumulative variance explained reaches 75.8%, indicating a strong dimensional reduction. The rule of thumb (Kaiser's criterion) suggests retaining factors with eigenvalues > 1. Based on this, at least 8 factors could be retained (Factors 1–8), since they have variances (eigenvalues) greater than 1. The LR test (Likelihood Ratio) yields $\chi^2(780) = 7464.34, p < 0.001$, indicating the correlation matrix is not an identity matrix — supporting the suitability of factor analysis. From Scree plot, it again appears that a six-factor model should be sufficient to represent the data set.

Figure 4.6. **Scree plot**



Source: STATA Output

As a general guideline, variables with higher factor loadings are considered more representative of the underlying factor, whereas lower loadings suggest a weaker association. According to a commonly accepted rule of thumb, factor loadings exceeding ±0.33 are deemed to have at least minimal practical significance. A loading of 0.33 indicates that approximately 10% of the variance in the observed variable is explained by the factor (Robert H., 2006). Variables with substantial loadings on the same factor can be interpreted as measuring a common underlying construct. Based on this criterion, the table above demonstrates that the variables are appropriately grouped according to the factors they most strongly

Factor	Variance	Difference	Proportion	Cumulative

represent.

Table 4.70. Rotated Factor Loadings

Variable Name	Highest Loading (Factor)	Loading Value	Interpretation
Additional banking functions	F5	0.8823	Desire for more features
Applying for and accessing loans is accessible through Digital Banking	F3	0.9013	Applying for credit via digital platforms
Digital Banking needs better security features	F1	0.8765	Better security encourages usage
Digital Banking has helped underserved communities to get better financial services	F1	0.7838	Banking is easy with digital tools
Digital Banking has improved my access to credit and loans	F2	0.9155	Satisfaction with Digital Banking services
Digital Banking has contributed to greater financial inclusion	F2	0.7278	Perceived growth in digital banking
I use Digital Banking because transactions are faster	F1	0.8379	Digital Banking saves time
Digital Banking has high fees or transaction costs	F2	-0.7564	Perceived shortcomings (inverse of satisfaction)
I use Digital Banking because it is convenient	F1	0.5262	Regular Digital Banking usage
I am willing to use only Digital Banking in the future, without physical branches	F1	0.6992	Confidence in using digital banking
My lack of digital skills makes it difficult to use digital banking	F1	0.8098	Digital skills barrier
Opening a bank account is accessible through Digital Banking	F3	0.8616	Opening bank accounts digitally
The Digital Banking platform I use is easy to use.	F2	0.7286	Digital Banking improves life
Using Digital Banking services is comfortable for me	F14	0.4261	General usage of digital banking
I use Digital Banking because it is available 24/7	F5	0.7178	Banking should be simpler

Source: STATA output

Factor	Variance	Difference	Proportion	Cumulative

Extraction Method: Principal Component Analysis

The variables represent items of each dimension in the self-administered questionnaire. An analysis of the rotated factor loadings presented in Table 4.70 indicates that fifteen out of the thirty-nine variables exhibited strong loadings on five factors corresponding to the four underlying dimensions. Overall, the factor analysis yielded ten distinct factors from the original set of variables. These extracted factors are predominantly defined by the items initially developed to represent the four theoretical dimensions.

4.1.2.5. Multiple regressions analysis

Multiple regressions is a statistical technique through which one can analyze the relationship between a dependent or criterion variable and a set of independent or predictor variables. Multiple steps have been undertaken to come up with the best fit prediction equation where variables in Perceived Ease of Use, Access to Financial Services/perceived usefulness, Challenges and Barriers/ Trust and Security, Future of Digital Banking/Adoption intention dimensions are the independent variables and The Role of DIGITAL BANKING in improving access to financial services is the dependent variable. All possible relevant steps such as correlation among predictor variables, factor analysis, multicollinearity diagnosis, evaluating the strength of prediction equation, and identifying independent relationships (relative contribution) of each predictor variable were properly done before analyzing multiple regressions. The STATA output Table 4.71 shows the multiple regressions analysis.

Table 4.71. Regression Summary and coefficients

This multiple regression model (n = 215, R^2 = 0.35, F(40,174) = 2.42, p < 0.001) identifies key drivers of Digital Banking role.

Variable	Coefficient	Std. Error	t	p-value	Significant?
Digital Banking has improved my access to credit and loans	0.256	0.120	2.13	0.034	Yes
I use Digital Banking because it is convenient	0.445	0.176	2.53	0.012	Yes
Digital Banking needs enhanced customer support	-0.228	0.073	-3.12	0.002	Yes
Access to financial services since using Digital Banking has improved	-.247	0.251	2.38	0.019	Yes
Digital Banking security concerns	-0.352	0.140	-2.51	0.013	Yes
Digital Banking needs more user-friendly interfaces	-0.315	0.159	-1.99	0.048	Yes
Digital Banking is accessible from remote areas	0.135	0.073	1.83	0.068	Marginal
Willingness to use only Digital Banking in the future, without physical branches	0.223	0.121	1.85	0.066	Marginal
Lack of digital skills makes it difficult to use Digital Banking	-0.127	0.071	-1.78	0.076	Marginal

Belief that Digital Banking will continue to improve access in the future	-0.240	0.128	-1.88	0.062	Marginal

Source: STATA output

4.1.2.5.1. *Identifying multicollinearity*

Multicollinearity refers to the situation in which the independent/predictor variables are highly correlated. When independent variables are multicollinear, there is "overlap" or sharing of predictive power. This may lead to the paradoxical effect, whereby the regression model fits the data well, but none of the predictor variables has a significant impact in predicting the dependent variable.

Table 4.72. Multicollinearity

Variable	**VIF**	**1/VIF**
Digital Banking has improved access to credit and loans	3.22	0.3108
Using Digital Banking is accessible from remote areas	3.13	0.3194
Digital Banking needs more user-friendly interfaces	2.94	0.3396
Lack of digital skills makes it difficult to use Digital Banking	2.70	0.3699
Digital Banking security concerns	2.37	0.4228
Digital Banking enhanced customer support	2.35	0.4251
Using Digital Banking is convenient	1.86	0.5362
Belief that Digital Banking will continue to improve access in the future	1.16	0.8615
Access to financial services since using Digital Banking has improved	1.13	0.8848
Willingness to use only Digital Banking in the future, without physical branches	1.07	0.9330
Mean VIF	**2.19**	

Source: STATA Output

Rule of Thumb:

- VIF < 5: Generally acceptable, no serious multicollinearity.
- VIF > 10: Indicates serious multicollinearity.

As Table 4.72. shows there is no evidence of harmful multicollinearity in the model. Therefore, the Researcher can confidently interpret the regression coefficients, as they are unlikely to be inflated or unstable due to collinearity among predictors.

Table 4.73. ANOVA[a]

Model	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	118.1571	35	3.376	3.24	.000[b]
Residual	186.38243	179	1.041		
Total	304.53953	214			

Source: STATA output

a. Dependent Variable: The Role of Digital Banking

b. Predictors: (Constant), Digital Banking has improved access to credit and loans, using Digital Banking is convenient, Digital Banking needs enhanced customer support, Access to financial services since using Digital Banking has improved, concerns about the security of Digital Banking, Digital Banking needs more user-friendly interfaces, using Digital Banking because it is accessible from remote areas, willingness to use only Digital Banking in the future, without physical branches, Lack of digital skills makes it difficult to use digital banking, Digital Banking will continue to improve access to financial services in the future.

4.1.2.5.2. *Evaluating the strength of prediction equation*

In this study, the results are summarized in the ANOVA table (see Table 4.73). The F-statistics assess the overall fit of the regression model (Model 1). A statistically significant F value indicates that the model explains a meaningful portion of the variance in the dependent variable. The computed F value of 3.24, with a significance level of $p <$

0.001, leads to the rejection of the null hypothesis that $R^2 = 0$. This suggests a significant linear relationship between the independent variables and the dependent variable. Therefore, the regression model provides a statistically adequate explanation of the relationship among the variables.

