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The Effectiveness of Digital Transformation Strategies in Enhancing Customer Experience at Ethiopian Banks: A Case Study of the Commercial Bank of Ethiopia (CBE)

Lemma Wakeyo Bokku

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Key West University University

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ABSTRACT

Ineffective digital transformation strategies remain a key challenge affecting customer experience and technology adoption in the banking sector, particularly in emerging economies. As customer expectations increasingly shift toward seamless, secure, and user-friendly digital services, bank managers must adopt effective strategies to enhance customer satisfaction and sustained usage of digital platforms. Guided by the Technology Acceptance Model (TAM), the purpose of this qualitative single case study was to explore the digital transformation strategies managers at the Commercial Bank of Ethiopia (CBE) used to enhance customer experience. The participants were five senior managers in Addis Ababa, Ethiopia, each with more than five years of experience in implementing digital transformation initiatives in the banking sector. Data were collected through semi-structured interviews and analyzed using NVivo 14 following a systematic thematic analysis process that included data transcription, coding, categorization, and validation. Four major themes emerged from the data analysis, including strategic integration of digital technologies, customer-centric service delivery, innovation and process optimization, and sustainable digital transformation. The findings revealed that effective digital transformation at CBE extends beyond technology adoption to include strategic alignment, leadership commitment, customer orientation, innovation, and sustainability. A key recommendation for bank managers is to embed digital initiatives into enterprise-wide strategy while prioritizing customer needs, process efficiency, and long-term sustainability. The implications for positive social change include improved customer satisfaction, expanded financial inclusion, enhanced trust in digital banking services, and strengthened institutional resilience within Ethiopia’s banking sector.

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LIST OF ABBREVIATIONS

AI	Artificial Intelligence
ATM	Automated Teller Machine
CBE	Commercial Bank of Ethiopia
CRM	Customer Relationship Management
CX	Customer Experience
ERP	Enterprise Resource Planning
ESG	Environmental, Social, and Governance
GDP	Gross Domestic Product
NBE	National Bank of Ethiopia
NDPS	National Digital Payments Strategy
PEOU	Perceived Ease of Use
POS	Point of Sale
PU	Perceived Usefulness
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
TAM	Technology Acceptance Model

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CHAPTER ONE
OVERVIEW

The rapid growth of digital banking in Ethiopia has significantly reshaped customer expectations, with up to 79% of banking transactions now conducted through digital platforms at commercial banks. This shift reflects increasing demand for seamless, secure, and user-friendly digital experiences. Despite substantial investments in digital technologies, Ethiopian commercial banks continue to face persistent challenges related to service quality, including security concerns, limited responsiveness, and usability issues, which negatively affect customer satisfaction and loyalty. Against this backdrop, the general business problem addressed in this study was that managers of commercial banks have not consistently used effective digital transformation strategies to reduce customer churn. More specifically, some managers at the Commercial Bank of Ethiopia (CBE) lacked effective digital transformation strategies to enhance customer experience.

The purpose of this qualitative single case study was to explore the effectiveness of digital transformation strategies implemented by CBE in improving customer experience. The study focused on five experienced CBE managers in Addis Ababa who had more than eight years of involvement in successful digital transformation initiatives within the banking sector. By adopting a case study design, the research aimed to generate in-depth insights into the strategic, technological, and operational practices that have contributed to improved service delivery and customer satisfaction. The findings are intended to inform best practices within the Ethiopian banking industry and contribute to positive social change through enhanced financial inclusion and service quality.

The study is significant because effective digital transformation strategies play a critical role in enhancing customer satisfaction, expanding service accessibility, and strengthening customer retention in Ethiopian banks. Although digital banking adoption is growing rapidly, some bank managers continue to struggle with translating digital investments into meaningful customer experiences. The findings of this research may therefore contribute to improved business practices by identifying practical strategies that address service quality gaps and customer expectations. Additionally, the study has implications for positive social change by supporting the development of more inclusive, efficient, and customer-oriented banking services.

- *Problem Statement*

Ethiopian banking customers now process up to 79 percent of transactions via digital platforms at commercial banks, showing a significant shift in customer expectations for seamless and intuitive digital experiences (AI, Storyteller, 2024). However, though many Ethiopian commercial banks have made substantial investments in digital platforms, notable deficiencies persist in key service quality areas, including security, responsiveness, and user-friendliness, which impact customer satisfaction and loyalty (Bono, 2025). The general business problem was that managers of commercial banks did use effective digital transformation strategies to reduce customer churn rates. The specific business problem was that some Ethiopian managers of the Commercial Bank of Ethiopia (CBE) lacked effective digital transformation strategies to enhance customer experience.

- *Purpose of Research*

The purpose of this qualitative single case study was to explore the effectiveness of digital transformation strategies implemented by the Commercial Bank of Ethiopia (CBE) in enhancing customer experience. The study focused on five CBE managers in Addis Ababa, Ethiopia, who had more than eight years of experience in implementing successful digital transformation strategies within the banking industry. Using a case study design, this research sought to gain in-depth insights into the strategic approaches, technological innovations, and operational practices that have contributed to improved customer satisfaction and service delivery. The findings may contribute to positive social change by informing best practices for digital transformation in the Ethiopian banking sector, promoting financial inclusion, and enhancing the overall quality of banking services for customers.

- *Significance of Study*

Effective digital transformation strategies greatly enhance customer satisfaction in Ethiopian banks by streamlining service delivery, expanding accessibility, and enriching the overall user experience (Bono, 2025). However, some managers of commercial banks are still struggling to use effective digital transformation strategies to increase customer satisfaction and retention rate. Therefore, the findings from the current study could contribute to business practices and have implications for positive social change.

- *Contributions to Business Practices*

Digital transformation has emerged as a critical driver of innovation and competitiveness in the global banking sector. Numerous studies have emphasized the importance of adopting digital strategies to improve operational efficiency, customer satisfaction, and service delivery (Gebremariam & Tadesse, 2023; Alemu, 2024). However, limited research has focused on how these strategies are effectively implemented in the context of developing economies, particularly within Ethiopia's banking industry. This study may offer valuable contributions to business practices by providing insights into the strategic approaches employed by experienced managers at the Commercial Bank of Ethiopia (CBE) to enhance customer experience through digital transformation. The findings could serve as a benchmark for other financial institutions seeking to modernize their operations, improve customer engagement, and remain competitive in an increasingly digital financial landscape. Furthermore, the study may inform policy

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development, capacity-building initiatives, and investment decisions related to digital banking infrastructure in Ethiopia and similar emerging markets.

➢ *Implications for Positive Social Change*

Access to efficient and customer-centric banking services is essential for promoting financial inclusion, economic empowerment, and sustainable development. In Ethiopia, where a significant portion of the population remains unbanked or underbanked, digital transformation in the banking sector holds the potential to bridge service gaps and reach underserved communities. The insights gained from this study could contribute to positive social change by highlighting effective digital strategies that enhance accessibility, transparency, and responsiveness in banking services. By understanding how experienced CBE managers have successfully implemented digital initiatives, stakeholders, including policymakers, financial institutions, and development partners can design more inclusive and impactful digital financial services. These improvements may foster economic participation, support small and medium enterprises (SMEs), and ultimately contribute to poverty reduction and national development goals.

➢ *Research Method and Design*

Researchers typically adopt one of three methodological approaches, including qualitative, quantitative, or mixed methods based on the specific objectives and nature of their studies (Taherdoost, 2022; Weyant, 2022). Grønmo (2023) and Schoonenboom (2023) shared that researchers can use the qualitative research method when they aim to explore human experiences, perceptions, and social dynamics using non-numerical data sources, including interviews, semi-structured interviews, observations, and open-ended interviews. Additionally, the qualitative research method is appropriate when researchers seek to gather rich, and detailed information into participants lived experiences, beliefs, and interactions within a specific context (Sardana et al., 2023). Taherdoost (2022) and Weyant (2022) shared that unlike qualitative, the quantitative method is appropriate when researchers seek to collect numerical data and examine the relationship between variables. However, since I was not interested in testing hypotheses or investigating the correlation between variables, I chose not to use the quantitative research method. The mixed method is also inappropriate for the current study because it involves the use of quantitative approach. Therefore, I used the qualitative approach to explore the digital transformation strategies some Ethiopian managers of the CBE use to enhance customer experience.

Qualitative research encompasses several distinct designs; each suited to different types of inquiry. The five most used qualitative research designs are case study, phenomenology, ethnography, grounded theory, and narrative research (Creswell & Creswell, 2023; Sardana et al., 2023). These designs enable researchers to explore complex social phenomena, human experiences, and organizational processes in depth. For instance, phenomenology focuses on individuals lived experiences, ethnography examines cultural groups in their natural settings, grounded theory seeks to develop new theories from data, and narrative research explores personal stories to understand how individuals make sense of their experiences (Tomaszewski et al., 2020). For the current study, a single case study design was the most appropriate approach to explore the effectiveness of digital transformation strategies in enhancing customer experience at the Commercial Bank of Ethiopia (CBE). Yin (2018) shared that a case study allows for an in-depth, contextual analysis of a contemporary phenomenon within its real-life setting, especially when the boundaries between the phenomenon and context are not clear. CBE, as the largest and most technologically advanced bank in Ethiopia, represents a critical and unique case for understanding how digital transformation is operationalized in the country's banking sector. The single case study design enables the researcher to gather rich, detailed data from experienced managers who have implemented digital strategies, providing insights into both the processes and outcomes of these initiatives (Yin, 2018). Other qualitative designs were considered but deemed less suitable for this study. Phenomenology was excluded because the focus is not solely on the lived experiences of individuals, but rather on organizational strategies and their effectiveness. Ethnography requires prolonged immersion in a cultural setting, which is beyond the scope and timeline of this research. Grounded theory was not selected because the study does not aim to generate a new theory but to explore and describe existing practices. Lastly, narrative research was not appropriate as the study does not focus on personal life stories but on strategic and managerial practices within an institutional context. Therefore, the single case study design offered the most robust framework for achieving the research objectives.

➢ *Research Question*

The central research question for the current study was:

What digital transformation strategies did managers at CBE use to enhance customer experience?

Here are the interview questions participants responded to, during the semi-structured interviews:

- Can you describe the digital transformation strategies that have been implemented at CBE in recent years?
- What specific goals or customer experience challenges were these strategies designed to address?
- How do you assess the effectiveness of these digital strategies in improving customer satisfaction?
- What role do customer feedback and data analytics play in shaping your digital transformation initiatives?
- Can you share an example of a successful digital project or initiative that significantly enhanced customer experience?
- What internal or external challenges have you faced while implementing digital transformation strategies?

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- How does CBE ensure that digital tools and platforms are accessible and user-friendly for all customer segments?
- What kind of training or support is provided to staff to adapt to new digital systems and processes?
- How do you measure the impact of digital transformation on customer engagement and loyalty?
- In your opinion, what are the key success factors for sustaining digital transformation in the Ethiopian banking context?
- Is there anything else you would like to share with me regarding the digital transformation strategies you implemented at CBE to enhance customer experience?

➢ *Assumptions and Limitations*

The current study had several assumptions and limitations which I addressed as follows:

➢ *Assumptions*

The current study is grounded in several key assumptions that shape its design and interpretation. First, I assumed that the selected participants, CBE managers with over eight years of experience, possess accurate, relevant, and comprehensive knowledge of the bank's digital transformation strategies and their impact on customer experience. I also assumed that the selected participants would provide honest, reflective, and detailed responses during interviews, which is essential for capturing the depth and richness of qualitative data (Sardana et al., 2023). Furthermore, another assumption I made was that the digital transformation initiatives implemented at CBE are representative of broader trends within the Ethiopian banking sector, allowing for meaningful insights that may inform future strategies in similar contexts.

