ADDIS ABABA UNIVERSITY

COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCES

INFORMATION SCIENCE SCHOOL

THE IMPACT OF DIGITAL TRANSFORMATION ON ORGANIZATION PERFORMANCE AT THE FEDERAL HOUSING CORPORATION .

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JUNE, 2025

ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY

COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCES

SCHOOL OF INFORMATION SCIENCE

DEPARTMENT OF INFORMATION SCIENCE

THE IMPACT OF DIGITAL TRANSFORMATION ON ORGANIZATION PERFORMANCE AT THE FEDERAL HOUSING CORPORATION.

A Thesis Submitted to School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Master of Science in Information Science

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June, 2025

Addis Ababa, Ethiopia

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This thesis has not previously been accepted for any degree and is not being concurrently submitted in candidature for any degree in any university.

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The thesis has been submitted for examination with my approval as university advisor.

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DEDICATION

I am very happy to dedicate this thesis work to my beloved partner, W/ro Etalem Atnafu, for her love, support, and encouragement. She has inspired me through all the ups and downs of my educational journey. Thank you for everything you have given me.

To my beloved children, Rediet Solomon and Eyob Solomon, I have no words to express my gratitude. Thank you.

ACKNOWLEDGEMENT

First and foremost I would like to thank the Almighty GOD, without your strength this would not have been possible.

I would like to sincerely thank my advisor Dr. Temtim Assefa for his constructive comments, moral support, valuable suggestions and good guidance. I appreciate his assistance.

I would also like to thank the staff of FHC employees and managers who helped me by filling the questionnaire and giving response for the interview. Special thanks to Ato Million Dejene giving your time to interview and discussing issues raised about it.

I am also very thankful to my beloved wife Etalem Atnafu and to all my family. You were with me in each and every process of my job and research work.

Finally, I am grateful to all those who have helped me directly and/or indirectly in doing this thesis and I would like to thank my classmates for all their friendship, team sprits during class discussion, experience sharing and motivations.

May God Bless you all!!

Solomon Legesse

Addis Ababa, Ethiopia

Abstract

This thesis investigates the impact of digital transformation capabilities on organizational performance at the Federal Housing Corporation (FHC) in Ethiopia. In the context of globalization and heightened competitive pressures, organizations must expertly integrate digital technologies to succeed. This study aims to address the challenges FHC faces in leveraging digital transformation to enhance operational efficiency and service delivery. Employing a mixed methods approach, the research combines quantitative surveys and qualitative interviews to gather insights from FHC employees and management. The quantitative component utilizes structured surveys distributed to a sample of 320 employees, with 235 completed responses returned. The collected data was analyzed using descriptive and inferential statistics, utilizing the Statistical Package for Social Sciences (SPSS) version 25 software. The qualitative aspect involves interviews with 5 selected respondents, enriching the findings by capturing the experiences and perceptions of key stakeholders regarding digital initiatives. The study findings revealed that dynamic capabilities ($r=0.591$, $P< 0.01$), adaptive capabilities ($r=0.586$, $p < 0.01$), and managerial capabilities ($r=0.677$, $P< 0.01$) exhibited a statistically significant relationship and positive influence on organizational performance, with a significance level of 0.01 in the correlation output. The status of organizational performance within the Corporation was determined to be relatively good, with a descriptive statistical mean value of 4.02 and a standard deviation value of 0.85, as supported by the findings of the interviews. Additionally, the regression analysis coefficients demonstrated a positive and statistically significant relationship between managerial capabilities and organizational performance at the Federal Housing Corporation, specifically at the 1% significance level ($P< 0.01$).This study utilizes a sequential mixed methods approach,where quantitative findings inform and enrich the qualitative insights. In order to increase overall performance, it is advised that the Federal Housing Corporation develop desirable managerial skills and incorporate them into the dynamic and adaptive capacities ; However, several limitations must be acknowledged, including participants' delayed response times and the difficulty in obtaining relevant reference materials, which may affect the generalizability of the findings.

Keywords: Federal Housing Corporation, Digital Transformation, Dynamic capabilities, Adaptive capabilities, Managerial capabilities, organizational performance.

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LIST OF ACRONYMS

AI	Artificial Intelligence
BSC	Balanced Score Card
COVID 19	Coronavirus Disease 2019
DT	Digital transformation
DX	Digital Transformation
ENA	Ethiopian News Agency
ERP	Enterprise Resource Planning
ESPAS	European Strategy and Policy Analysis System
HR	Human Resource
ICT	Information Communication Technology
IMIS	Integrated Management Information System
IOT	Internet of Things
IT	Information Technology
MSME	Micro Small and Medium Enterprise
MiNT	Ministry of Innovation Technology
OECD	Organization of Economic Cooperation and Development
SME	Small and Medium Enterprise
Spss	Statistical Package for the Social Sciences
VPN	Virtual Private network

CHAPTER ONE
INTRODUCTION

This thesis primarily investigates the impacts of digital transformation capabilities on organizational performance and explores how these capabilities can influence performance within the context of the Federal Housing Corporation in Addis Ababa, Ethiopia's public housing sector. This chapter provides an overview of the thesis, explaining its background and structure. The effects of digital transformation capabilities on organizational performance are addressed throughout the paper.

1.1 Back ground of the study

Businesses are under more and more pressure to adapt as a result of globalization in recent decades. Businesses must effectively integrate in order to survive and expand in highly competitive situations. Efficient integration can only be accomplished through digital processes and collaborative technology (White, 2012). As a result, the significance of digital transformation (DT) has grown. Exploring and utilizing its potential to attain organizational agility is essential for successful company transformation (Hess ,et al., 2016).

An evolutionary process that uses digital capabilities and technology to enable business models, operational procedures, and consumer experiences to create value is known as digital transformation. Scholars call this process "digital transformation" (DT) when businesses use digital technologies to support the transformation of organizational structures, resources, or relationships with internal and external actors, or to develop new or modify existing business models and processes (Brynjolfsson, et al, 2000); (Loebbecke,C.,& Picot, A., 2015); (Vial, 2021). Almost every aspect of contemporary businesses is impacted by the use of digital technologies, including but not limited to production, organizational structures, and interactions with suppliers, Customers, and partners (Pagani, M., & Pardo, C. , 2017). Researchers studied how information technology (IT) adoption affected organizational structures and hierarchies, as well as innovation and performance, in the 1980s and early 1990s, which is where DT had its start (Plekhanov,et al, 2023).