4.1.2.5.3. *Evaluating the regression model*

Table 4.74. Model Summary[b]

Model	R	R square	Adjusted R square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.623[a]	0.3880	0.2683	1.02041	0.3880	3.24	35	179	0.000

Source: STATA output

As stated in Table 4.74 the R-squared value indicates the proportion of variance in the dependent variable that is explained by the regression model, which includes the ten specified independent variables. In this case, the model accounts for 38.8% of the variance in the dependent variable, suggesting a moderate level of explanatory power. Results from the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity confirm the adequacy of the sample, indicating that the data is suitable for regression analysis and that the independent variables are appropriate for explaining the outcome variable.

Although smaller samples can sometimes inflate R-squared values due to overestimation, this study utilized as many observations as possible to improve the reliability and generalizability of the model. Furthermore, the ANOVA table confirms the statistical significance of the overall model, reinforcing the conclusion that the independent variables meaningfully contribute to explaining the Role of Digital Banking.

4.1.2.5.4. *Identifying independent relationships*

Once it has been confirmed that multicollinearity is not a concern, multiple regression analysis can be employed to evaluate the independent contribution of each predictor variable to the dependent variable.

Given that all variables are measured using a common five-point Likert scale, the standardized Beta coefficients (refer to the coefficient table) provide a valid basis for comparing the relative strength of each variable's association with the Role of Digital Banking. This allows for a meaningful interpretation of the individual impact of each predictor within the model.

The size of the Beta weights indicates the strength of their independent relationships. From the coefficients table it can be seen that the item using Digital Banking is convenient has the highest Beta (B=0.445, t=2.53, p<0.001), Digital Banking has improved access to credit and loans has the second highest Beta coefficient of 0.256(t= 2.13 p<0.001), Willingness to use only Digital Banking in the future, without physical branches third (B=0.223, t=1.85, p< 0.001). The direction of the coefficients also shed light on the nature of the relationships. The positive coefficient associated with the four variables show that the more the respondents interpreted the role of Digital Banking as being due to the stated variables. The other dimensions do have significant p> 0.05 so that they have less relationship with the dependent variable.

Therefore, from the coefficients table and the related preconditions for regression analysis, the regression equation for the Role of Digital Banking will be:

$$Y=2.42+0.256X1+0.445X2-0.228X3-0.247X4-0.352X5-0.315X6+0.135X7+0.223X8-0.127X9-0.240X10+\varepsilon$$

Where:

Y= The role of Digital Banking in improving access to Financial Services

X1 = Digital Banking has improved access to credit and loans

X2 = Using Digital Banking is convenient

X3 = Digital Banking needs enhanced customer support

X4 = Access to financial services since using Digital Banking has improved

X5 = Digital Banking security concern

X6 = Digital Banking needs more user-friendly interfaces

X7 = Digital Banking is accessible from remote areas

X8 = Willingness to use only Digital Banking in the future, without physical branches

X9 = Lack of digital skills makes it difficult to use Digital Banking

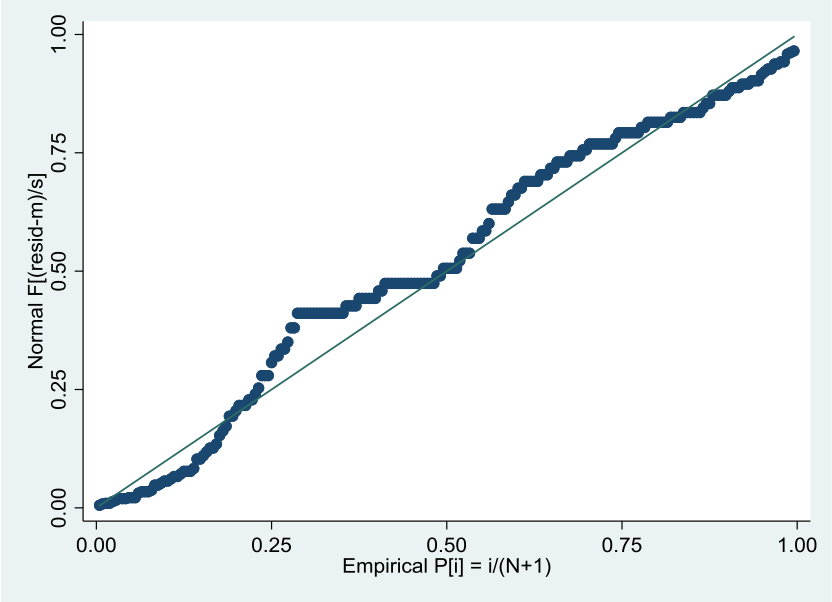
X10 = Belief that Digital Banking will continue to improve access in the future

4.2. Discussion

This section will explain the relationship between Access to financial services dimensions with The Role of Digital Banking using graphs and tables. The 215 usable data obtained from the self-administered questionnaire has been analyzed through STATA 15.1 and various outputs were interpreted in the results section. The discussion part will mainly be devoted to providing detailed explanation about the association among the dimensions, Access to financial services and The Role of Digital Banking.

4.2.1. Normality of regression model

Fig. 4.7. Normality of regression model plot



Source: STATA output

Even though the regression line shown in figure 4.7 appears to deviate from the reference line at the middle, it is somewhat linear for a sample size of 215. This shows there exists a linear Relationship between Digital Banking and Access to Financial services.

Table 4.75. Descriptive Statistics

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**
Role of Digital Banking	3.71	1.19	1	5
Willingness to use only Digital Banking in the future without physical branches	1.48	0.70	1	3
Using Digital Banking is convenient	3.69	1.29	1	5
Access to financial services since using Digital Banking has improved	3.78	1.18	1	5
Digital Banking has improved access to credit and loans	3.05	1.02	1	5
Digital Banking needs enhanced customer support	1.99	0.72	1	3

Variable	Mean	Std. Dev.	Min	Max
Belief that Digital Banking will continue to improve access in the future	3.91	1.19	1	5
Digital Banking security concern	3.08	1.79	1	5
Digital Banking needs more user-friendly interfaces	4.34	1.12	1	5
Digital Banking is accessible from remote areas	3.43	1.38	1	5
Lack of digital skills makes it difficult to use Digital Banking	3.58	1.20	1	5

Source: STATA output

Table 4.75 presents the descriptive statistics for the variables used in this study, focusing on perceptions and experiences related to Digital Banking. The analysis is based on responses from 215 participants.

The dependent variable, Role of Digital Banking, has a mean of 3.71 (SD = 1.19), indicating that respondents generally perceive Digital Banking to play a moderately strong role in financial service delivery.

Among the independent variables, More User-Friendly Systems had the highest mean score (M = 4.34, SD = 1.12), suggesting that ease of use is a key factor positively associated with Digital Banking usage. Similarly, Belief that Digital Banking will continue to improve access in the future (M = 3.91, SD = 1.19) and Access to financial services since using Digital Banking has improved (M = 3.78, SD = 1.18) also received high mean scores, reflecting optimistic views on the ongoing relevance and utility of digital banking.

On the other hand, Willingness to use only Digital Banking in the future without physical branches had the lowest mean (M = 1.48, SD = 0.70), indicating that most participants still value access to physical branches and are not ready to fully transition to digital-only

banking. Similarly, Enhanced customer support had a relatively low mean (M = 1.99, SD = 0.72), pointing to perceived inadequacies in customer service through digital channels.

Notably, the variable Digital Banking security concern shows high variability (SD = 1.79), indicating mixed perceptions among respondents regarding security concerns in Digital Banking environments.