Moreover, I assumed that the qualitative case study design is appropriate for exploring the complex and context-specific nature of digital transformation in banking. This approach presumes that the phenomenon under investigation cannot be fully understood through quantitative measures alone, but rather requires an in-depth exploration of managerial perspectives, organizational culture, and customer interaction processes (Grønmo, 2023). Besides, I assumed that the data collected through semi-structured interviews will be sufficient to identify patterns and themes that reflect the effectiveness of digital strategies in enhancing customer experience. The above assumptions were necessary to ensure the validity and coherence of the study's findings and conclusions.

➢ *Limitations*

Despite its strengths, the current study is subject to several limitations inherent in qualitative case study research. One major limitation was the limited generalizability of the findings. Since the study focuses on a single institution, CBE, and a small, purposively selected group of experienced managers, the results may not be applicable to other banks in Ethiopia or in different socio-economic contexts. The unique organizational culture, resources, and customer base of CBE may influence the nature and success of its digital transformation strategies, making it difficult to extrapolate the findings to other institutions without caution.

Another limitation was the potential for researcher bias and participant subjectivity, which are common concerns in qualitative research. The interpretation of interview data is influenced by the researcher's perspectives and prior knowledge, which may affect the objectivity of the analysis (Mwita, 2022). Similarly, participants may provide socially desirable responses or withhold critical information due to organizational loyalty or fear of repercussions. Additionally, the dynamic nature of digital transformation means that strategies and technologies are constantly evolving, which may limit the study's relevance over time. The above limitations underscored the importance of transparency, reflexivity, and methodological rigor in conducting and reporting qualitative research.

➢ *Operational Definitions*

- *Customer Experience (CX):* Customer experience in digital banking is defined as the cumulative perception and emotional response of customers resulting from their interactions with a bank's digital and physical touchpoints, including mobile apps, websites, ATMs, and customer service (Chauhan et al., 2022).
- *Digital Banking*: Digital banking is the delivery of banking services through digital platforms, including mobile applications, internet banking, and automated teller machines (ATMs), enabling customers to perform financial transactions without visiting physical branches (Ramesh & Padmaja, 2025).
- *Digital Innovation*: Digital innovation in the banking sector involves the development and implementation of new digital tools, platforms, or processes that enhance service delivery, improve customer satisfaction, and create new business models (Papathomas & Konteos, 2023).
- *Digital Service Quality*: Digital service quality is the perceived effectiveness, reliability, and user-friendliness of a bank's digital platforms, including website design, mobile app functionality, transaction speed, and security features (Mbama et al., 2018).
- *Digital Strategy*: Digital strategy in banking refers to a bank's long-term plan to leverage digital technologies to improve customer value, streamline operations, and maintain competitiveness in a rapidly evolving financial ecosystem (Lóska & Uotila, 2024).
- *Digital Transformation*: Digital transformation in banking refers to the strategic integration of digital technologies, including artificial intelligence (AI), blockchain, mobile platforms, and big data analytics into all areas of banking operations to enhance efficiency, customer engagement, and financial inclusion (Ononiwu et al., 2024).

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- *Financial Inclusion*: Financial inclusion refers to the availability and accessibility of affordable financial services, including savings, credit, insurance, and payments to underserved and unbanked populations, often facilitated through digital channels (Ononiwu et al., 2024).

➢ *Summary*

In Chapter One, the foundational components of the study were presented. The chapter introduced the research problem, highlighting the growing importance of digital transformation in the banking sector and the need to understand its impact on customer experience within the Ethiopian context. The purpose statement clarified the study's intent to explore the digital strategies employed by experienced managers at the Commercial Bank of Ethiopia (CBE). The significance of the study was discussed in terms of its potential contributions to business practices and positive social change. The research design and method were outlined, justifying the use of a qualitative single case study approach. The central research question was introduced, followed by a discussion of the study's assumptions and limitations. Finally, key operational definitions were provided to ensure conceptual clarity and consistency throughout the research.

Chapter 2 focused on literature review, which provided a comprehensive examination of existing scholarly work related to digital transformation, customer experience, and banking innovation. This chapter identified conceptual frameworks, selected the appropriate conceptual for the current study, and established the academic context for the current study. The review also supported the rationale for the research question and design and helped position the study within the broader field of digital banking and customer experience enhancement.

CHAPTER TWO
LITERATURE REVIEW

➢ *Conceptual Framework Orientation*

The Technology Acceptance Model (TAM) is the theoretical foundation for the current study. Fred Davis introduced TAM in 1989 to explain how users come to accept and use new technologies. Davis (1989) and O'Dea et al. (2025) emphasized that TAM provides a structured framework for understanding the behavioral intentions behind technology adoption. The model identifies two primary constructs, including the perceived usefulness (PU) and perceived ease of use (PEOU) as key determinants of an individual's decision to embrace a new technology. PU refers to the degree to which a person believes that using a particular system would enhance their job performance, while PEOU refers to the degree to which a person believes that using the system would be free of effort (Nguyen et al., 2024). The above constructs were particularly relevant in organizational settings where technology is introduced to improve service delivery and operational efficiency.

In the context of this study, TAM served as a valuable lens through which to examine how experienced managers at the Commercial Bank of Ethiopia (CBE) evaluate and implement digital transformation strategies. By applying TAM, the study explored whether the target participants perceive new digital tools as useful in enhancing customer satisfaction and whether they consider these tools easy for both employees and customers to use. This framework helped to uncover the cognitive and behavioral factors that influence strategic decision-making in digital adoption. Moreover, TAM supported the investigation of how organizational culture, training, and customer feedback may shape perceptions of usefulness and ease of use, ultimately affecting the success of digital transformation initiatives (Nguyen et al., 2024). Therefore, TAM not only guided the formulation of interview questions but also informed the interpretation of findings related to technology acceptance and customer experience enhancement in the Ethiopian banking sector.

➢ *Review of Literature*

Many researchers emphasized the transformative role of digital technologies in reshaping customer experience within the banking sector, particularly in developing economies like Ethiopia (Alene & Laxmikantham, 2023; Tessema & Prasad, 2024; Ayinaddis et al., 2023). Alene and Laxmikantham (2023) noted that while digital finance is gaining traction in Ethiopia, the sector remains underdeveloped compared to global standards, with challenges such as limited infrastructure, low digital literacy, and frequent service disruptions. Despite these barriers, banks like the Commercial Bank of Ethiopia (CBE) have made significant strides in adopting mobile banking, internet banking, and agent banking services to improve customer access and satisfaction. The current single-case study explored the digital transformation strategies managers at CBE use to enhance customer experience.

The literature review synthesized current research on digital banking adoption, customer satisfaction, and the strategic use of technology in financial services. Additionally, the literature review provided a rationale for grounding the study in the Technology Acceptance Model (TAM), which offered a robust lens for examining how perceived usefulness and ease of use influence technology adoption in banking. Many researchers highlighted that the literature review represents an essential tool in the research process (Kraus et al., 2024; Varsha et al., 2024). Krauss et al. (2024) shared that literature reviews provide a systematic approach to synthesizing existing research by employing a well-defined methodology. Researchers can use literature reviews as a systematic approach to synthesize the evidence on a specific research question, to better inform policy makers, practitioners, and the public (Bangdiwala, 2024; Varsha et al., 2024). The adoption of a systematic literature review enabled me to effectively synthesize existing scholarships on digital transformation and customer experience in the banking industry, answer the central research question, while aligning with the purpose of the current research.

The literature review of the current study integrated core constructs of the technology acceptance model (TAM), including perceived usefulness (PU) and perceived ease of use (PEOU), which were critical in understanding how both customers and bank employees interact with digital platforms (Alamir, 2024; Shaji et al., 2025). The TAM constructs are particularly relevant in the Ethiopian banking context, where digital transformation is still evolving and customer trust in digital systems is gradually being built. To ensure comprehensive synthesis, this review drawn on peer-reviewed articles, academic researchers, and institutional reports accessed through databases, including Google Scholar, ProQuest, EBSCOhost, and ScienceDirect. Key search terms included *digital transformation*, *customer experience*, *digital banking in Ethiopia*, *technology acceptance model*, and *banking innovation*. The findings from this review informed the study's conceptual framework and guided the development of interview questions aimed at uncovering the strategies CBE managers use to enhance customer experience through digital transformation.

➢ *Technology Acceptance Model*

The technology acceptance model (TAM), originally developed by Davis (1989), remains one of the most influential frameworks for understanding how individuals adopt and use new technologies. In the context of digital banking, TAM has been widely applied to examine how users' perceptions of technology influence their behavioral intentions and actual usage. The model posits that two primary constructs, including perceived usefulness and perceived ease of use are critical in shaping users' attitudes toward adoption (Davis, 1989). Alamir (2025) and Shaji et al. (2025) shared that PU refers to the degree to which a person believes that using a particular system will enhance their performance, while PEOU reflects the degree to which the system is perceived as

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free of effort. The two constructs of TAM (see Figure 1) are particularly relevant in banking environments where customer satisfaction and operational efficiency are closely tied to the usability and effectiveness of digital platforms (Shaji et al., 2025).

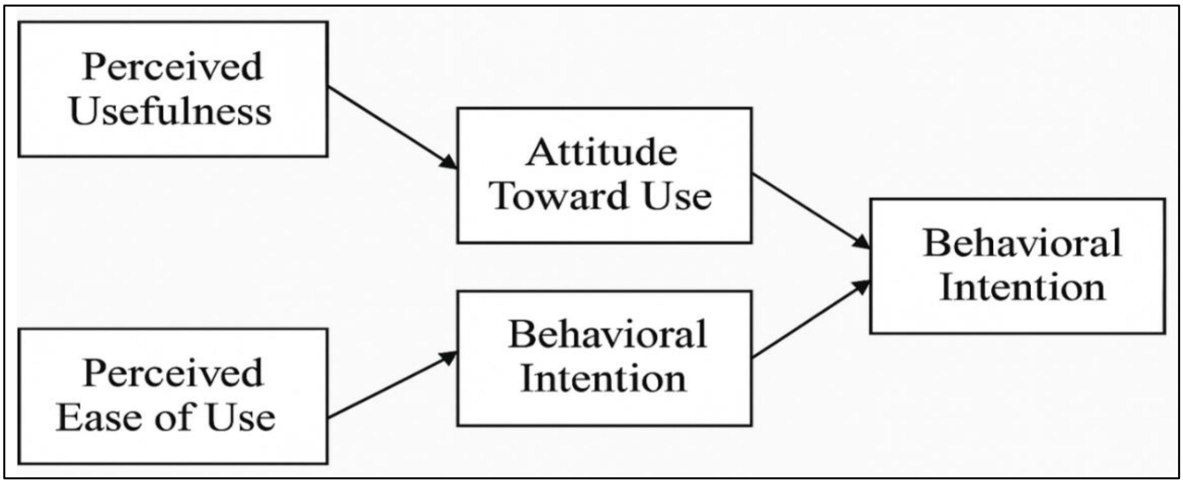

Fig 1 Technology Acceptance Model

Davis, F. D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology*. MIS Quarterly, 13(3), 319-340. https://doi.org/10.2307/249008

Recent studies have extended TAM to better capture the complexities of adoption of digital banking. For instance, researchers have incorporated additional variables such as trust, perceived risk, website design, and e-service quality to enhance the model's explanatory power in financial contexts (Shaji et al., 2025). These extensions are especially pertinent in developing economies like Ethiopia, where digital transformation is still in its early stages and customer trust in digital platforms is evolving. In such settings, the success of digital banking initiatives depends not only on the technical functionality of platforms but also on users' confidence in the security, reliability, and relevance of these technologies. The Commercial Bank of Ethiopia (CBE), as a leading financial institution, has implemented various digital strategies aimed at improving customer experience. Applying TAM in this context allowed for a structured exploration of how managerial perceptions of usefulness and ease of use influence the design and deployment of these strategies.