IT-enabled business transformation gained popularity in the 1990s as a result of the commoditization of computer technology and the expansion of the Internet (Kroißmayr, 2023). COVID-19 and other worldwide crises have recently brought it back into the spotlight. As IT systems have grown in strength and scope, DT research has spread to a wide range of commercial, management, and economic fields. Among other disciplines, IT, entrepreneurship, strategic management, operations management, marketing, and organization science have contributed to the interdisciplinary research field of DT today.

As the process of digital transformation progresses, different authors highlight different sectors that are affected. According to (Westerman, G et al., 2014), the firm's client experience, functional processes, and business models are the three key areas where digital transformation occurs. This means that these three areas are where business associations benefit from digital transformation. Although (Westerman, G et al., 2014) assert that business executives focus their enterprise's transformation efforts on these three critical areas; it is evident from a "managing the organization" perspective that not all necessary components to ensure perfect organizational unity have been included. For instance, (Schilirò, 2024) makes the case that employees shouldn't be excluded from the process of digital transformation. Value creation for the business and its consumers is the ultimate impact that associations want to focus on when implementing digital transformation, according to the researchers, who have used a variety of languages to describe the behavior that digital transformation has on associations.

The digital transformation of African businesses is still at an early stage, with many challenges facing the adoption of digital technologies. Infrastructure and connectivity, as well as a shortage of digital skills and talent, are some of the key challenges facing digital transformation in African businesses. However, there are some success stories of digital transformation in African businesses, such as Jumia and Safaricom, which demonstrate the potential of digital technologies to drive growth and increase efficiency in the continent. To accelerate the adoption of digital technologies, African businesses need to invest in developing digital skills and talent, as well as building the necessary infrastructure and connectivity to support their operations (Chibo-Christopher, 2023) .

The main force behind societal advancement increases in productivity, and inclusive growth has been technological transformation. With nations at varying phases and chances in this new paradigm, the world is once again at the center of a huge technological shift. Making sure the strategy chosen for digital transformation fits with a nation's national development vision and priorities is an essential first step (FDRE, 2018).

By defining four key areas, Ethiopia's Digital Transformation Strategy evaluates how digital technologies might be applied to build a knowledge based, successful, and inclusive society (FDRE, 2018). These include digitally enabled tourism, global manufacturing value chains, IT-based services, and agriculture. Ethiopia may succeed in the unique opportunities presented by each sector. Accessing the value of agriculture is the first sector. This industry encourages agricultural tech entrepreneurship and creates a platform for digital agriculture. Global manufacturing value chains are the focus of the second sector. In order to facilitate the implementation of new communication technologies and enhance digitalized logistics, this industry grows its fast and dependable Internet connections. The third sector wants to develop services that are enabled by IT. Providing infrastructure for high-potential talent centers and finding and attracting the best companies to outsource business operations are two aspects of this industry. The fourth sector places a strong emphasis on how technology improves the competitiveness of tourism. It suggests creating a task force to digitize the travel industry, developing focused digital marketing tactics, and enhancing small and medium-sized businesses' ability to embrace and utilize digital technologies. Overall, Ethiopia has made progress toward its goals of digital transformation, which will be thoroughly examined in the upcoming sections (Demissie, Balew, ND).

The government from Ethiopia was motivated by its digital transformation strategy to build the necessary infrastructure and institutions, marking a significant milestone in the process. The Ethiopian Science Museum and Ethiopian Artificial Intelligence (AI) Institute were founded in 2020 and 2022, respectively. The government has made progress in the areas of cyber security, digital ID, e-governance, power, and connectivity. In 2022, the International Telecommunication Union established Digital Transformation Centers in Addis Ababa, when the 2022 Draft Ethiopian Digital Identity, the Electronic Transaction Proclamation 1205/2020, and the National Digital Payments Strategy (NBA, 2022) were approved by the government. Furthermore, US

$200 million in concessional loans were approved by the World Bank to implement the Digital Ethiopia Strategy 2025 (world Bank, 2022).This will make it possible for government and business organizations to carry out digital projects and reforms that will support the Digital Economy Strategy. Chinese businesses like ZTE and Huawei in particular have greatly contributed to Ethiopia's digital economy and revolution. They have contributed to network growth and provided Internet and telecommunications equipment. A commercial telecom company called Safaricom joins the state owned Ethiopian Telecom as a new telecom operator. ICT is seen by the government as a sector unto itself as well as an environment that facilitates it. Digital ID issuing is nearing its conclusion. Every year, a large number of Ethiopians earn degrees in engineering, computers, and ICT. The private sector is involved in digital industries, particularly the Ethiopian Diaspora. All of the above accomplishments are crucial building blocks and significant turning points for Ethiopia's ongoing digital transformation (Demissie, Balew, ND).

The 5 Million Ethiopian Coders Initiative is a groundbreaking collaboration between Ethiopia and the United Arab Emirates. This initiative aims to train 5 million Ethiopian citizens in digital technology, artificial intelligence, and related digitization skills, addressing the growing demand for skilled labor in the tech sector (FDRE-MiNT, 2024). By empowering individuals with the knowledge necessary to participate in the global digital economy, the initiative seeks to transform Ethiopia into a technology hub in Africa, building a robust workforce ready to tackle the challenges of the digital age. Additionally, the Ethiopian federal government recently announced the launch of a pilot program for Mesob, a digital platform that integrates government e-services with the Fayda digital ID system. This platform allows citizens to access 41 services from 12 government agencies through a single porta (Kennedy, C, 2025)

The FHC's capacity to satisfy housing demand and enhance service delivery may be directly impacted by utilizing such trends in digital transformation. Digital tool integration can improve operational effectiveness and customer engagement, both of which are critical to achieving the company's goal of offering high-quality homes. Despite these developments, there are still obstacles to overcome in order to successfully integrate digital transformation into businesses. Notwithstanding its investments in IT infrastructure, the FHC still has trouble coordinating

digital projects with its strategic goals. Effective use of digital tools can greatly increase service delivery and operational efficiency, which will eventually boost organizational performance.