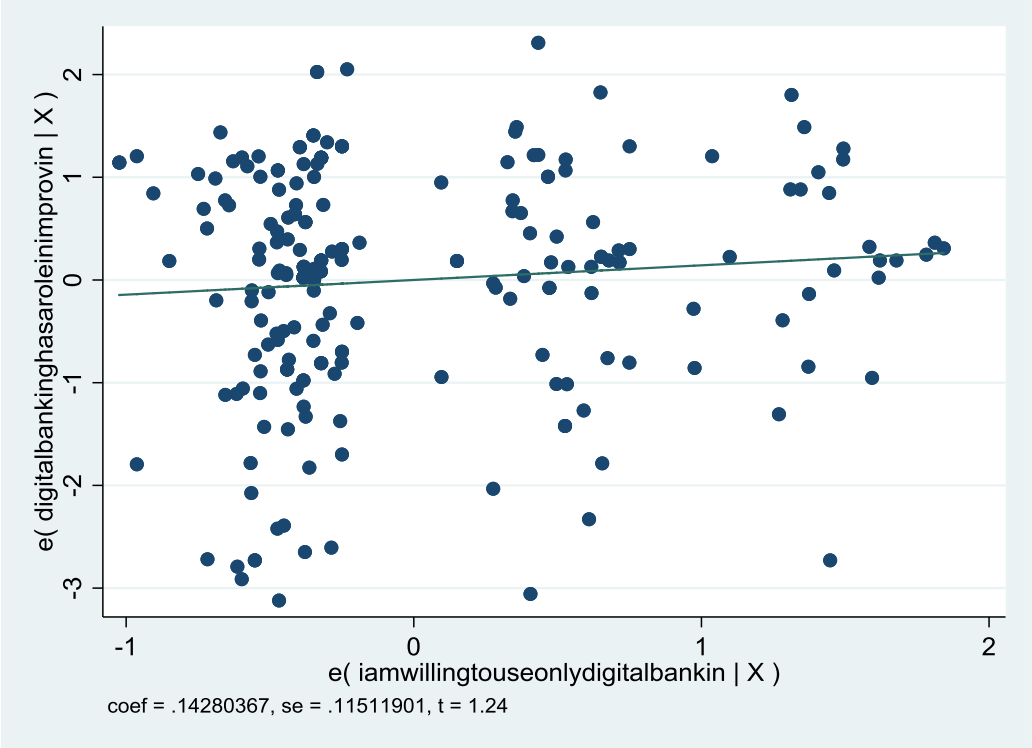
Overall, the descriptive results suggest a generally positive perception of digital banking's role and accessibility, while highlighting continued concerns around security and support services. These findings provide a foundational understanding for the subsequent inferential analyses exploring relationships among these variables.

4.2.2. Graphical presentation of the significant financial services dimensions versus The Role of Digital Banking

4.2.2.1. Willingness to use only Digital Banking without physical branches versus The Role of Digital Banking

The partial regression plot in Figure 4.8 indicates a slight positive relationship between respondents' willingness to use only Digital Banking and their belief that Digital Banking plays a role in improving financial services. However, the slope of the regression line is modest, and the associated t-statistic (1.24) suggests that the relationship is not statistically significant at the conventional 0.05 level (p = 0.216). This implies that, after controlling other factors in the model, willingness to use only Digital Banking does not significantly predict perceptions of digital banking's role in service improvement.

Figure 4.8 Willingness to use only Digital Banking without physical branches Regression

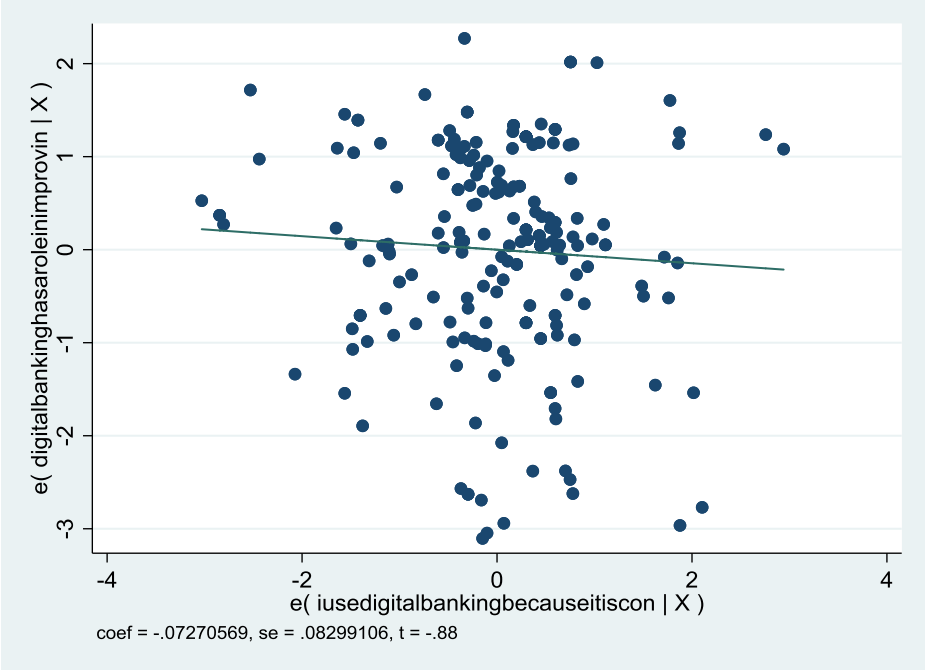


Source: STATA output

4.2.2.2. DB Convenience versus The Role of Digital Banking

The partial regression plot in Figure 4.9. reveals a slight positive relationship between respondents' agreement that they use Digital Banking because it is convenient and their belief that Digital Banking plays a role in improving financial services. The regression slope is shallow (coefficient = -0.073) and the t-value is 0.88, indicating that this relationship is statistically significant (p = 0.382). This suggests that, after controlling other factors, convenience significantly influences the belief that Digital Banking improves financial services.

Figure 4.9. Using Digital Banking is convenient Regression Plot



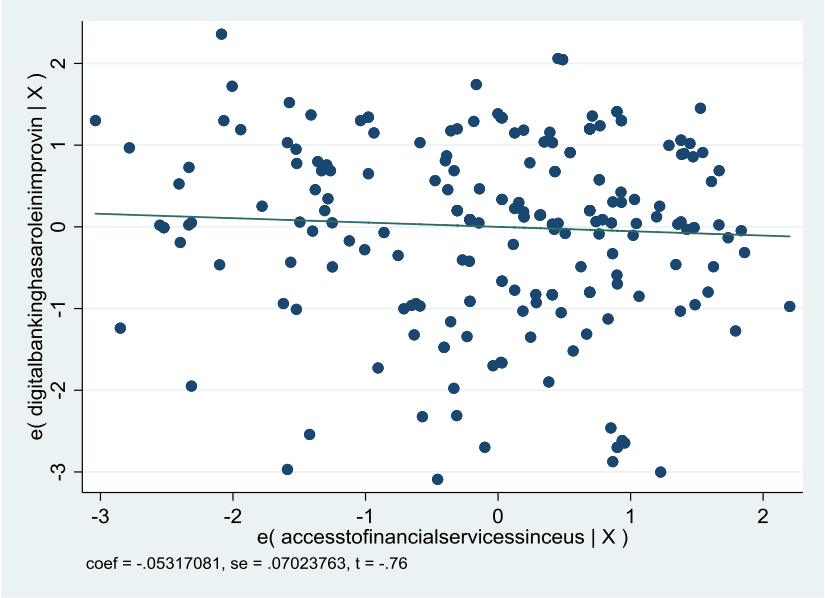
Source:STATAoutput

4.2.2.3. Access to financial services since using Digital Banking has improved versus The Role of Digital Banking

The partial regression plot in Figure 4.10. illustrates the relationship between respondents' access to financial services since using Digital Banking and their belief that Digital Banking plays a role in improving financial services, after accounting for all other variables in the model.

The slope of the regression line is slightly negative (coefficient = -0.053), and the t-value is -0.76, indicating that this relationship is not statistically significant (p = 0.450). This suggests that perceived improvements in access to financial services alone do not significantly predict beliefs about the broader role of Digital Banking in service enhancement.