Moreover, the growing body of literature suggests that TAM remains a robust and adaptable framework for analyzing technology adoption in the banking sector (O'Dea et al., 2025). For instance, in their systematic review, Shaji et al. (2025) found that TAM and its extended versions are among the most frequently used models in empirical studies on digital banking. The review highlighted that TAM-based studies often achieve high predictive relevance, especially when additional constructs such as perceived trust and digital service quality were included. These findings support the model's applicability to the Ethiopian banking context, where customer expectations are shifting rapidly due to increased mobile penetration and digital literacy. By grounding this study in TAM, the research aimed to uncover how experienced managers at CBE evaluate and implement digital transformation strategies that align with customer needs and technological capabilities.

➢ *TAM Constructs and Extended Variables in Digital Banking*

TAM identifies perceived usefulness (PU) and perceived ease of use (PEOU) as the two primary determinants of technology adoption. In the context of digital banking, PU refers to the extent to which customers and employees believe that digital platforms such as mobile apps or online banking portals enhance their efficiency, convenience, and satisfaction. PEOU, on the other hand, reflects the degree to which these platforms are perceived as user-friendly and intuitive (Davis, 1989). Shaji et al. (2025) shared that both PU and PEOU significantly influence users' intention to adopt digital banking services. Additionally, other researchers found that PU had the strongest impact on digital banking adoption among Indian users, followed closely by PEOU and self-efficacy (Hedau, 2025). These findings suggest that for banks like CBE, ensuring that digital tools are both effective and easy to use is essential for improving customer experience and driving adoption across diverse user groups.

However, the evolving digital landscape has prompted researchers to extend TAM by incorporating additional variables that better capture the complexities of user behavior in financial technology environments. Trust has emerged as a critical factor, particularly in banking, where users must feel confident that their personal and financial data are secure. Studies show that trust not only directly influences users' willingness to adopt digital banking but also mediates the relationship between PU and behavioral intention (Almaiah et al., 2023). In the Ethiopian context, where digital literacy and cybersecurity awareness are still developing, trust becomes even more vital. Managers at CBE must therefore prioritize transparency, data protection, and responsive customer service to foster trust and encourage broader adoption of digital services.

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Perceived risk is another important variable that can negatively affect digital banking adoption. It encompasses concerns about data breaches, transaction errors, and financial fraud. Almaiah et al. (2023) found that perceived risk significantly undermines users' trust and attitudes toward mobile banking, even when PU and PEOU are high. Thus, the need for banks to implement robust security protocols and communicate these measures clearly to customers. Additionally, website design and e-service quality have been shown to influence both trust and satisfaction. A well-designed digital interface that is visually appealing, easy to navigate, and responsive across devices enhances the user experience and reinforces perceptions of professionalism and reliability (Venkatakrishnan et al., 2023). Similarly, high e-service quality measured by factors such as reliability, responsiveness, and personalization has a direct impact on customer satisfaction and loyalty in digital banking environments.

In summary, while PU and PEOU remain foundational to understanding technology adoption, integrating variables such as trust, perceived risk, website design, and e-service quality provides a more comprehensive framework for evaluating digital transformation strategies. For the Commercial Bank of Ethiopia, applying this extended TAM framework can help uncover the nuanced factors that influence both managerial decision-making and customer behavior. The above approach not only supports the development of more effective digital strategies but also aligns with the broader goal of enhancing customer experience in Ethiopia's rapidly evolving banking sector.

➢ *Digital Banking in Ethiopia*

Digital banking in Ethiopia has experienced a remarkable transformation in recent years, largely driven by national policy frameworks and rapid technological advancement. The launch of phase two of the national digital payments' strategy (NDPS 2.0) in 2025 represents a critical milestone in the country's pursuit of a cash-lite and inclusive digital economy (NBE, 2025). Building upon the achievements of NDPS 2021–2024, Ethiopia witnessed an extraordinary surge in mobile money accounts from fewer than one million in 2020 to over 128.5 million by the end of 2024. This unprecedented growth was primarily enabled by the entry of non-bank mobile money providers and the establishment of interoperability frameworks that facilitated seamless transactions across diverse platforms.

The government's broader Digital Ethiopia 2025 initiative further underscores its commitment to digital transformation within the financial sector. The Digital Ethiopia 2025's comprehensive strategy's goal is to mainstream digital services across multiple sectors, including banking, with the overarching objective of improving service delivery and promoting inclusive economic participation. Key priorities include the integration of digital identification systems, expansion of merchant acceptance networks, and the development of inclusive financial ecosystems, particularly benefiting women, rural populations, and small and medium-sized enterprises (SMEs) (FDRE, 2024; MoIT, 2024).

Commercial banks have responded proactively to these national initiatives. Institutions such as the Commercial Bank of Ethiopia (CBE) have significantly expanded their digital offerings (Addis Insight, 2025). CBE Birr, the bank's mobile money platform, has become a central component of its digital strategy, allowing millions of customers to access essential financial services without the need for physical branch visits. Similarly, other leading banks, including the Cooperative Bank of Oromia and Dashen Bank have embraced digital innovation by launching "smart" branches and prioritizing mobile-first service delivery, thereby aligning with the national move toward paperless and technology-driven operations (NBE, 2025; Addis Insight, 2025).

Despite these notable advancements, several challenges persist. Digital literacy, particularly in rural communities, remains a critical barrier to widespread adoption of digital banking. Many potential users lack the technical skills or internet access necessary to fully utilize mobile and online banking services. If unaddressed, this digital divide could deepen existing inequalities and impede the goals of financial inclusion. Addressing these gaps requires sustained investment in digital education, infrastructure, and localized capacity-building initiatives (World Bank, 2025; MoIT, 2024).

Nonetheless, Ethiopia's progress toward a digitally enabled banking ecosystem is evident. With more than half of Dashen Bank's clientele already utilizing digital services and the government's ambition to achieve 70% financial inclusion by 2025, the country is clearly advancing toward a technology-driven financial landscape. The rapid uptake of mobile money and the growing preference for digital channels over traditional banking methods highlight the increasing centrality of digital banking in Ethiopia's financial sector (NBE, 2025; Addis Insight, 2025). Within this context, examining how experienced managers at CBE implement digital transformation strategies is crucial. Their perspectives can provide valuable insights into overcoming adoption barriers, enhancing customer experience, and ensuring that digital initiatives align with national objectives for innovation and inclusive economic growth.

➢ *Digital Transformation*

Digital transformation within the banking sector refers to the strategic integration of digital technologies across all operational areas, fundamentally reshaping how banks deliver value to customers and manage internal processes (Vial, 2019; Ozili, 2023). It extends beyond the mere digitization of existing services to encompass the redesign of business models, customer engagement frameworks, and operational workflows in response to the demands of the evolving digital economy (Bouwman et al., 2020). In Ethiopia, digital transformation has increasingly become a strategic priority for financial institutions seeking to maintain competitiveness, enhance efficiency, and meet the expectations of a rapidly growing, digitally literate customer base (NBE, 2024).

The Commercial Bank of Ethiopia (CBE), as the nation's largest financial institution, has been at the forefront of this transformation. The bank has invested heavily in modern core banking systems, mobile banking platforms, and digital payment infrastructures designed to streamline operations and improve customer accessibility (CBE Annual Report, 2024). These initiatives align with national frameworks such as the Digital Ethiopia 2025 strategy, which emphasizes technology-driven financial inclusion and innovation (MInT, 2020). Through the adoption of cloud computing, advanced data analytics, and mobile-first platforms, CBE aims to deliver faster, more secure, and personalized banking experiences while improving operational resilience.

One major outcome of digital transformation is the transition from branch-centric to customer-centric service models. Historically, banking in Ethiopia has been characterized by long queues, extensive paperwork, and limited accessibility (World Bank, 2023). However, with digital transformation, banks can now offer 24/7 access through mobile applications, internet banking, and automated teller machines (ATMs), reducing dependence on physical branches and enhancing convenience services (Lolemo & Pandya, 2023). This evolution not only contributes to improving efficiency but also fostering customer satisfaction and loyalty through greater flexibility and responsiveness as shown in Figure 2.

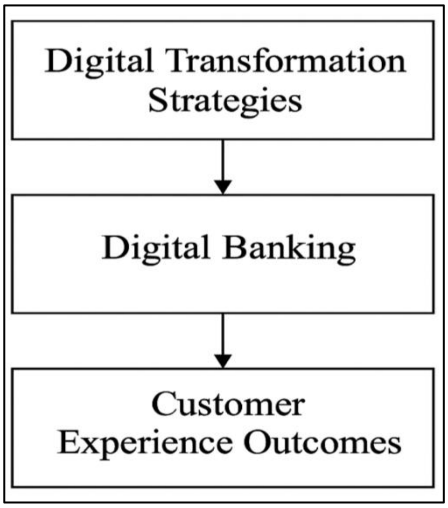

Fig 2 Digital Transformation

Bouwman, H., et al. (2020). *Digitalization and business models: Concepts and cases*. Springer.

Nevertheless, the successful implementation of digital transformation depends on more than technological investment. It requires a profound cultural and organizational shift, visionary leadership, and a clear strategic roadmap (Susanti et al., 2023). Managers play a pivotal role in guiding this transition by promoting innovation, managing change, and ensuring that digital initiatives are aligned with customer needs and institutional goals. At CBE, the leadership capacity of managers directly influences the bank's ability to deliver sustainable digital transformation outcomes and superior customer experiences (CBE Annual Report, 2024).

Despite these efforts, Ethiopia faces several contextual challenges that hinder the full realization of digital banking potential. Limited internet penetration, low levels of digital literacy, and infrastructural constraints, particularly in rural areas, continue to pose significant barriers (World Bank, 2023; NBE, 2024). To mitigate these challenges, banks are adopting inclusive approaches such as agent banking, multilingual user interfaces, and digital literacy initiatives to ensure that digital transformation benefits are equitably distributed across all demographics.

In conclusion, digital transformation represents an ongoing, iterative process rather than a one-time technological project. It demands continuous innovation, feedback-driven adaptation, and strategic alignment between technology, people, and processes (Vial, 2019; Ozili, 2023). For CBE, understanding how managers navigate this transformation what strategies they employ, the challenges they encounter, and how success is measured is essential for evaluating the overall effectiveness of its digital initiatives. Insights from this analysis contributed to the broader discourse on digital banking and transformation within emerging economies, offering lessons for other financial institutions pursuing similar modernization paths.

- *Banking Innovation*

Banking innovation encompasses the development and deployment of novel technologies, processes, and business models that enhance the efficiency, accessibility, and overall quality of financial services. In today's digital environment, innovation in banking extends well beyond merely introducing new products; it also includes transforming customer engagement, risk management, and operational systems (NBE, 2023; MoIT, 2024). As described in Figure 3, Technologies such as mobile banking applications, biometric authentication, artificial intelligence (AI), and blockchain are increasingly changing how banks interact with customers

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and optimize internal workflows. These innovations are especially consequential in emerging markets like Ethiopia, where traditional banking infrastructure has long constrained the reach of financial services (World Bank, 2025).

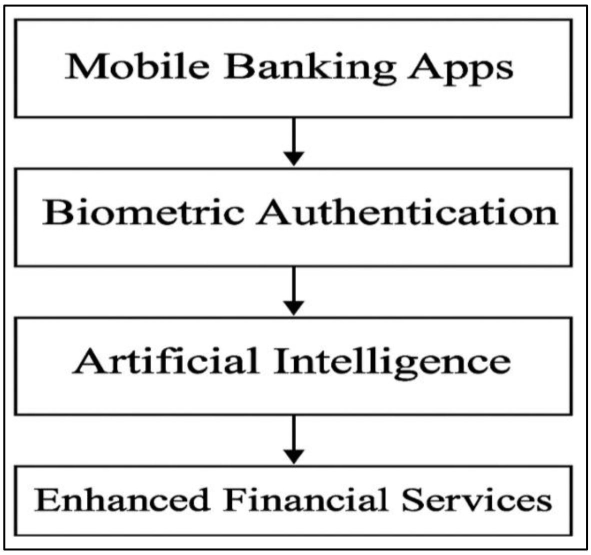

Fig 3 Banking Innovation

NBE (2023). *National Bank of Ethiopia: Mobile Money Directive and Innovation Framework*.