1.2 Research Motivation

To understand more about the things that drive people to conduct research, more study is required. Research should be motivated by an authentic desire or internal motivation to advance knowledge, according to the general consensus (Ryan, R. M., & Deci, E. L., 2000). In order to address the gaps in knowledge on the influence of DT capabilities and organizational performance in Federal Housing Corporation, our study indicate specifically focused on the following motivating factors.

- The case of Digital transformation is a new and dynamic research area.
- There is a notable gap in research focusing on developing countries and developed country.
- There is a desire to address the critical challenges outlined in a recent survey by the Federal Housing Corporation (FHC), which has initiated a transformation draft plan for discussion. This draft plan highlights six significant issues: inadequate financing, limited human resource capacity, outdated properties, insufficient IT infrastructure, and intense market competition. Despite recognizing these challenges, the proposed plan does not offer clear solutions for overcoming them.

1.3 Statement of the Research Problem

A research problem is an educational issue, concern, or controversy that the researcher investigates (Cresswell, 2014). This study focuses on the correlation between the Federal Housing Corporation's (FHC) current performance and the impacts of digital transformation. By employing a conceptual framework that emphasizes dynamic, adaptive, and managerial capabilities, the research aims to identify how effective digital transformation initiatives can enhance FHC's operational efficiency and service delivery, ultimately improving overall organizational performance.

The rapid advancement of digital technologies presents opportunities as well as challenges for companies across all sectors. For companies looking to increase operational efficiency, improve service delivery, and develop new business models, digital transformation (DT), which is defined as the integration of new digital technologies into an organization's processes and strategies (Fitzgerald, 2014), has become a strategic imperative (Berman L. h., 2012); (Westerman,G et al., 2014).

Numerous studies illustrate how organizations have adopted digital technologies and the transformational impacts thereof. An MIT Sloan Management Review Research Report (2013) revealed that 78% of executives believed that achieving digital transformation was critical to their organizations. Similarly, a Harvard Business Review Analytics Services study (2014) indicated that 50% of leaders felt their organizations were missing out on new technology-enabled business opportunities. (Berman S. J., 2012)highlights key transformational opportunities such as creating new business models, improving operational processes, and enhancing customer experiences. (Bharadwaj, A., 2013) suggest that the digital transformation era is a time for organizations to rethink the role of IT strategy, shifting from a functional-level strategy to one that integrates IT with business strategy.

The benefits of digital transformation are vital for organizations seeking to enhance performance. By streamlining processes through automation, organizations can increase efficiency and reduce operational costs (Westerman, G.,2014). Improved data analytics capabilities facilitate informed decision-making, allowing organizations to respond swiftly to market changes (Brynjolfsson &

McAfee, 2014). Enhanced digital tools lead to better customer experiences through personalized services and improved communication channels, which (Lemon, K. N., & Verhoef, P. C. , 2016) identify as key to boosting customer satisfaction and loyalty. Digital transformation also fosters greater agility and flexibility, enabling organizations to innovate and adapt to changing environments (Kane et al., 2015). Effective digital strategies can provide a competitive advantage essential for sustained growth in today's dynamic landscape (Porter, M. E., & Heppelmann, J. E. , 2014).

Furthermore,empirical studies examining the relationship between digital transformation capabilities and organizational performance yield diverse and often inconclusive results. Some research indicates a positive influence of digital transformation capabilities on performance (Fairoos, M. F,et al. M2020), while others report no significant influence (Usai, A,et al. , 2021); This inconsistency highlights the need for further research to clarify the nature of this influence. Moreover, most literature focuses on developed countries, creating a geographical gap in research on developing nations. In response to calls for more studies to establish the root causes influencing organizational performance in rapidly changing environments (Hasegan, Nudurupati & Childe, 2019), this study aims to fill gaps by researching the link between digital transformation capabilities and organizational performance in the Federal Housing Corporation.

Organizations that fail to adapt to technological advancements illustrate the critical consequences of neglecting digital transformation. Kodak, once a leader in photography, faced bankruptcy after ignoring the shift to digital imaging, despite inventing the digital camera (Menz, M et al., 2021). Blockbuster's failure to recognize the emerging digital streaming trend allowed competitors like Netflix to dominate the market (Kane et al., 2015). Similarly, Sears struggled to compete with e-commerce giants due to its inadequate online presence, leading to significant store closures (Bharadwaj, A et al 2013) Toys "R" Us failed to transition effectively to online sales, resulting in a loss of market share to rivals like Amazon, ultimately leading to bankruptcy (Zhu, P et al., 2021). Lastly, Nokia, once a smartphone leader, could not adapt to the smartphone revolution, losing significant market share to Apple and Samsung (Verhoef, P. C et al 2021). These examples underscore how neglecting digital transformation can jeopardize organizational performance and competitive standing.

In Ethiopia, the integration of digital technologies in service delivery has led to a 20% reduction in service delivery time and a 35% enhancement in service quality metrics, highlighting the significant benefits of digitalization for service sector firms (Assefa & Tadesse, 2021).

The FHC has significantly invested in its IT infrastructure over the years. In 2013, the FHC allocated more than 3 million birr for computer purchases. This investment grew in the following years, with expenditures of more than 1 million birr in 2014, more than 6.5 million birr in 2015, and more than 4 million birr in 2016. Additionally, the FHC dedicated funds to antivirus, system development, and infrastructure, investing more than 6.5 million birr in 2013, near 5 million birr in 2014, more than 18 million birr in 2015, and more than 1.5 million birr in 2016. These expenditures highlight the FHC's commitment to strengthening its IT capabilities and ensuring system security.

Despite this investment, the FHC faces challenges in fully capitalizing on technological advancements. For instance, the FHC has outsourced the development of its Integrated Management Information System (IMIS) to a local private company. While the system encompasses basic core business functions, it lacks crucial components, such as managing investments related to the housing process and integrating the operational brick production factory. This gap significantly affects the organization’s financial management, particularly in the finance department, which relies heavily on accurate data. Additionally, tools for tracking legal issues remain underutilized, and the corporate email system purchased from Ethio Telecom is largely unused despite employee training. Integrating these systems with IT alignment is essential to ensure all tools effectively support the organization’s strategic objectives. Before implementing the online rent collection system, identifying tenant payments was challenging, leading to significant amounts of uncollected rent. This misalignment complicates the FHC's ability to meet evolving regulatory requirements, increasing the risk of non compliance.