Figure 4.10. Access to financial services since using Digital Banking has improved

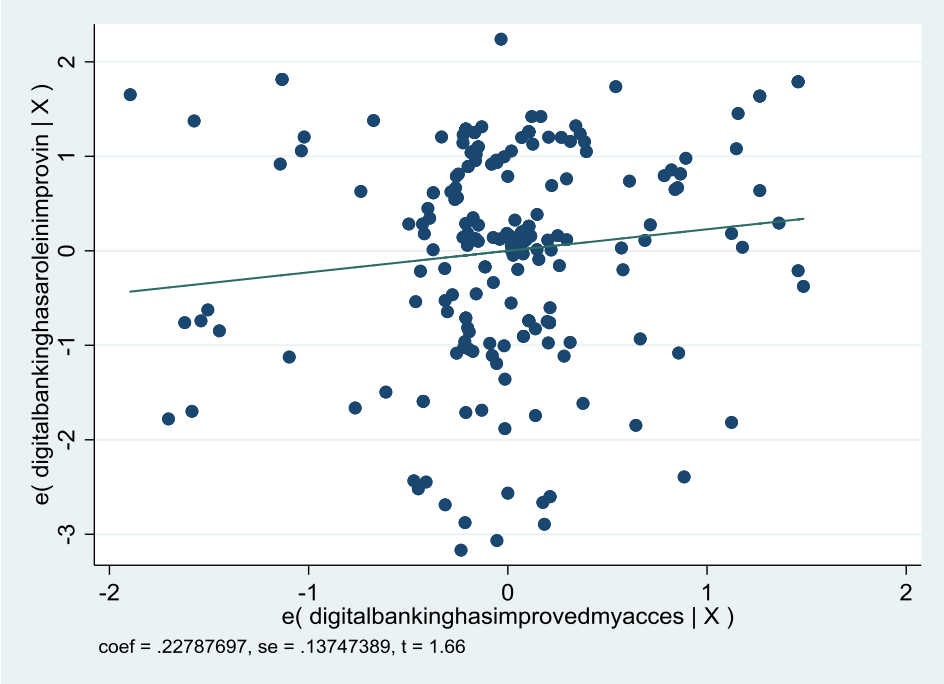


Source: STATA output

4.2.2.4. Digital Banking has improved access to credit and loans versus The Role of Digital Banking

The partial regression plot in Figure 4.11. shows a positive relationship between respondents' belief that Digital Banking has improved their access to credit and loans and their belief that Digital Banking plays a role in improving financial services, after controlling for other predictors. The coefficient is 0.228 and the t-value is 1.66, indicating a marginally significant association ($p \approx 0.099$). This suggests that perceived improvements in access to credit and loans via Digital Banking may positively influence individuals' perceptions of the broader role Digital Banking plays in enhancing financial services, though the evidence is not strong enough to confirm this at the 5% significance level.

Fig. 4.11. Digital Banking has improved access to credit and loans Regression plot

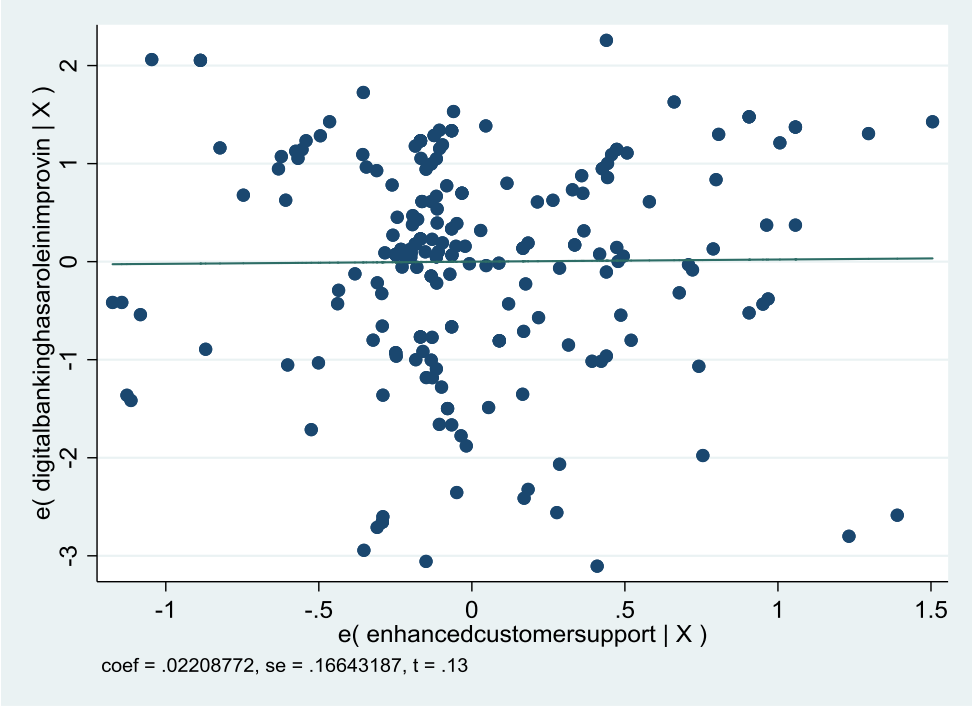


Source: STATA Output

4.2.2.5. Digital Banking needs enhanced customer support versus The Role of Digital Banking

The partial regression plot Figure 4.12. demonstrates the relationship between perceptions of enhanced customer support from Digital Banking and the belief that Digital Banking has a role in improving financial services, controlling other variables. The coefficient is 0.022, and the t-value is 0.13, indicating a very weak and statistically insignificant relationship ($p = 0.895$). This suggests that perceived improvements in customer support through Digital Banking do not meaningfully influence individuals' views on the broader role of Digital Banking in improving financial services.

Fig. 4.12. Digital Banking needs enhanced customer support Regression plot

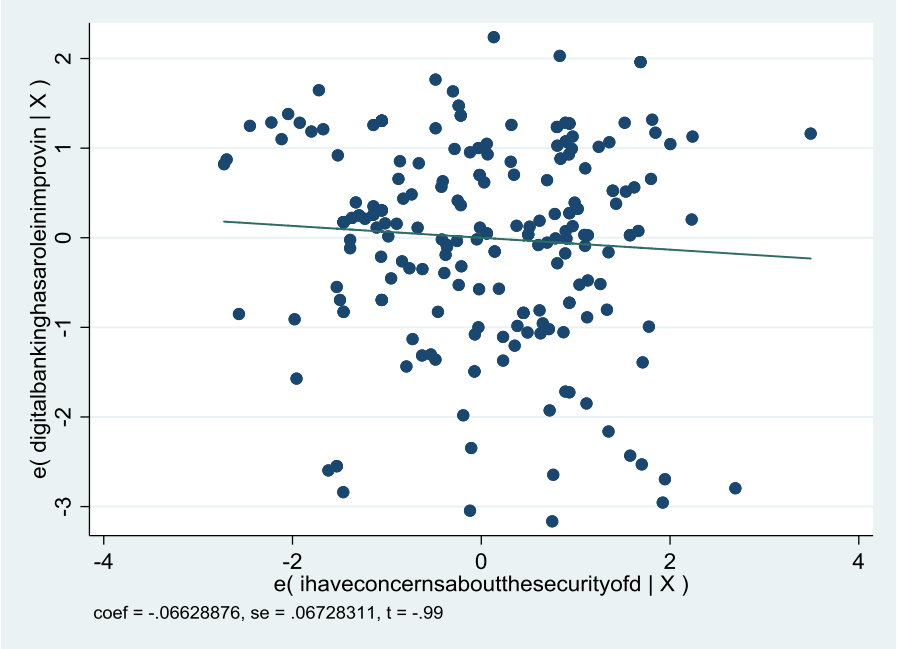


Source: STATA Output

4.2.2.6 Digital Banking security concern versus The Role of Digital Banking

The partial regression plot in Figure 4.13. displays a slightly negative relationship between respondents' concerns about the security of Digital Banking and their belief that Digital Banking plays a role in improving financial services, after controlling for other variables in the model. The coefficient is -0.066, and the t-value is -0.99, indicating that the relationship is not statistically significant (p = 0.326). This suggests that security alone do not significantly influence perceptions of the role Digital Banking plays in enhancing financial services.