In Ethiopia, the push toward banking innovation is driven by institutional reforms and external pressures alike, including intensified competition, shifting customer expectations, and government-led digitalization initiatives. The NBE has implemented regulatory reforms, such as its revised directive for mobile money providers, which aims to foster safety, competition, and innovation in digital payment systems (NBE, 2023). These reforms have enabled banks, including the Commercial Bank of Ethiopia (CBE) to explore new service delivery models like agent banking, digital lending platforms, and expanded mobile wallet usage. Such innovations are critical for raising financial inclusion, particularly among rural and underserved populations (World Bank, 2025; MoIT, 2024).

CBE has been a prominent agent of banking innovation in Ethiopia. Recent data indicate that in the past six months the bank processed 5.3 trillion Birr through its digital channels, and that roughly 79% of its money-transfer transactions are now conducted via digital platforms. The bank reports have 30 million CBE Birr users, 9 million mobile banking users, about 21 million debit cardholders, and over 4,000 businesses using POS (Point-of-Sale) terminals (ENA, 2025; Addis Insight, 2025). To support these developments, CBE has invested in upgrading its core banking systems, improving its digital infrastructure, and enhancing real-time processing, data analytics, and customer relationship management (CRM) tools, enabling more responsive, secure, and personalized service delivery.

A key dimension of innovation is responsiveness to changing customer behavior. As smartphone ownership and internet connectivity increase, customers increasingly expect fast, seamless, and mobile-first banking experiences. In response, financial institutions are deploying intuitive apps, integrating chatbots for customer support, and offering self-service solutions via kiosks and digital platforms. These strategies improve convenience, reduce operational costs, and free bank staff to focus on high-value interactions.

Nevertheless, innovation faces constraints. Regulatory uncertainty persists, cybersecurity risks loom, and organizational resistance to change can slow implementation. In Ethiopia, infrastructure limitations such as inconsistent internet access, limited smartphone penetration, and relatively low digital literacy especially in rural areas, pose serious challenges (World Bank, 2025; MoIT, 2024). Overcoming these requires a customer-centric innovation strategy that emphasizes usability, trust, multilingual interfaces, robust data protection, and digital literacy programs.

For the current study, banking innovation provides a critical analytical lens for evaluating CBE's digital transformation strategies. Examining how its managers identify, implement, and scale innovation offers insights into best practices and lessons learned. Such understanding is essential for assessing how innovation contributes to customer experience, financial inclusion, and the resilience of Ethiopia's banking sector.

➢ *Customer Experience*

Customer experience (CX) in banking refers to every interaction a client has with a financial institution from opening an account, using digital services, to resolving issues. In the modern digital economy, CX has become a major differentiator for banks, as customers increasingly expect services that are seamless, personalized, and efficient (Asefa, 2024; Tessema & Prasad, 2024). A high-quality CX not only boosts satisfaction but also promotes loyalty, retention, and positive advocacy. In Ethiopia, where banking is rapidly becoming digital, understanding and enhancing CX is crucial for institutions like the Commercial Bank of Ethiopia (CBE) to stay relevant and competitive.

Digital transformation has fundamentally changed how customers engage with banks. Traditional in-branch services are being replaced by mobile apps, internet banking, and automated customer support channels. These digital touchpoints provide greater convenience, speed, and accessibility, especially in regions where physical branches are sparse. Yet, the success of these channels in delivering satisfying CX depends on their usability, reliability, personalization, and responsiveness. For CBE, ensuring that its platforms meet these criteria is essential to its digital strategy.

Many researchers and practitioners shared that customer experience in digital banking is shaped by both functional and emotional dimensions (Asefa, 2024; Tessema & Prasad, 2024). Functional factors include navigation ease, speed of transactions, and system availability; emotional factors include trust, perceived value, and feeling supported and understood by the bank (Asefa, 2024; Kumelachew, 2023). In Ethiopia, where many customers are relatively new to digital banking, efforts to build trust and provide intuitive interfaces are especially important. Banks must also make provisions for language preferences, cultural norms, and differing digital literacy levels in their CX design.

Customer feedback plays a pivotal role in guiding digital strategies. Globally and in Africa, banks are increasingly relying on customer data and analytics to personalize offerings, anticipate needs, and proactively resolve issues. CBE has a valuable opportunity to use similar approaches by analyzing usage patterns, transaction histories, and customer complaints to identify pain points and tailor its digital services. Such a data-driven orientation can not only improve satisfaction but also strengthen customer relationships and build brand loyalty.

Moreover, CX is closely interlinked with financial inclusion. When digital banking platforms are designed for accessibility and inclusivity, they empower underserved groups—women, rural residents, and small business owners to more fully engage with the formal financial system. Inclusive features such as agent banking, biometric authentication, and offline transaction capabilities can help bridge the digital divide and ensure that digital transformation benefits all segments of society.

In conclusion, customer experience is both a goal and a driver of successful digital transformation. For CBE, comprehending how its strategies affect customer satisfaction, trust, and engagement is essential for long-term success. This study aims to examine how experienced managers at CBE design and implement digital initiatives to enhance CX, with the goal of deriving insights that can inform future innovation and policy in Ethiopia's evolving banking landscape.

- *Summary*

The literature reviewed in this chapter highlighted choice of the TAM as the conceptual framework for the current study, as well as the interconnected roles of digital banking, transformation, innovation, and customer experience in shaping the future of Ethiopia's financial sector. As Ethiopia accelerates its digital agenda through national strategies like Digital Ethiopia 2025 and the National Digital Payments Strategy, banks, including the Commercial Bank of Ethiopia (CBE) are at the forefront of implementing digital solutions to enhance service delivery. Digital transformation is not merely a technological upgrade but a strategic overhaul that demands visionary leadership, cultural change, and customer-centric thinking.

Banking innovation, driven by mobile platforms, AI, and data analytics, is enabling institutions to reach underserved populations and streamline operations. At the heart of these efforts lies customers experience an essential metric of success in the digital age. By exploring how experienced managers at CBE design and implement digital transformation strategies, this study aims to uncover the mechanisms through which technology can be leveraged to improve customer satisfaction, foster inclusion, and drive sustainable growth in Ethiopia's banking sector.

CHAPTER THREE
METHODOLOGY

➢ *Purpose of the Study*

The purpose of this qualitative single case study was to explore the effectiveness of digital transformation strategies implemented by the Commercial Bank of Ethiopia (CBE) in enhancing customer experience. The study focused on five CBE managers in Addis Ababa, Ethiopia, who had more than eight years of experience in implementing successful digital transformation strategies within the banking industry. Using a case study design, this research sought to gain in-depth insights into the strategic approaches, technological innovations, and operational practices that have contributed to improved customer satisfaction and service delivery. The findings may contribute to positive social change by informing best practices for digital transformation in the Ethiopian banking sector, promoting financial inclusion, and enhancing the overall quality of banking services for customers.

➢ *Research Method and Design*

In this sub-section, I discussed the research method and design selected for the current study.

➢ *Research Method*

Researchers typically adopt one of three methodological approaches, including qualitative, quantitative, or mixed methods based on the specific objectives and nature of their studies (Taherdoost, 2022; Weyant, 2022). Grønmo (2023) and Schoonenboom (2023) shared that researchers can use the qualitative research method when they aim to explore human experiences, perceptions, and social dynamics using non-numerical data sources, including interviews, semi-structured interviews, observations, and open-ended interviews. Additionally, the qualitative research method is appropriate when researchers seek to gather rich, and detailed information into participants lived experiences, beliefs, and interactions within a specific context (Sardana et al., 2023). Taherdoost (2022) and Weyant (2022) shared that unlike qualitative, the quantitative method is appropriate when researchers seek to collect numerical data and examine the relationship between variables. However, since I was not interested in testing hypotheses or investigating the correlation between variables, I chose not to use the quantitative research method. The mixed method is also inappropriate for the current study because it involves the use of quantitative approach. Therefore, I used the qualitative approach to explore the digital transformation strategies some Ethiopian managers of the CBE use to enhance customer experience.

➢ *Research Design*

Qualitative research encompasses several distinct designs; each suited to different types of inquiry. The five most used qualitative research designs are case study, phenomenology, ethnography, grounded theory, and narrative research (Creswell & Creswell, 2023; Sardana et al., 2023). These designs enable researchers to explore complex social phenomena, human experiences, and organizational processes in depth. For instance, Tomaszewski et al. (2020) shared that phenomenology focuses on individuals lived experiences, ethnography examines cultural groups in their natural settings, grounded theory seeks to develop new theories from data, and narrative research explores personal stories to understand how individuals make sense of their experiences. For the current study, a single case study design was the most appropriate approach to explore the effectiveness of digital transformation strategies in enhancing customer experience at the Commercial Bank of Ethiopia (CBE). Yin (2018) shared that a case study allows for an in-depth, contextual analysis of a contemporary phenomenon within its real-life setting, especially when the boundaries between the phenomenon and context are not clear. CBE, as the largest and most technologically advanced bank in Ethiopia, represents a critical and unique case for understanding how digital transformation is operationalized in the country's banking sector. The single case study design enables the researcher to gather rich, detailed data from experienced managers who have implemented digital strategies, providing insights into both the processes and outcomes of these initiatives (Yin, 2018). Other qualitative designs were considered but deemed less suitable for this study. Phenomenology was excluded because the focus is not solely on the lived experiences of individuals, but rather on organizational strategies and their effectiveness. Ethnography requires prolonged immersion in a cultural setting, which is beyond the scope and timeline of this research. Grounded theory was not selected because the study does not aim to generate a new theory but to explore and describe existing practices. Lastly, narrative research was not appropriate as the study does not focus on personal life stories but on strategic and managerial practices within an institutional context. Therefore, the single case study design offered the most robust framework for achieving the research objectives.

➢ *Research Question*

The central research question for the current study was:

- What digital transformation strategies did managers at CBE use to enhance customer experience?

➢ *Population and Sampling Strategy*

The target population for this study comprised stakeholders directly involved in or affected by digital transformation initiatives at the Commercial Bank of Ethiopia (CBE), including (a) bank employees, especially those in IT, customer service, and strategy departments, (b) brand managers and executives, and (c) digital transformation project team members. The target population was selected based on their proximity to the implementation and experience of digital transformation strategies, aligning with similar studies in the Ethiopian banking sector (Alene, 2023; Tekle & Kumar, 2025).

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Purposive sampling is one of the most used approaches in qualitative research across a wide range of scientific disciplines (Nyimbili & Nyimbili, 2024). Robinson (2024) shared that researchers can use purposive sampling to intentionally select research participants with specific, relevant characteristics to respond to a research question and interview questions. Given the case study approach and the need for in-depth insights, I used a purposive sampling for the current study. Many researchers stated that purposive sampling is a non-probability sampling method that enables researchers to select participants who are most knowledgeable and relevant to the research objectives (Ahmad & Wilkins, 2025; Nyimbili & Nyimbili, 2024).

Researchers can use purposive sampling to enhance research rigor and trustworthiness (Robinson, 2024; Saunders et al., 2019). Indeed, purposive sampling enabled me to carefully select participants who meet predefined criteria, which can in turn contribute to improving credibility, transferability, dependability, and confirmability of the findings from the current research. Stratton (2024) noted that purposive sampling is a resource-efficient approach which allows for in-depth exploration of the research topic. Additionally, purposive sampling supports the inductive approach of qualitative inquiry. Allowing researchers to adapt their sampling as new themes emerge during the data collection (Ahmad & Wilkins, 2025). Therefore, I used purposive sampling to select employees involved in digital transformation projects at CBE, and managers and executives responsible for strategic decisions.

➢ *Research Instrument*

In qualitative research, the research instrument must be designed to capture rich, contextual insights into participants' experiences and perceptions. For this study, the primary instrument will be a semi-structured interview protocol (see Appendix A), tailored to explore how digital transformation strategies at CBE influence customer experience. Semi-structured interviews are ideal for case studies in banking because they allow participants to express their views freely while ensuring that key themes are consistently addressed across interviews (Thunberg & Arnell, 2022).