Digital technologies significantly influence corporate performance, and dynamic capabilities provide a consistent framework for researching this impact (Warner & Wäger, 2019). Adaptive capability represents a firm's internal capacity to swiftly coordinate and reconfigure resources in response to sudden environmental changes while maintaining prior performance (Ansoff, 2018; Birkinshaw & Gibson, 2004). Additionally, management cognition encompasses the mental

processes involved in acquiring, retaining, and utilizing knowledge for decision making within organizations (Tikkanen et al., 2005). This involves gathering, evaluating, and rationalizing information to draw conclusions and take action (Dickson, 2014). Together, these elements illustrate how the coordination of dynamic capabilities and management cognition influences organizational performance amid digital transformation.

Therefore, this study aims to investigate the correlation between FHC's digital transformation capabilities and its organizational performance.

1.4 Research Questions

1. What is the current practice of digital transformation at Federal Housing Corporation, Ethiopia ?

2. What are the capabilities of digital transformation affecting organization perfromce at the Federal Housing Corporation, Ethiopia?

1.5 Objectives of the Study

1.5.1 General Objective

The general objective of the research is to identify the influence of digital transformation capabilities on organizational performance at Federal Housing Corporation.

1.5.2 Specific Objectives

The following particular goals are addressed in this study in order respond to the abovementioned broad objective:

1. To identify the current practice of digital transformation capabilities affecting organizational performance at Federal Housing Corporation.
2. To explore the specific digital transformation capabilities affecting organizational performance within the Federal Housing Corporation.

1.6 Significance of the Study

This study is important because it examines how the Federal Housing Corporation in Ethiopia might benefit from digital transformation capabilities. Through an examination of the impact of managerial, dynamic, and adaptive capacities on organizational performance, the study seeks to offer practical recommendations for improving competitiveness and operational efficiency. Managers will be able to optimize resource allocation, create efficient performance measures that support the goals of digital transformation, and make well-informed strategic decisions by having a thorough understanding of these relationships.

The research also holds considerable importance for employees within the organization. By identifying the necessary skills and competencies for successful digital transformation, the study can inform targeted training and development programs. This focus on skill enhancement is likely to improve job satisfaction by reducing repetitive tasks and fostering a more innovative workplace culture. Ultimately, the findings will empower employees, encouraging them to actively participate in the digital transformation process and contribute to organizational success.

Furthermore, this research contributes to the broader field of Information Systems theory by expanding existing frameworks and providing empirical evidence on the impact of digital transformation. The insights gained could stimulate further research on technology adoption and its interplay with organizational culture. By bridging the gap between theory and practice, this study aims to enrich the academic discourse and support the ongoing evolution of organizations in an increasingly digital landscape.

By investigating the effects of digital transformation skills on organizational performance at the Federal Housing Corporation in Ethiopia, this study aims to close this gap. This study will offer important insights into how successful digital transformation can improve FHC's capacity to carry out its mission of creating, overseeing, and renting high-quality housing to people of all income levels by examining the dynamic, adaptable, and managerial capabilities that affect the organization's performance. This will ultimately position FHC for success in the competitive East African housing market. The results of this research will help shape the FHC's DT strategy and advance knowledge of how businesses in developing nations may use digital technology to

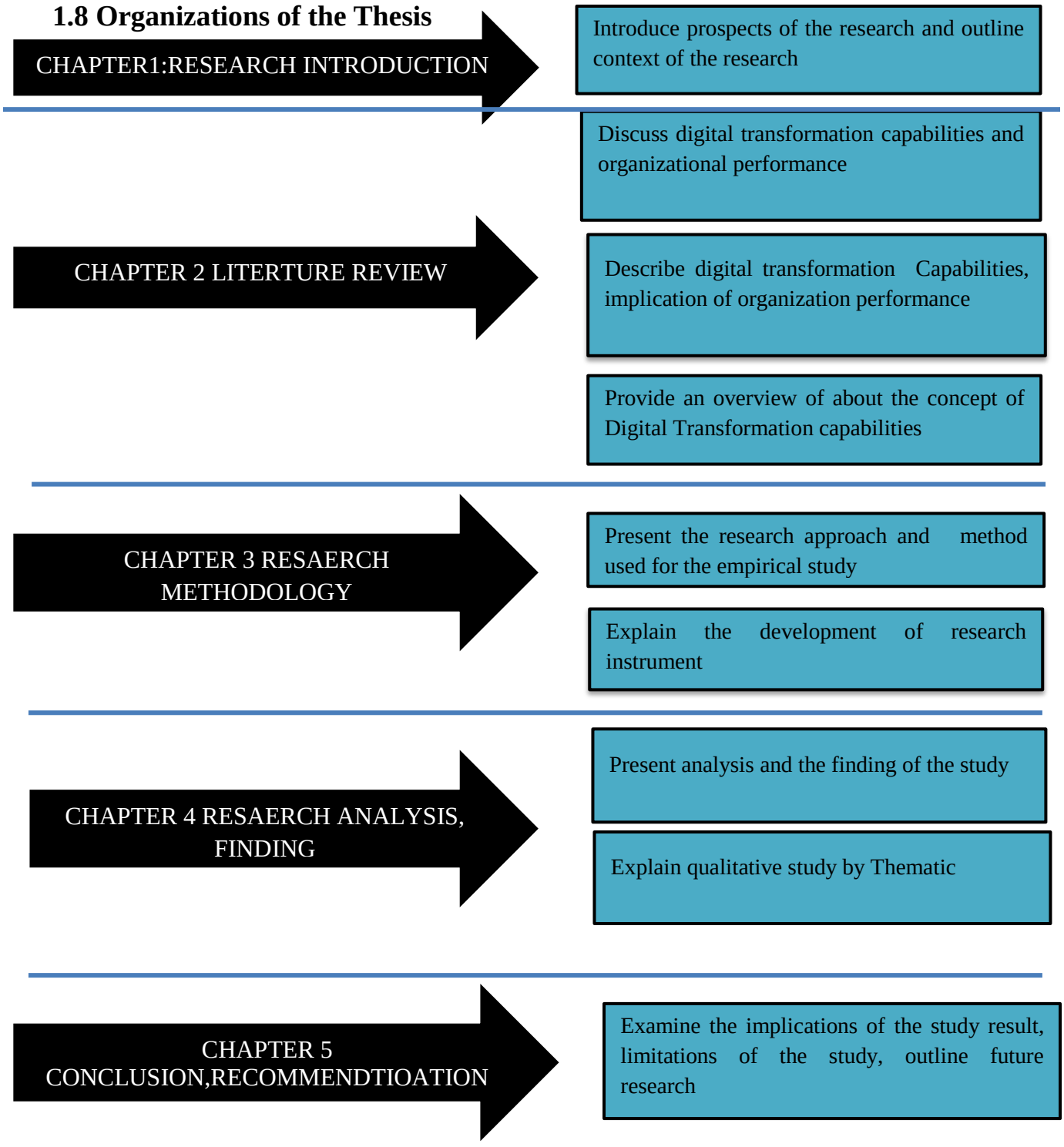
accomplish their strategic objectives. This study addresses requests in the literature on digital transformation for additional research that identifies the underlying factors affecting an organization's effectiveness in drastically altered surroundings (Hasegan, M. F et al., 2018). The goal of this study is to offer a context-specific analysis that can guide theory and practice by concentrating on the FHC.