Fig. 4.13. Digital Banking security concern regression plot

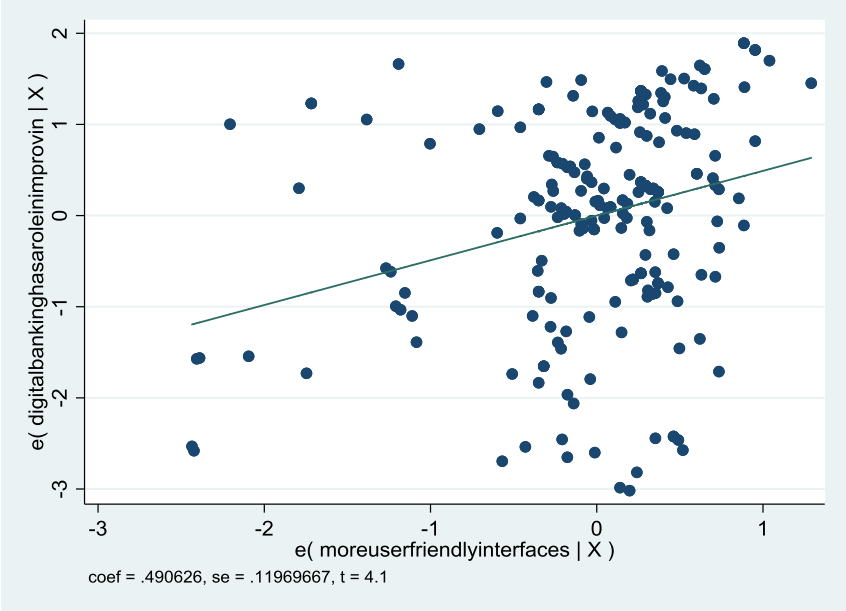


Source: STATA Output

4.2.2.7. Digital Banking needs more user-friendly interfaces versus The Role of Digital Banking

The partial regression plot in Figure 4.14. shows a strong positive relationship between respondents' agreement that more user-friendly interfaces are needed and their belief that Digital Banking plays a role in improving financial services, after controlling other variables. The coefficient is 0.491 and the t-value is 4.10, indicating a statistically significant relationship ($p < 0.001$). This suggests that the perceived need for user-friendly Digital Banking interfaces is a strong and significant predictor of the belief that Digital Banking enhances financial services, highlighting usability as a critical factor in shaping positive perceptions.

Fig. 4.14. Digital Banking needs more user-friendly interfaces Regression plot

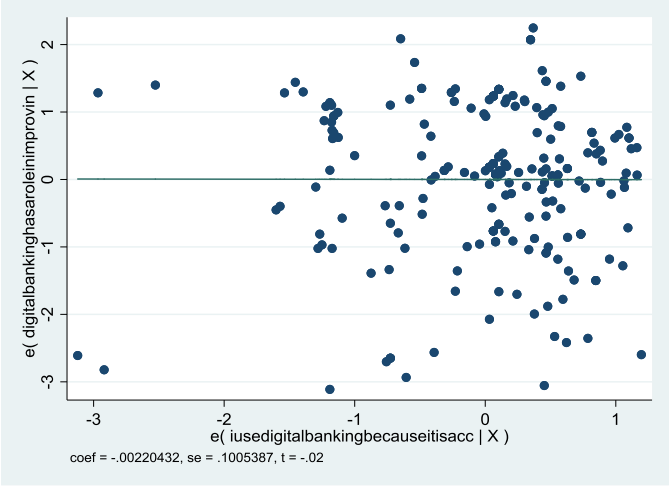


Source: STATA Output

4.2.2.8. Digital Banking is accessible from remote areas versus The Role of Digital Banking

The partial regression plot in Figure 4.15. reveals a slight relationship between respondents' use of Digital Banking because of its remote accessibility and their belief that Digital Banking plays a role in improving financial services, after adjusting for other variables in the model. The coefficient is 0.135 and the t-value is 1.83, indicating a small statistically insignificant association ($p = 0.068$). This suggests that perceiving Digital Banking as accessible from anywhere meaningfully influences users' perceptions of its role in improving financial services.

Fig. 4.15. Digital Banking is accessible from remote areas Regression plot

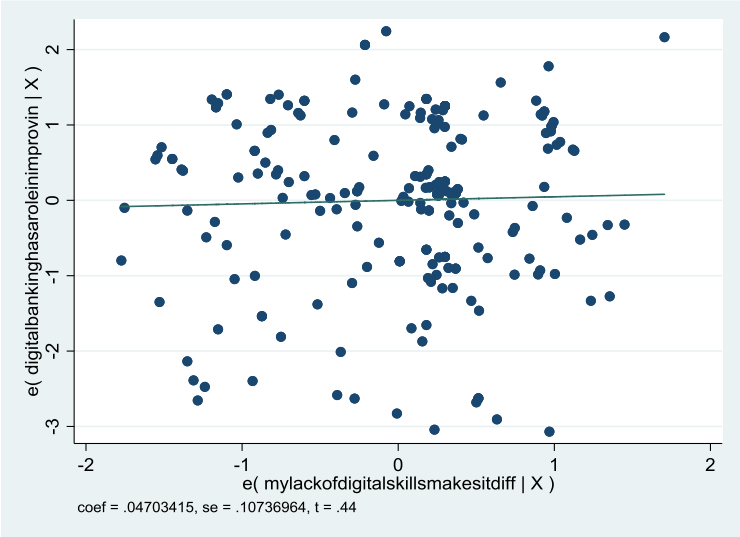


Source: STATA Output

4.2.2.9. Lack of digital skills makes it difficult to use Digital Banking versus The Role of Digital Banking

The partial regression plot in Figure 4.16. shows a slight positive relationship between respondents' perception that a lack of digital skills makes it difficult to use Digital Banking and their belief that Digital Banking has a role in improving financial services, after controlling other factors in the model.

Fig. 4.16. Lack of digital skills makes it difficult to use Digital Banking Regression plot



Source: STATA output

4.2.3. *Discussion of implications*

The findings from this study underscore that digital banking plays a significant role in improving access to financial services, particularly through mobile applications that dominate usage patterns among respondents. This aligns with the Technology Acceptance Model (Davis, 1989), which posits that perceived ease of use and usefulness drive technology adoption. The high usage rates observed in this study validate these constructs, suggesting that when digital platforms are intuitive and convenient, they can effectively broaden financial access.

However, while these findings reinforce existing literature from Jack & Suri (2014) and Mbiti & Weil (2016)—who highlight the transformative potential of mobile money in Sub-Saharan Africa—the relatively low association between digital banking and reduced transaction fees (only 23.72% agreed) calls for a nuanced interpretation. This challenges the widely held assumption, as seen in Demirgüç-Kunt et al. (2018), that cost-efficiency is an inherent benefit of digital finance. It suggests that in Ethiopia's context, transaction costs may remain a barrier or that users are not sufficiently informed about cost differences, pointing to a need for financial literacy programs and transparent pricing structures.

Moreover, the substantial agreement (51.63%) that digital banking is valuable due to accessibility from remote areas supports the claims made in the Financial Intermediation Theory (Diamond & Dybvig, 1983) that digital platforms bridge physical infrastructure gaps. However, this finding also reveals that nearly half of the population remains neutral or unconvinced, possibly due to Ethiopia's persistent infrastructural limitations—such as unreliable internet and limited smartphone penetration—as noted in the NFIS 2021–2025 and studies like Tibebe et al. (2021).

Gender and geographic disparities—widely discussed in empirical work such as Riley (2019) and Hidayat & Lestari (2019)—also require deeper attention.

While the data does not explicitly disaggregate by gender or region, the relatively high rate of younger, employed urban users in the sample suggests that the benefits of digital banking are not yet fully inclusive. This reflects concerns raised by Aker and Mbiti (2010) on the persistence of the digital divide, and underscores the importance of targeted interventions, such as gender-intentional digital policies and localized infrastructure development, emphasized by the National Financial Inclusion Strategy.

Additionally, while 41.4% of respondents reported opening their first bank account through digital channels, a promising sign for financial inclusion—this figure also means the majority (58.6%) did not, which tempers overly optimistic claims. It illustrates that digital banking is not a standalone solution but part of a broader ecosystem that must integrate trust, literacy, infrastructure, and policy reform, echoing the inclusive finance ecosystem model proposed by Allen et al. (2016).

In terms of policy implications, the findings support the expansion of mobile money and digital literacy initiatives but also highlight the need to address user trust, usability across age groups, and equitable cost structures. These aspects are central to the Sustainability Guidelines for Ethiopian Banks (2025), which recommend embedding inclusion metrics into product development and outreach strategies.