The interview protocol was developed around core themes such as digital service accessibility, user satisfaction, perceived efficiency, and challenges encountered. Additionally, I used open-ending questions to encourage detailed responses and allow for probing where necessary. Best practices in interview design recommend that protocol be simple, conversational, and flexible, enabling the interviewer to adapt based on the flow of discussion (Duke University, 2020). Besides, I used pilot-test the interview protocol with a small group of CBE staff to refine question clarity and relevance.

To complement interviews, I used document analysis as a secondary instrument. Hence, I reviewed internal reports, digital strategy documents, and customer feedback records to triangulate findings and provide institutional context. The use of a multi-method approach enhances the credibility and depth of the research, aligning with recommendations for qualitative studies in digital banking (Khatun & Munira, 2025; Osei et al., 2023).

Given the digital nature of the topic, I conducted interviews both in-person and via digital platforms such as Zoom or Microsoft Teams (see Appendix A). Digital interviews offer flexibility and broader reach, especially in urban Ethiopian contexts where internet access is more reliable. However, researchers must be mindful of technical challenges and ethical considerations, such as ensuring privacy and informed consent in virtual settings (Magida, 2024; McCalla, 2025). Finally, I maintained ethical rigor throughout the data collection process by briefing participants on the study's purpose, their rights, and the confidentiality of their responses before the interview (see Appendix B). I audio-recorded all interviews with the participants' consent (see Appendix B) and transcribed them for thematic analysis using qualitative software like NVivo.

➢ *Instrument Validation*

Instrument validation is a foundational step in empirical research, ensuring that the tools used to measure constructs such as digital transformation and customer experience are both reliable and valid. In the context of Ethiopian banking, particularly the Commercial Bank of Ethiopia (CBE), the rapid adoption of digital technologies necessitates robust instruments to assess their effectiveness. Valid instruments help researchers draw accurate conclusions about how digital strategies influence customer satisfaction, loyalty, and service quality (Tessema & Prasad, 2024).

Reliability refers to the consistency of an instrument in measuring a construct across different contexts and times. In recent studies on Ethiopian banks, researchers have used Cronbach's alpha to assess internal consistency. For example, Tessema and Prasad (2024) reported alpha values above 0.7 for constructs such as digital banking usage and customer satisfaction, indicating acceptable reliability. This statistical measure ensures that items within a scale are correlated and measure the same underlying concept, which is crucial for evaluating customer experience in digital banking.

Construct validity ensures that the instrument accurately measures the theoretical concepts it is intended to assess. In digital transformation research, constructs, including ease of use, responsiveness, and trust must be clearly defined and operationalized. Rhayha and Ismaili (2024) demonstrated construct validity through confirmatory factor analysis (CFA), validating a multi-dimensional model that included system quality, user satisfaction, and service quality. Applying similar techniques in the CBE context ensures that digital transformation strategies are evaluated against well-defined customer experience metrics.

Content validity involves expert review to confirm that the instrument comprehensively covers all relevant aspects of the construct. In Ethiopia, researchers have engaged banking professionals and academic experts to validate survey items related to digital banking services. For instance, the study by Kassaye and Alamirew (2025) included variables such as ATM transaction value, mobile banking usage, and internet banking adoption, which were vetted for relevance and completeness. This process ensures that the instrument reflects the full scope of digital transformation initiatives at CBE.

Criterion validity examines how well the instrument predicts outcomes based on established benchmarks. In the Ethiopian banking sector, researchers have linked digital banking metrics with financial performance indicators such as return on equity (ROE) and customer retention. Abera (2024) found significant correlations between ATM transaction values and profitability, validating the predictive power of the instrument. Such findings reinforce the importance of using validated instruments to assess the real-world impact of digital strategies on customer experience.

Robust instrument validation is essential for producing credible insights into digital transformation and customer experience. As Ethiopian banks like CBE continue to innovate, future research should adopt mixed-method validation approaches, combining statistical techniques with qualitative feedback. Moreover, cultural and infrastructural factors unique to Ethiopia must be considered during validation. Studies such as those by Fedasa Hordofa (2024) highlighted the need for regulatory alignment and customer education to support digital adoption. Validated instruments thus played a key role in guiding strategic decisions and enhancing service delivery.

➢ *Data Collection Procedures*

In this qualitative single case study, data collection was designed to explore the lived experiences and perceptions of stakeholders regarding digital transformation strategies at the Commercial Bank of Ethiopia (CBE). Saunders et al. (2023) shared that semi-structured interviews allow for detailed, contextualized understanding of participants' experiences and perspectives. Other researchers shared that the use of semi-structured interviews allows us to ensure a rich, contextual understanding of how digital initiatives influence customer experience (Creswell & Poth, 2018). Therefore, I used semi-structured interviews as the primary data collection method, supplemented by document analysis and non-participant observation.

Participants were selected using purposive sampling, targeting individuals with direct experience in digital banking services at CBE, including customers, digital banking managers, and frontline staff. This approach aligns with qualitative research principles that prioritize depth over breadth and seek information-rich cases (Saunders et al., 2023). The sample size was determined by data saturation, the point at which no new themes emerged from the interviews, ensuring comprehensive coverage of the research topic.

Semi-structured interviews were conducted using an interview protocol (see Appendix A) developed from a review of literature on digital transformation and customer experience in banking. The guide includes open-ended questions designed to elicit detailed narratives about participants' interactions with digital platforms such as mobile banking, internet banking, and ATM services. Interviews were conducted remotely and recorded with consent, then transcribed verbatim for analysis. This method allows for flexibility in probing deeper into emerging themes while maintaining consistency across interviews (Braun & Clarke, 2025).

In addition to interviews, I performed document analysis on internal reports, customer feedback summaries, and digital strategy documents provided by CBE. These documents should offer contextual insights into the bank's digital transformation efforts and complement the interview data. Non-participant observation was also conducted in selected branches to observe customer interactions with digital banking tools and staff responses. This triangulation of data sources enhanced the credibility and trustworthiness of the findings (Meydan & Akkas, 2024).

Ethical considerations were rigorously observed throughout the data collection process. I informed participants of the study's purpose, their rights, and the voluntary nature of their involvement (see Appendix B). Informed consent was obtained, and confidentiality maintained by anonymizing participant data. Saunders et al. (2019) shared that researchers should maintain a reflexive journal to document personal biases and methodological decisions, ensuring transparency and reflexivity in the research process.

Overall, the data collection procedures wase designed to align with the principles of qualitative inquiry, emphasizing depth, context, and participant meaning. The combination of interviews, document analysis, and observation provided a holistic view of how digital transformation strategies are perceived and experienced by stakeholders at CBE, thereby contributing to a nuanced understanding of customer experience in the Ethiopian banking sector.

➢ *Data Analysis*

The data analysis for this qualitative single case study will be conducted using reflexive thematic analysis, a flexible and rigorous method suitable for exploring complex phenomena such as digital transformation and customer experience in banking. Reflexive thematic analysis allows researchers to identify, analyze, and interpret patterns of meaning across qualitative data, particularly interview transcripts and documents (Braun & Clarke, 2025).

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Following Braun and Clarke's six-phase framework, the analysis began with familiarization with the data. This involves reading and re-reading interview transcripts, observation notes, and internal documents from the Commercial Bank of Ethiopia to gain a deep understanding of the content. I recorded initial impressions and ideas in a reflexive journal to support transparency and reflexivity throughout the process.

Next, I will generate initial codes inductively from the data. Coding will be done via NviVo 14 to ensure close engagement with the material. Then I organized the codes into broader themes that capture the essence of participants' experiences with digital banking services. The third phase involved reviewing and refining themes to ensure they are coherent and distinct. I validated the themes through triangulation with document analysis and non-participant observations, thus enhancing the credibility of the current study's findings.

In the defining and naming themes phase, I clearly defined and support each theme aligning with quotes from participants. This step ensured that the analysis remains grounded in the data and aligned with the research objectives. Finally, the reporting phase involved synthesizing the themes into a coherent narrative that addresses the research question. The analysis highlighted how digital transformation strategies at CBE both improve and challenge customer experience. While innovations like mobile banking and online platforms increased convenience, issues such as system downtime and limited digital literacy hindered full adoption. These insights provided valuable implications for policy and practice in Ethiopian banking.

➢ *Summary*

Chapter 3 outlined the methodological framework of the study, focusing on the qualitative approach used to explore the effectiveness of digital transformation strategies in enhancing customer experience at the Commercial Bank of Ethiopia (CBE). Chapter 3 began by restating the purpose of the study introduced in Chapter 1 and justified the use of a qualitative method and case study design to gain rich, contextual insights. The chapter presented the central research question and described the purposive sampling strategy used to select participants with direct experience of CBE's digital services. Additionally, chapter 3 detailed the development and validation of the semi-structured interview guide, including expert review and pilot testing to ensure credibility. Data collection procedures involved conducting in-depth interviews, which were transcribed and prepared for analysis.

The chapter concluded with an explanation of the data analysis process, which employed thematic analysis to identify patterns and insights related to customer satisfaction, digital engagement, and service accessibility. Coding was conducted both manually and with the support of qualitative analysis software to ensure rigor and consistency. Chapters 4 and 5 presented the findings of the study, including a detailed thematic breakdown, summary of participant responses, and interpretation of key insights. The study concluded with practical recommendations for improving digital service delivery in Ethiopian banks and suggestions for future research to build on these findings.

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CHAPTER FOUR
ANALYSIS AND PRESENTATION OF RESULTS

➢ *Overview*

The purpose of this qualitative single case study was to explore the effectiveness of digital transformation strategies implemented by the Commercial Bank of Ethiopia (CBE) in enhancing customer experience. Digital transformation has become a strategic imperative for banks globally, and in Ethiopia, initiatives such as Digital Ethiopia 2025 and NDPS 2.0 have accelerated this shift (NBE, 2024; MoIT, 2024). Understanding how managers navigate this transformation provides insights into best practices for improving customer satisfaction and financial inclusion.

For this study, I used Technology Acceptance Model (TAM) as the guiding conceptual framework because it explains how perceived usefulness and ease of use influence adoption of digital banking services. I conducted semi-structured interviews with five senior managers at CBE who have more than five years of experience in implementing digital strategies. Each participant responded to eleven open-ended questions (see Appendix A), which helped answer the central research question:

- RQ: What digital transformation strategies did managers at CBE use to enhance customer experience?

I analyzed the data using NVivo 14, which enabled coding and theme identification. Four major themes emerged from the dataset, including (a) Strategic Integration of Digital Technologies, (b) Customer-Centric Service Delivery, (c) Innovation and Process Optimization, and (d) Sustainable Digital Transformation.

The four interrelated themes, including strategic integration of digital technologies, customer-centric service delivery, innovation and process optimization, and sustainable digital transformation collectively reflect a comprehensive and integrated approach to digital transformation in the banking sector. Strategic integration underscores the embedding of technologies such as mobile banking platforms, cloud computing, and advanced analytics into core banking operations, thereby strengthening efficiency, scalability, and operational coherence. Customer-centric service delivery signifies a shift away from traditional, branch-dependent models toward digital-first channels that provide continuous access, enhance convenience, and promote customer satisfaction and financial inclusion.

Innovation and process optimization focus on the deployment of advanced solutions, including biometric authentication, AI-enabled chatbots, and digital lending platforms, to improve service personalization, streamline internal processes, and lower operational costs. Meanwhile, sustainable digital transformation highlights a long-term perspective that integrates environmentally responsible practices, energy-efficient infrastructures, and inclusive digital strategies aimed at narrowing the digital divide and supporting global sustainability objectives. Taken together, these themes demonstrate that digital transformation at CBE extends beyond technology adoption to encompass strategic alignment, customer focus, innovation, and social responsibility, ultimately foster enhanced customer experiences alongside institutional resilience and sustainability.