By exploring the dynamic, adaptive, and managerial capabilities that influence FHC's performance, this research will provide valuable insights into how effective digital transformation can enhance the organization's ability to fulfill its mission of building, managing, and renting quality housing to citizens of varying income levels, ultimately positioning FHC for success in the competitive East African housing market.

1.7 Scope of the Study

The Federal Housing Corporation's (FHC) organizational performance and digital transformation are the main subjects of this study. By analyzing how successfully IT projects complement business objectives, the research sought to improve organizational performance and service delivery. It was to specifically evaluate the present level of IT alignment, identify obstacles and difficulties, and investigate organizational best practices. The study was carried out at the FHC's corporate office, five branches, and the Dire Dawa branch in Addis Ababa. This provided a thorough examination of digital transformation in a variety of operational situations. Data was gathered for the study over an established amount of time, guaranteeing timely insights that can guide adjustments right away. Participants included IT staff, management, and staff from many departments, offering a range of viewpoints on the significance of successful digital transformation. A combination of qualitative and quantitative approaches, including surveys, interviews, and document analysis, was used in a mixed-methods approach to fully comprehend digital change and its effects on the FHC. This well defined scope was a guarantee that the study successfully covered the crucial elements of IT alignment inside the organization.

1.8 Organizations of the Thesis



CHAPTER TWO
LITERTURE REVIEW

2.1 Overview

Building on earlier studies, this chapter examines the importance of digital transformation capabilities and how they affect organizational performance. It provides a summary of the body of research on the connection between organizational success and digital transformation. This chapter also summarizes the present status of research on how organizational performance is affected by digital transformation capabilities. This research article offers a thorough assessment of the literature by incorporating both theoretical and empirical findings. In the framework of this thesis, each strategy is thoroughly investigated, providing insights into how it improves our knowledge of digital transformation.

The objective of a literature review is straightforward: before constructing an argument or justification, one ought to inform themselves about the subject and comprehend the literature. "A crucial section of the thesis, a literature review serves to give the context and rationale for the research conducted" (Ridley, 2012).

Examining the influence of digital transformation capabilities on organizational performance, particularly within the context of public organizations, remains underexplored in developing countries, especially in Ethiopia. This literature review provides a comprehensive overview of the current status of research in the area of digital transformation and organizational performance, as well as potential future directions. To achieve this, a detailed examination of existing literature has been conducted, highlighting gaps and opportunities for further investigation. Relevant studies were found by using selected keywords in major databases and the top conference proceedings in the subject of information systems. Future research initiatives in this crucial field are informed by this review, which lays the groundwork for a greater comprehension of the implications of digital transformation in public institutions.

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2.2 Definition of Digital Transformation

2.2.1 Digitization

The distinction between digitization and digitalization is significant. According to Picard (2011), digitization is the act of transferring data from analog to digital form or simplifying processes using technology for communication and information (Hess T et al., 2016). Digitalization, in most cases in business, refers to improving business processes, business functions, business operations, and more by leveraging the new technology the digital space provides.Several approaches for business IT alignment have been developed as a result of digitization, including software selection procedures, technology adoption concepts, and information systems for data and information integration (Imgrund, F., & Janiesch, C, 2019). Further (Imgrund, F et al., 2018) points out that, Digitization have resulted to significant improvements in organizations use of IT, implementation of IT strategies and information processing capabilities. Thus it can be understood that Digitization had put the first step to an extensive digital transformation process which is fuelled by the convergence of social, mobile, cloud, and smart technologies and the growing need for big data applications, automation, and integration (Gaffley, G., & Pelser, T. G. , 2021).

2.2.2 Digitalization / Digital Transformation÷

Conversely, digitalization, also referred to as digital transformation, is a combination of digital innovation and digitization processes with the goal of enhancing current products with cutting-edge capabilities (Lyytinen, K et al., 2016). According to Holotiuk (2017), digitalization outlines how an organization's bu siness and IT strategies align and how information technology is integrated into the business plan.

Figure2.1DigitizationtoDigitalTransformation
(Unruh and Kiron ,2017)

2.2.3 Digital Transformation

Although there is a global focus on researching and understanding DT, with authors striving to precisely define the topic, no established definition of DT is in place, and any boundaries that could help define it remain blurred. Existing explanations describe among other things a wide range of business contexts and digital technologies.

The DT concept needs to be differentiated from digitization. Also described as “digitalization” in some research (Hagberg, J et al., 2016); (Hess, 2016)., (Parviainen, P et al., 2017)., DT refers to changes arising from digital technologies, whereas digitization refers to the conversion of information from analog to digital form, and the automation of processes through information technologies (Hess T et al., 2016). The term “transformation” comprises the understandability to take the required actions when organizations face new technologies; it is not to be confused with simple change (Singh, 2020).