In conclusion, while digital banking clearly enhances financial access, the study reveals that its effectiveness is conditioned by socio-economic, infrastructural, and cognitive factors. Future policies must therefore integrate digital expansion with inclusive design, targeted education, and affordable pricing to ensure that the promise of digital finance translates into equitable financial inclusion.

CHAPTER 5
CONCLUSION AND RECOMMENDATION

5.1.Summary of findings

Digital finance is revolutionizing the financial sector in significant ways. Its role in shaping the future of banks and financial services is a topic of widespread interest in Ethiopian Banks. This research examines the Role of DIGITAL BANKING in improving access to financial services via financial inclusion. A cross-sectional survey method was employed, and primary data was collected using self-administered questionnaires from a sample of 300 individual customers and staff of three medium-sized banks. The study has been done through applying 215 usable primary data and analyzed all the way through descriptive and inferential statistics to come up with enhanced results. Descriptive statistics produces magnificent results using frequencies, means and percentages of both demographic variables and survey questions.

5.1.1. Findings in relation to general objective of the study

The General objective of the study is to examine the role of Digital Banking in Improving access to Financial Services, focusing on how digital platforms influence customer engagement, financial inclusion, service availability, and overall satisfaction within the banking sector.

The findings of this research provide strong evidence that digital banking technologies are playing a transformative role in enhancing access to financial services across selected Ethiopian banks. The analysis confirms that digital banking increases customer engagement through enhanced convenience, availability, and accessibility of services.

For instance, the data reveals that users find digital banking convenient and effective for everyday transactions such as money transfers, bill payments, and accessing credit, indicating an improvement in service delivery and satisfaction.

Moreover, the study reveals that digital banking promotes financial inclusion by overcoming physical and geographical limitations, particularly for remote users. However, it also highlights the persistent digital divide caused by infrastructure issues (e.g., internet connectivity) and digital literacy gaps, which must be addressed to fulfill the full potential of digital financial services.

5.1.2. Findings in relation to specific objectives

To assess the impact of digital banking platforms on customer engagement and interaction with financial services. Hence, Findings show that digital banking has significantly increased customer engagement: Most users reported enhanced interaction with financial services since adopting digital banking, Remote accessibility is cited as a major motivator for users, allowing them to access services without visiting physical branches, Services such as account opening, loan applications, and bill payments creates more customer engagement than ever before. A large number of users use digital banking daily, indicating high engagement and perceived ease-of-use, Features such as 24/7 service availability, transaction speed, and remote access were consistently rated highly by users. Nonetheless, challenges remain. The study shows that internet access and digital infrastructure still hinder full access for some users, suggesting a need for more robust digital infrastructure investment.

The second specific objective of the study is to examine the contribution of digital banking technologies to improving financial inclusion, particularly among underserved or unbanked populations. The findings indicate a significant positive impact of digital banking on financial inclusion: Many respondents reported gaining access to credit and financial tools they had previously been excluded from, the study identifies that digital banking helps reduce physical, geographic, and economic barriers, making services more inclusive for underserved communities**.** Nevertheless, approximately 27% of respondents expressed skepticism or neutrality about digital banking's role in promoting inclusion, indicating that greater outreach, transparency, and education are needed.

The study also highlights critical obstacles to deeper financial inclusion: Security concerns, cost perception, and lack of digital skills limit adoption among some groups. Despite the availability of online support, some users remain dissatisfied, suggesting that improving customer support channels is essential for ensuring inclusivity.

The third specific objective is to evaluate the effect of digital banking on the availability, accessibility, and customer satisfaction of financial services within selected commercial banks. The findings indicate a significant positive impact of digital banking on remote accessibility, availability and optimum customer satisfaction: Digital platforms were widely regarded as effective in offering essential financial services, including account opening, credit/loan access, and bill payments.

The data also suggests that digital banking simplifies transactions, with the majority of users affirming that they save time and avoid the hassle of physical branch visits. However, some users remain neutral or unconvinced about these benefits, highlighting the importance of service awareness and user education to drive further adoption.

5.1.3. Summary of key insights

Convenience and accessibility are the most highly valued aspects of digital banking. While financial inclusion is improving, progress is not consistent across all demographic groups. Critical barriers such as infrastructure limitations and low levels of digital literacy continue to hinder broader Digital Banking usage.

Additionally, customer support and security concerns remain key areas in need of improvement. Digital Banking service usage are highest among males aged 26 to 35 with higher income and education levels, highlighting a demographic gap that should be addressed through targeted inclusion strategies.

In the context of digital banking, reliability testing was conducted prior to further inferential statistical analysis and confirmed that the data exceeded the minimum required standards. The results from correlation analysis, factor analysis, and regression reveal that, among the twenty-five financial services examined, ten emerged as particularly significant in the context of digital banking within three medium-sized banks. These key variables highlight the role of digital banking in improving access to credit and loans, enabling accessibility from remote areas, and offering enhanced customer support. However, they also underscore challenges such as the need for more user-friendly interfaces, concerns about digital security, and difficulties arising from a lack of digital skills. Additional important factors include the convenience of digital banking, improved access to financial services since adoption, optimism about future improvements in accessibility, and a growing willingness to rely solely on digital platforms without the need for physical branches. Notably, digital banking convenience was identified as the most influential factor among all variables.

5.2. Conclusion

The banking sector in Ethiopia is characterized by intense competition, with financial institutions striving to attract and retain customers. One of the key strategies employed in this competitive landscape is the adoption and enhancement of Digital Banking services. These services not only improve operational efficiency but also serve as a critical tool in differentiating banks and securing customer loyalty in an increasingly digital economy.

The reviewed literature shows that Digital Banking plays a vital role in improving access to financial services globally. Through mobile money, online banking, and digital credit services, Digital Banking reduces traditional barriers to financial inclusion.

Theoretical models support the mechanisms of adoption, while empirical evidence affirms the transformative potential of digital finance, particularly for underserved populations.

Future research should focus on evaluating long-term impacts, closing the digital divide, and designing policies that support inclusive digital finance ecosystems.

This study investigated **The role of Digital Banking in improving access to financial services** and promoting financial inclusion in Ethiopian banks, 215 usable responses using primary data from a survey of 300 customers and staff across three medium-sized banks were analyzed. The findings highlight a growing acceptance and usage of Digital Banking platforms, particularly among younger, educated, and higher-income individuals. Convenience, 24/7 accessibility, and ease of transactions emerged as primary motivators for adoption, while remote accessibility and enhanced service delivery were recognized as major benefits in expanding financial inclusion.

However, challenges remain. Not all users perceive cost savings or sufficient customer support. Furthermore, a significant digital divide persists, especially in internet connectivity and digital literacy—factors that could hinder broader adoption. A notable minority of users still express skepticism about digital banking's impact on financial inclusion, particularly in underserved communities. Security concerns, the need for more user-friendly interfaces, and dissatisfaction with current support services also surfaced as areas needing attention.

Overall, the study concludes that Digital Banking holds significant potential role to transform the financial services landscape in Ethiopia by increasing access, simplifying financial operations, and reducing traditional barriers. Yet, its full potential can only be realized through strategic enhancements in infrastructure, education, and service delivery.

5.3. Recommendations

Drawing on the survey findings, the researcher recommends Bank of Abyssinia S.C., Dashen Bank S.C., and Hibret Bank S.C. to pursue a coordinated set of initiatives that will accelerate digital-banking usage and deepen financial inclusion. First, the banks—working closely with telecom operators and government agencies—should invest in robust, affordable internet infrastructure, especially in rural and underserved areas, to close the digital divide. Parallel digital-literacy campaigns, featuring hands-on training, simplified user guides, and intuitive interfaces, will help less tech-savvy customers gain confidence online. Because most customers rely on smartphones, every platform must be optimized for low-end devices to guarantee a seamless mobile experience. To counter skepticism about financial-inclusion impact, the banks should publish transparency reports and share success stories that demonstrate how digital services reach marginalized groups. Enhanced encryption, stronger multi-factor authentication, and regular user-awareness programs are essential to build trust and counter persistent security concerns. Round-the-clock, multilingual digital support—via live chat and swift response times—will further boost satisfaction. The banks should also review fee structures, communicate any cost advantages clearly, and ensure digital services remain competitively priced. Inclusive design must remain a priority, with tailored features for the elderly, unbanked populations, and customers with disabilities. Continuous upgrades to core services such as money transfers, bill payments, and credit access—focusing on speed, reliability, and simplicity—will reinforce adoption and retention. Finally, by piloting fully digital-only banking models for willing customers while maintaining hybrid options for others, the banks can meet diverse preferences and strengthen their overall value proposition.