➢ *Theme 1: Strategic Integration of Digital Technologies*

The qualitative analysis of data from five managers revealed that strategic integration of digital technologies emerged as a key theme in assessing the effectiveness of digital transformation strategies at the Commercial Bank of Ethiopia (CBE). This concept refers to the intentional incorporation of digital technologies such as core banking systems, mobile and internet banking platforms, advanced analytics, and cloud infrastructures into the organization's overarching strategy and daily operations, rather than implementing them as isolated initiatives. Many researchers and practitioners shared that strategic integration is a critical success factor for digital transformation in banking because it promotes operational alignment, service consistency, and long-term value creation (Kraus et al., 2023). Within CBE's context, this theme illustrates how digital initiatives were positioned as enterprise-wide enablers designed to enhance customer experience, moving beyond the notion of technology as a mere support function.

From a theoretical standpoint, Theme 1 demonstrates strong alignment with the Technology Acceptance Model (TAM), which asserts that technology adoption is primarily influenced by two factors: perceived usefulness and perceived ease of use (Davis, 1989). Strategic integration directly enhances perceived usefulness by ensuring that digital technologies address core customer needs, such as faster transaction processing, reliable service availability, and improved accessibility. At the same time, seamless integration across systems reduces complexity and service fragmentation, thereby improving ease of use. Empirical evidence supports this relationship, indicating that when digital technologies are strategically embedded within organizational objectives, both customers and employees perceive them as more valuable and user-friendly, leading to higher adoption rates and greater satisfaction (Naatu et al., 2025; Nyanga & Eresia-Eke, 2025; Uula & Avedta, 2023).

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Table 1 Subthemes for Theme 1: Strategic Integration of Digital Technologies (CBE)

Subtheme	Participants (n=5)	Percentage of participants
Digital platforms positioned as core banking channels aligned with customer service strategy	5	100%
Leadership commitment and strategic-level governance of technology decisions	5	100%
Cross-channel system integration (mobile, core banking, CRM) enhancing customer experience and usability	5	100%
Data integration and advanced analytics enabling personalized, responsive services	5	100%
Reduced employee resistance and increased staff confidence through end-to-end digital alignment	5	100%
Reinforcement of TAM constructs (perceived usefulness & ease of use) via strategic integration	5	100%

All five participants emphasized that CBE's digital transformation initiatives were anchored in a clear strategic vision that aligned technology investments with customer service objectives. P-1 explained that "digital platforms are no longer treated as support tools but as core banking channels that shape how customers interact with the bank," underscoring the integration of technology into the bank's value proposition. Similarly, P-2 highlighted the critical role of leadership commitment, noting that "technology decisions are made at the strategic level, not at the IT department level alone." These insights reflect a leadership-driven approach to digital integration, consistent with recent research indicating that executive involvement strengthens digital maturity and customer-centric outcomes in banking institutions (Bouwman et al., 2020).

All five participants consistently highlighted that system integration across multiple digital channels significantly enhanced both customer experience and technology acceptance. For instance, P-3 explained that linking mobile banking, core banking, and customer relationship management systems eliminated service delays and inconsistencies that had previously frustrated customers. From the perspective of the Technology Acceptance Model (TAM), these improvements directly strengthen perceived ease of use, as customers encounter fewer errors and redundancies when interacting with digital platforms. The above observation aligns with recent studies in African and other emerging-market banking contexts, which demonstrate that integrated digital infrastructures substantially improve customer trust, usability perceptions, and intentions for continued usage (Aboelmaged & Hashem, 2024; Naatu et al., 2025; Nyanga & Eresia-Eke, 2025).

All five participants also emphasized the importance of data integration and analytics in enabling personalized and responsive banking services. For example, P-4 noted that "integrated data systems allow the bank to understand customer behavior better and proactively respond to their needs," highlighting how advanced analytics supports tailored service delivery. This capability strengthens perceived usefulness by demonstrating clear, tangible benefits of digital technologies to customers. Current research reinforces this perspective, showing that strategically integrated analytics improve service quality, accelerate decision-making, and enhance customer satisfaction, factors that align closely with TAM constructs and foster technology acceptance (Naatu et al., 2025; Nyanga & Eresia-Eke, 2025).

The analysis also revealed that strategic integration played a critical role in reducing internal resistance to digital tools among employees, which indirectly enhanced customer experience. For instance, P-5 observed that when systems are fully aligned and processes are digitally connected, "staff confidence in using digital platforms increases, and this confidence transfers to customers during service delivery." This finding aligns with TAM-based research, which increasingly recognizes employee acceptance as a key precursor to customer adoption, particularly in service-intensive industries such as banking (Dwivedi et al., 2023; Nguyen & Malik, 2024). Consequently, strategic integration not only improves technical performance but also fosters a positive organizational culture that supports technology adoption and customer-centric outcomes.

In summary, Theme 1 illustrates that CBE's strategic integration of digital technologies serves as a cornerstone for enhancing customer experience by reinforcing the core constructs of the TAM's perceived usefulness and perceived ease of use. The findings indicate that digital transformation is most effective when technologies are embedded within organizational strategy, operational workflows, and service delivery models rather than implemented as isolated tools. This alignment ensures that digital initiatives deliver tangible benefits to customers, streamline processes, and foster usability, thereby driving higher technology acceptance. Consistent with recent scholarly literature, such integration not only improves service quality and customer satisfaction but also supports sustainable digital transformation outcomes within the banking sector.

➢ *Theme 2: Customer-Centric Service Delivery*

The qualitative analysis of data collected from the five managers indicated that customer-centric service delivery emerged as a critical theme in evaluating the effectiveness of digital transformation strategies at the Commercial Bank of Ethiopia (CBE). Customer-centric service delivery refers to the design and delivery of banking services that prioritize customer needs, preferences, convenience, and accessibility through digital channels. Recent literature emphasizes that customer-centricity is a cornerstone of digital transformation in the banking sector, as it shifts organizational focus from product-driven models to value-driven and experience-oriented service models (Chauhan et al., 2022; Lemon & Verhoef, 2016). At CBE, digital transformation initiatives were deliberately structured to enhance customer experience by improving service speed, availability, and responsiveness.

Customer-centric delivery aligns closely with the Technology Acceptance Model (TAM), particularly the constructs of perceived usefulness and perceived ease of use. Customer-centric digital services enhance perceived usefulness by providing tangible benefits such as 24/7 access, reduced waiting times, and improved transaction reliability. At the same time, intuitive interfaces and simplified digital processes improve perceived ease of use, thereby encouraging customer adoption and continued usage. Recent studies confirm that customer-centered digital service design significantly strengthens TAM relationships, leading to higher customer satisfaction and loyalty in digital banking environments (Song, 2015; Shaikh et al., 2024).

All five participants emphasized that CBE's shift toward customer-centric service delivery was driven by the need to respond to changing customer expectations in a digital era. For instance, P-1 noted that "customers now expect banking services to be available anytime and anywhere, and digital platforms have become the primary way to meet those expectations." This statement reflects a strategic move away from traditional branch-dependent service models toward digital-first solutions. Similarly, P-2 highlighted that customer convenience guided most digital initiatives, stating that "every new digital service is evaluated based on how much value it adds to the customer experience." Such findings align with recent research showing that customer-centric digital strategies are strongly associated with increased technology acceptance and service usage (Alonge et al., 2021).

Table 2 Subthemes for Theme 2: Customer-Centric Service Delivery (CBE)

Subtheme	Participants n=5	Percentage of participants
24/7 accessibility and convenience through digital platforms	5	100%
Customer value-driven evaluation	5	100%
Expanded access and inclusiveness via mobile and agent banking	5	100%
Personalization of services using customer data and transaction history		
Reinforcement of TAM constructs through accessibility, personalization,	5	100%
convenience, and friction reduction in digital service design		
	5	100%

Participants also discussed how digital channels improved service accessibility and inclusiveness. For example, P-3 shared that mobile and agent banking platforms have expanded access to banking services for customers in remote and underserved areas. From a TAM perspective, increased accessibility enhances perceived usefulness by demonstrating that digital technologies solve real customer problems. Contemporary studies in emerging economies similarly indicate that customer-centric digital banking initiatives promote financial inclusion and positively influence customer attitudes toward technology adoption (Banna et al., 2021; Lemon & Verhoef, 2016).

Another recurring aspect of this theme was service personalization enabled through digital platforms. For example, P-4 explained that "digital systems allow the bank to tailor services and notifications based on customer behavior and transaction history." Personalized services improve perceived usefulness by making banking interactions more relevant and efficient for customers. Recent scholarly work supports this view, suggesting that personalization through digital technologies enhances customer engagement, trust, and satisfaction, thereby reinforcing TAM-based adoption intentions (Kanaparthi, 2024; Mikalef et al., 2024).

Participants further emphasized that customer-centric digital service delivery reduced service friction and improved overall satisfaction. P-5 noted that digital platforms have minimized errors, reduced processing time, and limited the need for physical branch visits, which previously caused customer dissatisfaction. These improvements directly relate to perceived ease of use, as customers experience fewer obstacles when interacting with banking technologies. Recent studies confirm that ease of navigation and service reliability are among the strongest predictors of customer acceptance and continued use of digital banking services (Bergmann et al, 2023; Kim & Yang, 2025).

Theme 2 demonstrates that customer-centric service delivery is a fundamental outcome of effective digital transformation at CBE and is strongly aligned with the Technology Acceptance Model. The participants' insights reveal that by prioritizing customer needs, accessibility, personalization, and convenience, CBE enhanced both the perceived usefulness and ease of use of its digital services. Consistent with recent scholarly literature, these customer-focused digital strategies foster higher technological acceptance, improved customer satisfaction, and stronger long-term relationships between the bank and its customers.

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➢ *Theme 3: Innovation and Process Optimization*

The qualitative analysis of data obtained from the five participating managers revealed that Innovation and Process Optimization emerged as a significant theme in assessing the effectiveness of digital transformation strategies at the Commercial Bank of Ethiopia (CBE). Innovation and process optimization refer to the use of advanced digital technologies such as artificial intelligence (AI), automation, biometric systems, and digital lending platforms to redesign workflows, enhance service efficiency, and reduce operational bottlenecks. Recent scholarship emphasizes that innovation-driven process optimization is central to digital transformation in banking, as it enables institutions to improve service quality while simultaneously lowering costs and increasing agility (Feroz & Kwak., 2024; Oyekunle & Boohene, 2024).

Innovation and process optimization aligns closely with the Technology Acceptance Model (TAM), particularly through the constructs of perceived usefulness and perceived ease of use. Process optimization enhances perceived usefulness by delivering faster turnaround times, fewer errors, and more reliable services, while innovative digital tools simplify interactions for both employees and customers, thereby improving ease of use. Contemporary studies confirm that customers are more likely to adopt and continue using digital banking services when innovations clearly improve efficiency and convenience (Alamir, 2024; Uula & Avedta, 2023).

All five participants highlighted that innovation at CBE was primarily driven by the need to streamline internal processes and improve customer-facing services. P-1 stated that "automation and digital workflows have significantly reduced manual processing and service delays that previously affected customer satisfaction." This observation aligns with recent findings that automation and workflow digitization improve operational performance and positively influence customer perceptions of service reliability (Abdurrahman, 2025). By reducing process redundancies, CBE enhanced both service speed and consistency, which are critical determinants of technology acceptance.

Table 3 Subthemes for Theme 3: Innovation and Process Optimization (CBE)

Subtheme	Participants n-5	Percentage of participants
Automation and digital workflows reducing manual processing and delays	5	100%
AI-enabled tools (chatbots, automated support) improving responsiveness	5	100%
Digital lending and credit assessment platforms streamlining loan approvals	5	100%
Biometric authentication and digital identity systems enhancing security and efficiency	5	100%
Process optimization improving operational speed, reliability, and customer experience	5	100%
Reinforcement of TAM constructs (perceived usefulness & ease of use) via innovations	5	100%

Participants also emphasized the role of AI-enabled tools in optimizing service delivery. P-2 and P-3 noted that AI-driven chatbots and automated customer support systems have improved response times and reduced pressure on branch staff. From a TAM perspective, these innovations increase perceived usefulness by ensuring timely support and enhance ease of use by offering intuitive, self-service options. Recent empirical research supports this view, showing that AI-based customer service innovations positively affect customer satisfaction, trust, and adoption intentions in digital banking environments (Bialkova, 2025; Dwivedi et al., 2023).