Table 2.1 Various definition of digital transformation

Author(s)	Definitions.
Fitzgerald et al. (2014, p. 2)	Digital transformation is the use of new digital technologies such as social media, mobile technology, analytics, or embedded devices to enable major business improvements including enhanced customer experiences, streamlined operations, or new business models.
Westerman et al. (2011, p. 5)	Digital transformation is the use of technology to radically improve the performance or reach of enterprises.
Solis et al. (2014, p. 3)	Digital transformation is the realignment of, or new investment in, technology and business models to more effectively engage digital customers at every touch point in the customer experience lifecycle.
Hinings et al. (2018, p. 53)	Digital transformation is the combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace, or complement existing rules of the game within organizations, ecosystems, industries, or fields.
Bondar et al. (2017, p.33)	Digital transformation is a consistent networking of all economic sectors and an adaption of actors to new circumstances of the digital economy.
Liu et al. (2011, p. 1728)	Digital transformation is an organizational transformation that integrates digital technologies and business processes in a digital economy.
Stolterman et al. (2004, p. 689)	Digital transformation comprises the changes associated with the application of digital technology in all aspects of human society.
Martin (2008, p. 130)	Digital transformation is the use of information and communication technology, not when trivial automation is performed, but in the case where fundamentally new capabilities are created in business, public government, and in the lives of people and society.

2.3 The Concept of Digital Transformation

Nowadays, digital transformation is a buzzword in an academic and business environment. Business, education, banking, government, manufacturing almost every industry is being "digitally transformed" in the period of the fourth industrial revolution. Elements of digital transformation, drivers and barriers, value creation through digital transformation these and other related topics are frequently discussed in an academic environment last 20–25 years (Williams,

C., Schallmo, D., Lang, K., & Boardman, L., 2019); (Benlian, A., & Hess, T., 2015); (Ismail, M. H et al., 2017) Call for digital transformation in Google Scholar data basis yielded three million results. The request for the key digital transformation" in Web of Science and SCOPUS bases also resulted in plenty of scientific papers, the amount of which is increasing every year (see Figure 2-2)

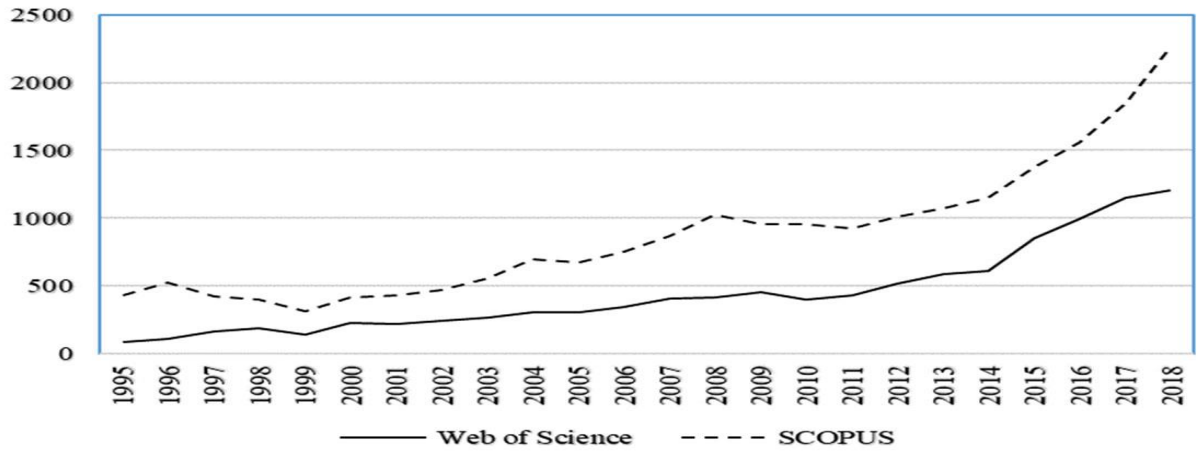

Figure 2. 2 Number of publications devoted to Digital transformation: results from Web of Science and SCOPUS scientific databases 1995–2018 (Natalja Verina, Jelena Titiko , 2019).

In 2017, the Organization of Economic Cooperation and Development (OECD) launched a new global project "**Going Digital**: Making the Transformation Work for Growth and Well-being". Its goal is "to help policymakers better understand the digital transformation that is taking place and create a policy environment that enables their economies and societies to prosper in a world that is increasingly digital and data-driven" (OECD, 2019).

Why so much attention is paid to digital transformation? First, the rapid advancement of business, economy, and society is largely due to digitalization. These days, the trends of globalization and digitization, or the reverse, govern our existence. The European Commission predicts that one of the major worldwide trends through 2030 will be a "transformative industrial and technological revolution All aspects of society such as politics, governance, education, science, lifestyles, collective intelligence networks, the setting-up of open systems, and health, including the transformation of the human genome will be transformed by technological breakthroughs, (ESPAS., 2015)." Speaking about the successful business DT stated that "people, process and technology need to be aligned."

Table 2.2 Categories of the concept of Digital transformation and the elements

Technologies	Management / Processes	People
➢ Data ➢ Big data ➢ Cloud ➢ Mobile devices ➢ Social media ➢ Software ➢ Analytics ➢ Embedded devices ➢ Artificial intelligence ➢ The Internet of Things ➢ Cyber security ➢ App marketplaces	➢ Business models ➢ Operating models ➢ Operational processes ➢ Strategies ➢ Business activities ➢ Organizational structure ➢ Organizational culture ➢ Coordination mechanism ➢ Products ➢ New services	➢ Customers ➢ Employees / workforce / people ➢ Managers ➢ Executives ➢ Talents ➢ Owners ➢ Suppliers ➢ Partners ➢ Stakeholders ➢ Competencies

Source:Natalja Verina, Jelena Titiko (2019)

The simplified conceptual model of digital transformation was created by the ((Verina, N., & Titko, J. , 2019) focusing attention on factors enabling DT processes, as well as on potential outcomes for business and society, (see Figure 2.3).