5.4. Further area of Study and practical implications

This study primarily examines customers residing in Addis Ababa, selected from various Digital Banking premises. However, the limited scope of the sampling may affect the generalizability of the findings. Future studies could expand coverage to include regional customers beyond Addis Ababa, allowing for more comprehensive analysis. Additionally, while this research focuses solely on the role of digital banking, further studies could explore other dimensions of Digital Banking services to provide a broader perspective on their impact and utilization.

Therefore, the Researcher believes that other all-inclusive study needs to be undertaken in this area to come up with superior results. However, as the study was based on an adequate sample size to ensure reliability, the management of the banks can effectively use the findings to address the growing demand for Digital Banking services.

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ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

MASTER OF SCIENCE in CORPORATE FINANCE specialty in INVESTMENT MANAGEMENT

Questionnaire on

The Role of Digital Banking in Improving Access to Financial Services

(To be filled by digital banking users of three medium-sized banks in Addis Ababa)

Dear Respondent: Thank you for participating in this survey. The purpose of this questionnaire is to understand the role of digital banking in improving access to financial services provided by commercial banks in Addis Ababa that will be used for partial fulfillment of the requirement for MSc in Corporate Finance specialty in Investment Management. Your responses will remain confidential and will only be used for academic purposes.

Please contact me at 0911-150460/getyonathan@gmail.com for any query regarding this questionnaire.

General Instruction:

There is no need to write your name

Please put (√) Mark to indicate your preference

Thank you for your valuable response and timely co-operation

Section 1: Demographic Information

Please answer the following questions about yourself.

a. Gender:

Male ☐ Female ☐

b. Age:

18 – 25 ☐ 46 – 55 ☐

26 – 35 ☐ above 55 ☐

36 – 45 ☐

c. Level of Education:

High School ☐

Undergraduate Degree ☐

Postgraduate Degree ☐

Other (please specify): _____

d. Profession:

Employee ☐ Retired ☐

Self-employed ☐ Other (please specify):_____

e. Monthly Income (in Birr):

Below 5000 ☐

5000 - 10,000 ☐

10,001 - 20,000 ☐

Above 20,000 ☐

Section 2: General Digital Banking Usage

This section aims to assess your usage of digital banking services.

f. How often do you use digital banking services (e.g., mobile apps, internet banking)?

Daily ☐ Rarely ☐

Weekly ☐

Monthly ☐

g. Which device do you use most often for digital banking? (Check all that apply)

Smartphone ☐

Laptop/Desktop ☐

Tablet ☐

Other (please specify):_____

h. Which digital banking platform do you use most frequently? (Check all that apply)

Mobile Banking App ☐

Internet Banking (via website) ☐

USSD Banking (for feature phones) ☐

Other (please specify): _____

i. Has digital banking helped you open your first bank account?

Yes ☐

No ☐

Not applicable ☐

Section 3: Perceived Ease of Use

S.no	Items	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1.	Using digital banking services is comfortable for me					
2.	Digital banking is more convenient than traditional banking					
3.	The digital banking platform I use is easy to use					
4.	I am willing to use only digital banking in the future, without physical branches					
5.	I use digital banking because it is convenient					
6.	I use digital banking because transactions are faster					
7.	I use digital banking because it is available 24/7					
8.	I use digital banking because it offers lower transaction fees					
9.	I use digital banking because it is accessible from remote areas					

Section 4: Access to Financial Services/perceived usefulness
This section explores how digital banking has impacted your access to financial services.

S.no	Items	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1.	Access to financial services since using digital banking has improved					
2.	Digital banking has made transactions easier for me					
3.	Digital banking has helped me save money					
4.	Digital banking has improved my access to credit and loans					
5.	Digital banking has contributed to greater financial inclusion					
6.	Digital banking has helped me manage my finances better					
7.	Digital banking has helped underserved communities to get better financial services					
8.	Customer support for digital banking services is obtained on time					
9.	Digital banking has an impact on financial inclusion (access to banking services)					

Accessibility of Financial Services

S.no	Items	**Not accessible**	**Slightly accessible**	**Neutral**	**Accessible**	**Highly accessible**
1.	Opening a bank account is accessible through Digital Banking					
2.	Applying for and accessing loans is accessible through Digital Banking					
3.	Paying bills is accessible through Digital Banking					
4.	Money transfer is accessible through Digital Banking					

Section 5: Challenges and Barriers/ Trust and Security
This section aims to identify any challenges or barriers you face in using digital banking.

S.no	Items	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1.	I have limited internet access that affects my use of digital banking					
2.	My lack of digital skills makes it difficult to use digital banking					
3.	I have concerns about the security of digital banking					
4.	The digital banking platforms I use are difficult to navigate					
5.	Digital banking services are not readily available in my area					
6.	Digital banking has high fees or transaction costs					
7.	Digital banking services are secure for my financial transactions					
8.	I have experienced security issues with digital banking					
9.	I trust my bank's digital platform to protect my personal and financial information					

Section 6: Future of Digital Banking/Adoption intention

This section gathers your views on the future of digital banking.

S.no	Items	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1.	Digital banking needs better security features					
2.	Digital banking needs more user-friendly interfaces					
3.	Digital banking needs enhanced customer support					
4.	Digital banking needs additional banking functions					
5.	Digital banking will continue to improve access to financial services in the future					
6.	I intend to continue using digital banking in the future					
7.	I will recommend digital banking to others as a means of accessing financial services					

Section 7: Digital Banking Role

This section gathers your views on the role of digital banking in improving access to financial services

Overall experience

Digital Banking has a Role in Improving Access to Financial Services	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**

Thank you for taking the time to complete this questionnaire. Your responses are valuable in helping me understand the role of digital banking in improving access to financial services and will contribute to the improvement of financial inclusion and service delivery.

አዲስ አበባ ዩኒቨርሲቲ የንግድ ስራ ት/ቤት

የአካውንቲንግና ፋይናንስ ትምህርት ክፍል

የዲጂታል ባንኪንግ በፋይናንስ አገልግሎት ላይ ያለውን ሚና ለመለካት የሚያስችሉ መለኪያዎች ዳሰሳ

(አዲስ አበባ በሚኖሩ የዲጂታል ባንኪንግ ተጠቃሚዎች የሚሞላ መጠይቅ)

ውድ የጥናቱ ተሳታፊ፣

የዚህ መጠይቅ ዋና ዓላማ ለሁለተኛ ዲግሪ የማሟያ ጽሁፍ ለማዘጋጀት የሚረዳ መረጃ ለመሰብሰብ ሲሆን ይህም በተመረጡ ሶስት ባንኮች ዲጂታል ባንኪንግ በፋይናንስ አገልግሎት ላይ ያለውን ሚና ለመለካት የሚያስችሉ መለኪያዎች ዳሰሳን ይመለከታል፡፡በመሆኑም እርስዎ የሚሰጡት መረጃ ከላይ ለተገለጸው ዓላማ ብቻ የሚውል፣በምስጢር የሚጠበቅ እንዲሁም ለሶስተኛ ወገን የማይተላለፍ መሆኑን ላረጋግጥልዎ እወዳለሁ፡፡መጠይቁን በተመለከተ ለሚኖርዎት ማንኛውም ጥያቄ በ 0911-150460 ወይም getyonathan@gmail.com ሊያገኙኝ ይችላሉ፡፡

ጠቅላላ መረጃ

- ስምዎን መጻፍ አስፈላጊ አይደለም
- እባክዎ በመረጡት ሳጥን ውስጥ (√) ምልክት ያድርጉ

ስለሰጡት ምላሽ አመሰግናለሁ!