Process optimization through digital lending and credit assessment platforms was another key aspect highlighted by participants. P-4 explained that "digital loan processing systems have shortened approval times and improved transparency for customers." These improvements directly enhance perceived usefulness by addressing long-standing customer pain points associated with delays and uncertainty. Recent studies indicate that digitally optimized lending processes significantly improve customer experience and strengthen acceptance of financial technologies, particularly in emerging economies (Aboelmaged & Hashem, 2024).

Participants further discussed how biometric authentication and digital identity systems improved both efficiency and security. P-5 shared that biometric verification reduced fraud risks and eliminated repetitive identity checks, thereby simplifying customer interactions. Within the TAM framework, enhanced security combined with simplified procedures increases both perceived usefulness and ease of use. Contemporary literature confirms that secure and efficient authentication mechanisms are strong predictors of customer trust and sustained usage of digital banking platforms (Citra et al, 2024; Koç, 2025).

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Theme 3 illustrates that innovation and process optimization are critical enablers of effective digital transformation at CBE and are strongly aligned with the Technology Acceptance Model. The participants' insights demonstrate that by leveraging innovative technologies to streamline workflows, automate services, and enhance security, CBE improved operational efficiency and customer experience simultaneously. Consistent with recent scholarly research, these innovations strengthen perceived usefulness and ease of use, thereby fostering higher levels of technology acceptance and supporting sustainable digital transformation in the banking sector.

➢ *Theme 4: Sustainable Digital Transformation*

The qualitative analysis of data gathered from the five participating managers revealed that sustainable digital transformation emerged as a critical theme in evaluating the effectiveness of digital transformation strategies at the Commercial Bank of Ethiopia (CBE). Sustainable digital transformation refers to the implementation of digital technologies in a manner that ensures long-term economic viability, environmental responsibility, and social inclusiveness. Recent studies emphasize that sustainability has become an integral dimension of digital transformation in the banking sector, as financial institutions are increasingly expected to align digital innovation with environmental, social, and governance (ESG) objectives (Bonfant, 2023; Tsindeliani, 2022). At CBE, sustainability considerations were embedded into digital strategies to ensure enduring value creation beyond short-term efficiency gains.

This theme aligns closely with the Technology Acceptance Model (TAM) by reinforcing perceived usefulness and perceived ease of use through sustainable practices. Environmentally efficient digital systems such as paperless banking, cloud-based infrastructures, and energy-efficient data centers enhance perceived usefulness by reducing costs, improving reliability, and supporting uninterrupted service delivery. At the same time, simplified and inclusive digital platforms enhance ease of use, particularly for diverse customer groups. Recent research suggests that customers are more likely to adopt digital banking technologies when they perceive them as not only functional but also socially and environmentally responsible (Aboalsamh et al, 2023; Rocha et al., 2025).

All five participants emphasized that sustainability considerations influenced CBE's digital transformation decisions. P-1 stated that "digital banking has significantly reduced paper-based processes, which supports environmental sustainability while also improving service efficiency." This observation aligns with recent findings that paperless banking initiatives contribute to both environmental benefits and improved customer experience, thereby strengthening technology acceptance (Rahimi et al., 2022). By reducing physical documentation and branch dependency, CBE simultaneously improved operational efficiency and minimized its environmental footprint.

Participants also highlighted the role of digital platforms in promoting financial and social inclusion. P-2 and P-3 noted that mobile banking and agent banking services have extended access to financial services to rural and underserved populations. From a TAM perspective, inclusiveness enhances perceived usefulness by demonstrating that digital technologies address societal needs and improve quality of life. Contemporary studies confirm that inclusive digital transformation initiatives positively influence customer attitudes, trust, and long-term adoption of digital financial services, particularly in developing economies (Kishor et al., 2025; Mhlanga & Dzingirai, 2025).

Table 4 Subthemes for Theme 4: Sustainable Digital Transformation (CBE)

Subtheme	Participants n=5	Percentage of participants
Environmentally efficient digital systems (paperless banking, cloud, energy-efficient data centers)	5	100%
Financial and social inclusion via mobile and agent banking	5	100%
Energy efficiency and long-term system resilience through cloud-based, centralized infrastructures	5	100%
Customer trust and institutional reputation strengthened by ESG-aligned digital strategies	5	100%
Employee readiness and change management supporting sustained adoption and capability development	5	100%
Reinforcement of TAM constructs (perceived usefulness & ease of use) through sustainability practices	5	100%

Energy efficiency and long-term system resilience were additional aspects emphasized by participants. P-4 explained that CBE has increasingly adopted cloud-based and centralized digital infrastructures to optimize resource utilization and ensure scalability. These systems enhance perceived usefulness by ensuring service continuity and performance reliability while reducing operational

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and energy costs. Recent research supports this view, indicating that sustainable IT infrastructures improve organizational resilience and customer confidence in digital services (Bağış et al., 2025; Tsindeliani et al., 2022).

Participants further noted that sustainable digital transformation strengthened customer trust and institutional reputation. P-5 shared that "customers increasingly value banks that invest in responsible and inclusive digital solutions." Trust is a critical factor that complements TAM constructs, as customers are more likely to accept and continue using technologies they perceive as ethical and socially responsible. Recent studies demonstrate that sustainability-oriented digital strategies positively affect customer trust, loyalty, and technology continuance intentions in the banking sector (Natalwala & Habibullah, 2025).

Moreover, sustainable digital transformation supported employee readiness and long-term adoption. Participants indicated that training programs and change management initiatives were designed to ensure employees could effectively use and sustain digital systems over time. This approach aligns with TAM by enhancing ease of use and reducing resistance to technology. Recent literature highlights that sustainable digital transformation requires continuous learning and capability development to ensure enduring technology acceptance among both employees and customers (Li & Lin, 2024).

Theme 4 demonstrates that sustainable digital transformation is a foundational pillar of CBE's digital strategy and is strongly aligned with the Technology Acceptance Model. The participants' insights reveal that by integrating environmental responsibility, social inclusion, and long-term system resilience into digital initiatives, CBE enhanced perceived usefulness, ease of use, and trust in its digital services. Consistent with recent scholarly research, these sustainability-oriented digital strategies support sustained technology acceptance, improved customer experience, and long-term organizational resilience in the banking sector.

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CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

- *Summary of the Results*

The purpose of this qualitative single case study was to explore how digital transformation strategies implemented by the Commercial Bank of Ethiopia (CBE) enhanced customer experience. Guided by the Technology Acceptance Model (TAM), the study examined how managers leveraged digital initiatives to improve perceived usefulness and perceived ease of use of banking services. Semi-structured interviews with five senior managers revealed that digital transformation at CBE is shaped by national policy priorities, including Digital Ethiopia 2025 and NDPS 2.0, and is strategically aligned with the bank's mandate to expand access, improve service quality, and strengthen financial inclusion. The findings demonstrate that digital transformation at CBE is not ad hoc but purposeful, coordinated, and closely tied to customer experience outcomes.

Data analysis using NVivo 14 resulted in the identification of four interrelated themes, including (a) Strategic Integration of Digital Technologies, (b) Customer-Centric Service Delivery, (c) Innovation and Process Optimization, and (d) Sustainable Digital Transformation. Together, these themes illustrate a holistic approach to digital transformation in which technology is embedded into strategy, operations, and service delivery. Rather than viewing digital tools as isolated IT projects, managers positioned them as core enablers of value creation. This integrated approach aligns strongly with TAM, as it ensures that digital solutions are both useful to customers and easy to use, thereby supporting adoption and continued usage.

The first theme, Strategic Integration of Digital Technologies, revealed that CBE embedded digital platforms such as mobile banking, core banking systems, analytics, and cloud infrastructure into its enterprise-wide strategy. Managers emphasized leadership commitment, system interoperability, and data integration as key drivers of success. This strategic alignment reduced service fragmentation, improved reliability, and increased employee confidence in using digital tools. From a TAM perspective, strategic integration strengthened perceived usefulness by addressing fundamental customer needs and enhanced perceived ease of use by simplifying interactions across channels, ultimately supporting higher levels of technology acceptance.

The second theme, Customer-Centric Service Delivery, highlighted a deliberate shift from branch-dependent banking toward digital-first service models. Managers described how customer expectations for convenience, accessibility, and personalization shaped digital initiatives. Mobile banking, agent banking, and personalized digital services improved access for underserved populations and enhanced service relevance. These customer-focused strategies reinforced TAM constructs by delivering clear benefits, reducing effort required to use services, and improving satisfaction. As a result, customer-centricity emerged as a central mechanism through which digital transformation enhanced customer experience at CBE.

The third theme, Innovation and Process Optimization, focused on how advanced technologies such as automation, AI-enabled chatbots, biometric authentication, and digital lending platforms streamlined workflows and reduced operational bottlenecks. Managers reported faster service delivery, improved transparency, and enhanced security as key outcomes. These innovations increased perceived usefulness by improving efficiency and service quality, while simplified processes and self-service tools enhanced ease of use. The findings indicate that innovation-driven process optimization played a critical role in strengthening both operational performance and customer acceptance of digital banking services.

The fourth theme, Sustainable Digital Transformation, underscored CBE's emphasis on long-term economic viability, environmental responsibility, and social inclusion. Managers highlighted paperless banking, energy-efficient infrastructures, cloud adoption, and inclusive digital channels as integral to the bank's digital strategy. These sustainability-oriented practices enhanced customer trust, institutional reputation, and long-term adoption of digital services. Consistent with TAM, sustainability initiatives reinforced perceived usefulness and ease of use while also fostering trust, which further supported technology acceptance. Overall, the results demonstrate that CBE's digital transformation strategy is comprehensive, customer-focused, innovative, and sustainable, leading to enhanced customer experience and greater institutional resilience.

- *Discussion of the Results*

This qualitative single case study explored the digital transformation strategies managers at the Commercial Bank of Ethiopia (CBE) used to enhance customer experience. Using NVivo 14 to analyze data collected through semi-structured interviews with five senior managers, four major themes emerged: strategic integration of digital technologies, customer-centric service delivery, innovation and process optimization, and sustainable digital transformation. These themes represent the core digital transformation strategies adopted by CBE to improve customer experience and expand access to banking services. The findings provide empirical insight into how banks in emerging economies operationalize digital transformation in response to evolving customer expectations and national digital policy agendas.

All four themes that emerged from the data analysis strongly aligned with the extant literature reviewed for this study and with the Technology Acceptance Model (TAM), which served as the conceptual framework. Prior research consistently emphasized that perceived usefulness and perceived ease of use are central determinants of digital banking adoption. The strategies identified in this

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study directly address these constructs by ensuring that digital solutions are valuable, accessible, and user-friendly. As such, the findings reinforce existing scholarly evidence that effective digital transformation in banking must extend beyond technology deployment to include strategic alignment, customer orientation, innovation, and sustainability.

The findings related to strategic integration of digital technologies highlight the importance of embedding digital systems into organizational strategy and core operations. Managers emphasized leadership commitment, system interoperability, and data integration as enablers of consistent and reliable service delivery. These findings align with prior studies that identify strategic alignment as a critical success factor for digital transformation and customer experience improvement. By reducing system fragmentation and operational silos, CBE enhanced perceived ease of use and usefulness, supporting higher levels of digital service adoption among customers and employees.