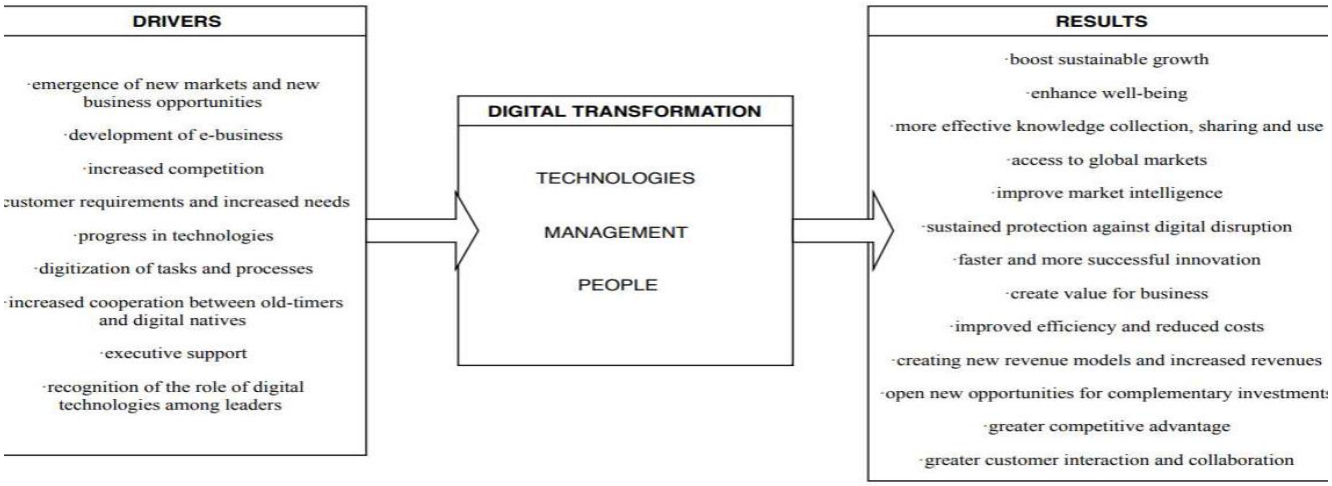

Figure 2. 3 Drivers Digital transformation and Results
(Natalja Verina, Jelena Titiko ; 2019)

The central block of the model presents three main categories of the concept of digital transformation, while side blocks represent “inputs” and “outputs”, but specifically the factors driving DT processes and resulting effects of successful digital transformation.

Digital Business Transformation is disrupting businesses in every industry by breaking down barriers between people, businesses and things. By breaking these barriers, they are able to create new products, services and find more efficient ways of doing business. These innovations are happening across organizations of all types, in every industry. But they share a common theme: The ability to transform processes & business models, Empower workforce efficiency and innovation, and Personalize customer citizen experiences. To do this, companies need a Digital Business Platform that is outcome driven and enabled by technology (Schwertner, K. , 2017).

Furthermore, research by (Vial, 2021) indicates that successful digital initiatives closely align with strategic goals, which is essential for maximizing performance benefits. This alignment ensures that digital tools and technologies support the organization’s mission, enhancing overall effectiveness. (Bharadwaj, A et al., 2013) highlight the importance of digital capabilities as a source of competitive advantage, linking them directly to organizational performance metrics.

2.4 Digital Transformation In Ethiopia

Ethiopia's digital transformation strategy builds on Ethiopia's comparative economic advantages. It aims to provide digital services to the country's key industries, including agriculture, manufacturing, and tourism, with a focus on the private sector. Digital transformation is the transition from an analog society where business, social, and government interactions take place in person to a fully integrated, inclusive digital economy where technology is used to make transactions faster, cheaper, and more secure, and where most interactions take place online (Taffere,2020). It is an evolution from traditional business practices to more digitized and automated processes. This shift cuts across all industries, sectors, and regions. It is bringing a new world order by joining the digital revolution in Ethiopia. The term "digital economy" describes economic activities that take advantage of networks and digital platforms. The digital economy is not just only about producing digital goods and services. It requires multiple interconnected components, such as infrastructure, supporting systems, and a regulatory

environment. These components enable individuals, organizations, and businesses to engage in and contribute to the digital economy. Innovation is essential to the development of the digital economy. Overall, Ethiopia's middle income and manufacturing goals will depend heavily on its ability to foster indigenous technology and innovation potential (FDRE-MiNT, 2020).

2.4.1 Success

Ethiopia's digital transformation strategy motivated the government to build institutes and essential infrastructure, which are the milestone for digital transformation. The country established the Ethiopian Artificial Intelligence (AI) Institute in 2020 and Science Museum in 2022. The government has worked on connectivity, power, e-governance, digital ID, and cybersecurity. The International Telecommunication Union launched Digital Transformation Centers in Addis Ababa in 2022. The government adopted the National Digital Payments Strategy (NBA,2022), the Electronic Transaction Proclamation 1205/2020, and the 2022 Draft Ethiopian Digital Identification. In addition, the World Bank approved $200 million in concessional loans for the implementation of the Digital Ethiopia Strategy 2025 (World Bank, 2022). This will enable private and government institutions to implement reforms and digital projects in support of the Digital Economy Strategy. Particularly, Chinese companies like Huawei, and ZTE have made significant contributions to Ethiopia's digital transformation and digital economy. They have supplied telecommunications and Internet equipment and participated in network expansion. The state-owned Ethio-telecom gets Safaricom, a private 4 telecommunications provider as an additional telecom provider. The government views ICT as both an enabling environment and a sector in its own right. The issuance of digital ID is reaching the final stage. Many Ethiopians graduate yearly in ICT, computers, and engineering. The private sector, especially the Ethiopian Diaspora, is participating in digital businesses. All above mentioned achievements are essential infrastructure and milestone in further succeeding in Ethiopia’s digital transformation

2.4.2 Challenges

Ethiopia has a huge young population of 117 million in 2021; 70% of the population is employed in agriculture, and nearly 85% of Ethiopians live in rural areas that are less connected to infrastructure and the Internet (World Bank, 2022). The lack of access to electricity is a major barrier to digital transformation. Ethiopia's import tariffs are too high. This makes ICT devices in Ethiopia, including computers and cell phones, very expensive. Even the industrial parks, which were expected to narrow the digital gap in the manufacturing sector, are not doing well. Ethiopia's share in the value chains of goods produced in the industrial parks is small. Workers in the parks tend to be physical laborers rather than digital and technological professionals (Taffere,2022). Above all, the recent civil war devastated the country's digital and technological infrastructure, and it will take decades for Ethiopia to catch up with its competitors. Internet quality and coverage are still poor and limited. The 2G and 3G networks cover 85.5 percent of the Ethiopian population, and 4G access is available in certain areas of Addis Ababa. Sporadic Internet outages occur throughout the country. Mainly, government agencies, businesses, private and international organizations, and the private sector have weak digital transformation strategy coordination. Above all, the country's education system lacks quality, especially in learning and producing digital technologies. The country's monetary policy is too traditional for the digital world

2.5 Organizational Performance

Managers find it difficult to describe the concept of organizational performance (Gutterman, A. S. , 2023). In short, it relates to the ability of a business to generate future value and accomplish predefined objectives, which could be as straightforward as reducing the disparity between aims and means. However, measures that are directly related to the organizational structure are frequently used to define organizational performance rather than the organization's potential effects on the economy and society. Even before the financial consequences are recognized, these indicators become important because they enable the detection of organizational issues in their earliest stages (Gutterman, A. S. , 2023).