ክፍል1 .ጠቅላላ መረጃ

ሀ. ጾታ

ወንድ ☐ ሴት ☐

ለ. እድሜ

18-25 ☐ 46-55 ☐

26-35 ☐ ከ55 በላይ ☐

36-45 ☐

ሐ. የትምህርት ደረጃ

ሁለተኛ ደረጃ ☐ 2ኛ ዲግሪ ☐

የመጀመሪያ ዲግሪ ☐ ሌላ (እባክዎ ይግለጹ)_____

መ. ወርሃዊ ገቢ (በብር)

እስከ 5,000 ☐ ከ10,001-20,000 ☐

ከ5,001-10,000 ☐ ከ20,001 በላይ ☐

ክፍል 2. የዲጂታል ባንኪንግ አጠቃቀም

ሠ. የዲጂታል ባንኪንግ አገልግሎቶችን ምን ያህል ይጠቀማሉ?

በየቀኑ ☐ አልፎ አልፎ ☐

በየሳምንቱ ☐

በየወሩ ☐

ረ. አዘውትረው የሚጠቀሙት የዲጂታል ባንኪንግ አገልግሎት የትኛው ነው? (ከአንድ በላይ መምረጥ ይችላሉ)

ሞባይል ባንኪንግ ☐ ኤቲኤም ☐

ኢንተርኔት ባንኪንግ ☐ ሌላ (እባክዎ ይግለጹ)_____

የኤስኤስዲ ☐

ክፍል 3. የአጠቃቀም ምቹነት

ተ.ቁ	መዘርዝሮች	በፍጹም አልስማማም	አልስማማም	አልወሰንም	እስማማለሁ	በጣም እስማማለሁ
1.	የዲጂታል ባንኪንግ አገልግሎት ለአጠቃቀም ቀላል ነው					
2.	ዲጂታል ባንኪንግ ከተለምዷዊ ባንኪንግ የተሻለ ነው					
3.	የዲጂታል ባንኪንግ ፕላትፎርም ለአጠቃቀም ምቹ ነው					
4.	ወደፊት ወደ ባንክ ቅርንጫፍ ሳልሄድ በዲጂታል ባንኪንግ ብቻ ለመጠቀም ፈቃደኛ ነኝ					
5.	ዲጂታል ባንኪንግ የምጠቀመው ምቹ ስለሆነ ነው					
6.	ዲጂታል ባንኪንግ የምጠቀመው የገንዘብ ዝውውር ፈጣን ስለሆነ ነው					
7.	ዲጂታል ባንኪንግ የምጠቀመው የ24/7 አገልግሎት ስላለው ነው					
8.	ዲጂታል ባንኪንግ የምጠቀመው አነስተኛ የአገልግሎት ክፍያ ስለሚያስከፍል ነው					
9.	ዲጂታል ባንኪንግ የምጠቀመው ከሩቅ ስፍራ መጠቀም ስለምችል ነው					

ክፍል 4. የፋይናንስ አገልግሎት የማግኘት ዕድል

ተ.ቁ	መዘርዝሮች	በፍጹም አልስማማም	አልስማማም	አልወሰንም	እስማማለሁ	በጣም እስማማለሁ
1.	ዲጂታል ባንኪንግ መጠቀም ከጀመርኩ ጀምሮ የፋይናንስ አገልግሎት ተደራሽነት ተሻሽሏል					
2.	ዲጂታል ባንኪንግ የገንዘብ ዝውውርን ቀላል አድርጎልኛል					
3.	ዲጂታል ባንኪንግ ገንዘብ እንድቆጥብ ረድቶኛል					
4.	ዲጂታል ባንኪንግ የብድር አገልግሎት ተደራሽነት እንዲሻሻል አድርጓል					
5.	ዲጂታል ባንኪንግ የፋይናንስ አካታችነት እንዲጨምር አስተዋጽኦ አድርጓል					
6.	ዲጂታል ባንኪንግ ፋይናንስ ሁኔታዬን በተሻለ እንዳስተዳድር ረድቶኛል					
7.	ዲጂታል ባንኪንግ የተጎዱ የማህበረሰብ ክፍሎች የገንዘብ አገልግሎት በተሻለ ተደራሽ እንዲሆኑ ረድቷል					
8.	በዲጂታል ባንኪንግ አገልግሎት የደንበኛ ድጋፍ ሲያስፈልግ በፍጥነት ይገኛል					
9.	ዲጂታል ባንኪንግ በፋይናንስ አካታችነት ላይ አዎንታዊ ተጽእኖ አድርጓል					

የፋይናንስ አገልግሎት ተደራሽነት

ተ.ቁ	መዘርዝሮች	ተደራሽ አይደለም	በመጠኑ ተደራሽ ነው	አልወሰንም	ተደራሽ ነው	በፍጹም ተደራሽ
1.	የባንክ ሂሳብ በዲጂታል ባንኪንግ መክፈት ይቻላል					
2.	በዲጂታል ባንኪንግ የብድር ጥያቄ ማቅረብና ማግኘት ይቻላል					
3.	በዲጂታል ባንኪንግ የአገልግሎት ክፍያዎችን ማግኘት ይቻላል					
4.	በዲጂታል ባንኪንግ የገንዘብ ዝውውር ማድረግ ይቻላል					

ክፍል 5. ተግዳሮት

ተ.ቁ	መዘርዝሮች	በፍጹም አልስማማም	አልስማማም	አልወሰንም	እስማማለሁ	በጣም እስማማለሁ
1.	የተቆራረጠ የኢንተርኔት አቅርቦት የዲጂታል ባንኪንግ አጠቃቀሜ ላይ አሉታዊ ተጽእኖ አድርጎብኛል					
2.	የዲጂታል አጠቃቀም ክህሎቴ ዲጂታል ባንኪንግ አጠቃቀሜ ላይ አሉታዊ ተጽእኖ አድርጎብኛል					
3.	ዲጂታል ባንኪንግ ደህንነት ላይ ጥያቄ አለኝ					
4.	ዲጂታል ባንኪንግ ፕላትፎርም ለአጠቃቀም አስቸጋሪ ናቸው					
5.	የዲጂታል ባንኪንግ አገልግሎት በአካባቢዬ ማግኘት አስቸጋሪ ነው					
6.	በዲጂታል ባንኪንግ መጠቀም ከፍተኛ የአገልግሎት ክፍያ አለው					
7.	የዲጂታል ባንኪንግ አገልግሎት ለገንዘብ ዝውውር አስተማማኝ ነው					
8.	በዲጂታል ባንኪንግ የማጭበርበር አጋጣሚ አጋጥሞኛል					
9.	የምጠቀምበት ባንክ የግልና የፋይናንስ መረጃዎቼን ይጠብቅልኛል ብዬ አምነዋለሁ					

ክፍል 6. የዲጂታል ባንኪንግ የወደፊት ሁኔታ

ተ.ቁ	መዘርዝሮች	በፍጹም አልስማማም	አልስማማም	አልወሰንም	እስማማለሁ	በጣም እስማማለሁ
1.	ዲጂታል ባንኪንግ የደህንነት ገጽታዎች ያስፈልገዋል					
2.	ዲጂታል ባንኪንግ የቀላል አጠቃቀም ገጽታዎች ያስፈልገዋል					
3.	ዲጂታል ባንኪንግ የተሻሻለ የደንበኛ አገልግሎት ድጋፍ ያስፈልገዋል					
4.	ዲጂታል ባንኪንግ ተጨማሪ የባንክ ምርጫዎች ያስፈልጉታል					
5.	ዲጂታል ባንኪንግ ወደፊት የፋይናንስ አገልግሎቶችን ተደራሽነት ማሻሻሉን ይቀጥላል					
6.	ወደፊት ዲጂታል ባንኪንግ መጠቀሜን እቀጥላለሁ					
7.	የፋይናንስ አገልግሎቶችን ለማግኘት እንዲያስችላቸው የዲጂታል ባንኪንግ አገልግሎቶችን እንዲጠቀሙ ለሌሎች እመክራለሁ					

ክፍል 7. የዲጂታል ባንኪንግ ሚና

ዲጂታል ባንኪንግ የፋይናንስ አገልግሎት ተደራሽነትን የማሻሻል ሚና አለው	በፍጹም አልስማማም	አልስማማም	አልወስንም	እስማማለሁ	በጣም እስማማለሁ

አመሰግናለሁ!