The theme of customer-centric service delivery underscores a shift from traditional branch-based banking toward digital-first service models that prioritize convenience, accessibility, and personalization. Managers reported that digital platforms enabled 24/7 service access, reduced waiting times, and expanded financial inclusion, particularly for rural and underserved populations. These findings are consistent with existing research indicating that customer-centric digital strategies improve satisfaction, trust, and technology acceptance. The alignment between the study findings and TAM further suggests that when digital services are designed around customer needs, adoption and continued use are more likely to occur.

The findings related to innovation and process optimization emphasize the role of advanced technologies such as automation, artificial intelligence, biometric authentication, and digital lending platforms in improving operational efficiency and service quality. Participants highlighted reduced processing times, improved transparency, and enhanced security as key outcomes. These results are consistent with the literature, which identifies innovation-driven process optimization as a mechanism for improving both organizational performance and customer experience. From a TAM perspective, these innovations strengthened perceived usefulness by delivering faster and more reliable services while also enhancing ease of use through simplified workflows.

The theme of sustainable digital transformation extends the discussion beyond short-term efficiency gains to include long-term economic viability, environmental responsibility, and social inclusion. Managers emphasized paperless banking, energy-efficient infrastructure, and inclusive digital platforms as strategic priorities. These findings align with recent research suggesting that sustainability-oriented digital strategies enhance customer trust, institutional reputation, and long-term technology acceptance. By integrating sustainability into digital transformation efforts, CBE not only improved customer experience but also supported broader developmental and societal goals, reinforcing the relevance of TAM in explaining sustained adoption.

In summary, the findings from this study align closely with the literature and the Technology Acceptance Model, demonstrating that effective digital transformation strategies in banking are multifaceted and interconnected. The four themes identified through NVivo analysis serve as a practical framework for bank managers and policymakers seeking to enhance customer experience through digital transformation.

- *Conclusions and Practical Recommendations*

The purpose of this qualitative single case study was to explore the effectiveness of digital transformation strategies implemented by the Commercial Bank of Ethiopia (CBE) in enhancing customer experience. Guided by the Technology Acceptance Model (TAM), the study examined how managerial strategies influenced perceived usefulness and perceived ease of use of digital banking services. The findings revealed that digital transformation at CBE is not merely a technological initiative but a strategic, customer-focused, innovative, and sustainability-oriented process. Through the perspectives of five senior managers, the study demonstrated that well-coordinated digital strategies can significantly enhance customer experience while supporting institutional resilience in an emerging economy context.

Four major themes emerged from the data analysis: strategic integration of digital technologies, customer-centric service delivery, innovation and process optimization, and sustainable digital transformation. Together, these themes illustrate a holistic approach to digital transformation in which technology is embedded into organizational strategy, operational processes, and service delivery models. Strategic integration ensured that digital platforms were aligned with business objectives and customer needs, thereby enhancing service consistency and reliability. Customer-centric service delivery emphasized accessibility, personalization, and convenience, which improved customer satisfaction and financial inclusion. Innovation and process optimization streamlined workflows and improved efficiency, while sustainable digital transformation ensured long-term economic viability, environmental responsibility, and social inclusiveness.

The findings also confirmed the relevance and applicability of the Technology Acceptance Model in explaining digital banking adoption in the Ethiopian context. Across all four themes, managers' strategies consistently reinforced the core TAM constructs of perceived usefulness and perceived ease of use. Digital services that were reliable, efficient, easy to navigate, and aligned with customer needs were more likely to be accepted and continuously used. Additionally, the findings suggest that trust, sustainability, and employee readiness complement TAM constructs by strengthening long-term adoption and customer engagement.

Overall, the study contributes to the growing body of knowledge on digital transformation in banking by providing empirical evidence from a large public bank in an emerging economy. The results highlight that effective digital transformation requires more than technology deployment; it demands strategic leadership, customer orientation, continuous innovation, and a commitment to sustainability. These insights are particularly relevant for banks operating in similar contexts where digitalization is intertwined with national development goals and financial inclusion agendas.

Based on the findings of this study, several practical recommendations are proposed for banking leaders, policymakers, and practitioners seeking to enhance customer experience through digital transformation. First, bank executives should prioritize the strategic integration of digital technologies by embedding digital initiatives into organizational strategy and decision-making processes. Digital transformation should be driven at the executive level, with clear alignment between technology investments, customer experience objectives, and long-term institutional goals. Ensuring interoperability across digital platforms and integrating data systems can reduce service fragmentation and improve usability for customers.

Second, banks should strengthen customer-centric service design by continuously assessing customer needs, expectations, and pain points. Digital services should be designed to maximize convenience, accessibility, and personalization, particularly for underserved and rural populations. Incorporating customer feedback mechanisms and user experience testing can further enhance perceived usefulness and ease of use, thereby increasing adoption and satisfaction. Third, banking institutions should continue to invest in innovation and process optimization through automation, artificial intelligence, biometric authentication, and digital lending platforms. These technologies can streamline workflows, reduce operational costs, and improve service speed and transparency. However, innovation efforts should be accompanied by adequate management change and employee training to ensure effective adoption and consistent service delivery.

Fourth, banks should adopt a sustainable approach to digital transformation by integrating environmental, social, and governance (ESG) considerations into digital strategies. Expanding paperless banking, investing in energy-efficient infrastructures, and promoting inclusive digital services can enhance customer trust and institutional reputation while supporting national and global sustainability goals. Sustainability-oriented digital initiatives can also strengthen long-term technology acceptance and resilience.

Finally, policymakers and regulators should support banking sector digital transformation by providing enabling regulatory frameworks, infrastructure investment, and digital literacy initiatives. Collaboration between banks, regulators, and technology providers can accelerate innovation while ensuring security, inclusiveness, and consumer protection. By implementing these recommendations, banks in Ethiopia and other emerging economies can leverage digital transformation as a powerful tool to enhance customer experience, promote financial inclusion, and achieve sustainable growth.

➢ *Recommendations for Further Research*

Building on the findings of this study, future research could expand the scope to include multiple banking institutions, including private, cooperative, and microfinance banks. Examining digital transformation strategies across a broader range of organizations would allow researchers to compare approaches, identify best practices, and determine how organizational context influences the effectiveness of digital initiatives. Such studies could enhance the generalizability of findings and provide a more comprehensive understanding of digital transformation in the banking sector. Future research could also adopt a quantitative approach to assess customer outcomes. While this study focused on managerial perspectives, surveys, transactional data analysis, or experimental designs could measure the impact of digital transformation on customer satisfaction, loyalty, and adoption rates. Quantitative evidence would complement qualitative insights and provide stronger empirical links between digital strategies and measurable customer outcomes.

Longitudinal studies are another promising avenue. Digital transformation is an ongoing process, and tracking the implementation and evolution of strategies over time would allow researchers to evaluate their sustained impact on customer experience, operational efficiency, and adoption of technology. Longitudinal research could also capture how banks adapt to technological, regulatory, or market changes, providing valuable insights for strategic planning. Investigating employee perspectives and technology acceptance is another important direction. Understanding how frontline staff perceive, adopt, and use digital technologies can shed light on how employee readiness, training, and engagement influence overall service quality and customer experience. Combining managerial and employee insights would offer a more holistic view of digital transformation dynamics within banks.

Sustainability emerged as a key theme in this study, yet future research could develop and apply specific metrics to evaluate the environmental, social, and governance (ESG) impact of digital banking initiatives. Exploring how sustainable practices affect customer adoption, trust, and institutional reputation could provide actionable guidance for integrating sustainability into digital transformation strategies. Finally, comparative and technology-specific studies could provide deeper insights. Cross-cultural research across different countries or regions in Africa or other emerging economies could reveal how national policies, infrastructure, and cultural factors shape the design, implementation, and success of digital transformation in banking. Similarly, investigations focusing on specific technologies such as AI-driven chatbots, biometric authentication, or blockchain could examine the relationship between technology features, user perceptions, and organizational strategy. Pursuing these research directions would

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enrich understanding of digital transformation in banking, strengthen theoretical frameworks such as the Technology Acceptance Model, and inform evidence-based strategies for enhancing customer experience, operational efficiency, and sustainability in emerging economy contexts.

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APPENDICES

APPENDIX A: INTERVIEW PROTOCOL

Study Title: The Effectiveness of Digital Transformation Strategies in Enhancing Customer Experience at Ethiopian Banks: A Case Study of the Commercial Bank of Ethiopia (CBE)

- *Central Research Question*

  What digital transformation strategies do managers at CBE use to enhance customer experience?

Interview Questions Aligned with Research Problem

Interview Question	Purpose / Alignment with Research Focus
1. Can you describe the digital transformation strategies that have been implemented at CBE in recent years?	To identify and understand the specific strategies used.
2. What were the main drivers or motivations behind adopting these digital strategies?	To explore the rationale and context for digital transformation.
3. How do these strategies aim to improve customer experience?	To link digital initiatives directly to customer satisfaction goals.
4. What role does customer feedback play in shaping or refining your digital services?	To understand how customer input influences strategy development.
5. Can you share an example of a digital initiative that significantly improved customer satisfaction?	To gather concrete evidence of effectiveness.
6. What challenges have you encountered during the implementation of digital strategies?	To identify barriers and limitations in the transformation process.
7. How do you ensure that digital platforms are accessible and user-friendly for all customer segments?	To assess inclusivity and usability of digital services.
8. What kind of training or support is provided to staff to adapt to digital changes?	To explore internal capacity-building efforts that support transformation.
9. How do you measure the success or impact of digital transformation on customer engagement?	To understand evaluation metrics and performance indicators.
10. In your opinion, what are the key success factors for sustaining digital transformation in the banking sector?	To identify best practices and lessons learned for long-term success.

APPENDIX B: PARTICIPANT CONSENT FORM

You are invited to take part in a research study about how digital banking services affect customer experience at the Commercial Bank of Ethiopia. The researcher is inviting customers and staff of the Commercial Bank of Ethiopia who have interacted with the bank's digital services to be in the study. I obtained your name/contact info via referrals and public outreach through CBE's customer service channels and professional networks. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Lemma Wakeyo, who is a doctoral student at Key West University. You might already know the researcher as a bank employee or associate, but this study is separate from that role.

- *Background Information:*

The purpose of this study is to understand how digital banking tools such as mobile apps, online banking, and automated services are affecting customer satisfaction and service quality at the Commercial Bank of Ethiopia.

- *Procedures:*

If you agree to be in this study, you will be asked to:

- Participate in a one-on-one interview lasting approximately 45–60 minutes.
- Answer questions about your experiences with digital banking services at CBE.
- Allow the interview to be audio-recorded for accuracy.

Here are some sample questions:

- How has your experience with mobile banking at CBE changed over time?
- What challenges have you faced when using digital services at the bank?
- In what ways do you think digital tools have improved or worsened your banking experience?

- *Voluntary Nature of the Study:*

This study is voluntary. You are free to accept or turn down the invitation. No one at Key West University or the Commercial Bank of Ethiopia will treat you differently if you decide not to be in the study. If you decide to be in the study now, you can still change your mind later. You may stop at any time. The researcher will follow up with all volunteers to let them know whether they were selected for the study.

- *Risks and Benefits of Being in the Study:*

Being in this type of study involves some risk of minor discomforts that can be encountered in daily life, such as fatigue or stress from recalling frustrating experiences. Being in this study would not pose risk to your safety or well-being. The study may not benefit you directly, but it could help improve digital banking services and customer experience at Ethiopian banks.

- *Payment:*

There is no payment or reimbursement for participating in this study. However, your contribution is greatly appreciated.

- *Privacy:*

Reports coming out of this study will not share the identities of individual participants. Details that might identify participants, such as the location of the study, also will not be shared. The researcher will not use your personal information for any purpose outside of this research project. Data will be kept secure by using password-protected files, encrypted storage, and coded identifiers instead of names. Data will be kept for a period of at least 5 years, as required by the university.

- *Contacts and Questions:*

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email at asarr@kwu.org. If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at +1-646-243-0729.

- *Please Print or Save this Consent form for your Records.*

- *Obtaining Your Consent*

If you feel you understand the study well enough to decide about it, please indicate your consent by replying to this email with the words, "I consent.