Organizational performance has three dimensions including productivity, efficiency and profitability and these play a part to identify four sub-dimensions to define performance hence the accomplishment of the mission of the organization, acquisition and control of resources and skills, delivery of quality services and the development and maintenance of a common culture and values. Organizational performance is an organization's ability to increase its market share, operate efficiently, improve service delivery, products, sales, innovative practices, and overall profitability (Gutterman, Organizational performance and effectiveness, 2023) organizational performance has a nexus to efficiency, effectiveness, financial stability as well as relevance of the organization in the ecosystem.

According to (ATHMAN, U. B., & GICHINGA, L. , 2024), organizational performance is assessed at various graded levels and can be assessed for individuals, groups, and the entire organization. It should be noted that the measures for organizational performance depend on who requested them and the reasons why performance metrics are necessary. (Samson, K., & Bhanugopan, R. , 2022) Noted that measuring and reporting organizational performance included justifying the valid use of investors' resources, guiding the managerial process of decision making by singling out the pain-points within the organization, comparing individual performances of diverse functions within the organization and exercising requisite control.

2.6 Resource Based Theory

Resource-Based Theory (RBT) is a strategic management framework that asserts that an organization's competitive advantage primarily derives from its unique resources and capabilities. According (Zahra, 2021) resources encompass "assets, capabilities, processes, information, and knowledge" that organizations control to implement strategies. RBT emphasizes that not all resources are equally valuable; for a resource to confer a sustained competitive advantage, it must be valuable, rare, inimitable, and non-substitutable (Barney, J. B et al, 2011). This perspective encourages organizations to focus on their internal strengths rather than simply reacting to external market conditions. In this framework, resources can include tangible assets, such as technology and financial capital, alongside intangible assets like brand reputation and organizational culture (Tang, 2017).

Within this context, Information Technology (IT) is recognized as a strategic resource capable of significantly enhancing organizational performance. When viewed through the lens of RBT, effective management of IT resources becomes essential for achieving sustained competitive advantage. The inherent characteristics of IT resources, such as their value, rarity, and inimitability, align with RBT principles, making them vital for differentiation in the competitive landscape (Madhani, 2010) to leverage IT as a strategic resource; organizations must implement effective management practices. This includes aligning IT strategies with broader business objectives to ensure that technology investments support the overall mission (Luftman, 2003).Furthermore, organizations should cultivate their IT capabilities through continuous training and investment in emerging technologies to maintain their competitive edge in an ever-evolving landscape (Ward, 2011). However, managing IT as a resource presents challenges, as rapid technological advancements necessitate agility and adaptability (Fitzgerald, 2014), and issues such as cyber security and data privacy can impact the value derived from IT investments (Weill, P., & Ross, J. W., 2004). The Theory of the Growth of the Firm (Penrose, 2009): Why do some firms perform better than others? What enables a firm to grow and take advantage of its opportunities? ”The Theory of the Growth of the Firm” addresses these questions and laid the foundation for this approach often referred to as the “resource based view of the firm. The proliferation of online social networks is one of the biggest changes of our time (Tiago, M. T. P. M. B., & Veríssimo, J. M. C. , 2014).

Later, further components were added to the resource-based approach. For instance (Prayogi, J., & Wibowo, A. , 2022) used the complementarity idea to better describe the function of a firm's resources and how they add value to the business. The value of an organizational resource can increase in the presence of other complementary resources because it is difficult for competitors to copy the total effect (Liang, T. P et al., 2010).

In other words, the joint value of complementary resources is higher than the sum total of their individual values. As far as research on a contemporary issue like digitalization is concerned, IT is increasingly viewed as a complementary resource that enhances the value of other organizational resources and capabilities (Bharadwaj, S et al., 2007).

2.7 Dynamic Capabilities and Organizational Performance

Dynamic capabilities emerged from the resource based view emphasizing firm specific capabilities and assets to explain how competitive advantage is attained and acquired over time (Ellström, D et al., 2021). In an effort to explain how businesses gain and maintain a competitive edge, Teece et al. (1997) introduced the concept of dynamic capacities. According to Teece et al. (1997), dynamic capabilities are the steps businesses take to modify their resources in order to continuously adapt to and create a competitive advantage in a changing environment. This dynamic capability is defined as "the capacity of an organization to purposefully create, extend, and modify its resource base" by (Helfat, C. E., & Peteraf, M. A. , 2015). Given the significant influence that digital technologies have had and will continue to have on corporate performance, dynamic capabilities offer a consistent method for researching digital transformation (Warner, K. S., & Wäger, M. , 2019).

Thus, to engage in digital transformation successfully, firms need a set of capabilities that facilitate changes to their business models and their organization. According to (Teece, D. J., 2017), dynamic capability is created by combining the sense, seize, and reconfigure capabilities. The concept of dynamic capabilities is captured and measured by (Hilliard, R., & Goldstein, D. , 2019) using routines, whereas (Teece, D. J., 2017) employs micro foundations to further elaborate on the substance of the sensing, seizing, and reconfiguring skills. Sensing opportunities and threats, taking advantage of these chances, and maintaining competitiveness through a reconfiguration of the underlying resources and assets are the three complete groups into which separated dynamic capabilities (Teece, D. J. , 2007).

2.7.1 Sensing Capabilities and Organizational Performance

Sensing and shaping new opportunities involves activities such as scanning, creating, learning and interpreting (Teece, D. J. , 2007), and entails ". . . identification, development, co-development and assessment of technological opportunities in relationship to customer needs" (Teece, D. J. , 2023). (Harvey, 2022) reviewed micro foundations of sensing capabilities from managerial cognition to team behavior, and proposed a novel mechanism through which managerial cognition scaled to a collective level in support of sensing capabilities and considered

how organizational design influenced the relationship; positing that high construal managers engaged in more environmental scanning than low construal managers, given that their mental horizons were broader and encompassed further alternatives such that over time their behavior became modeled by their teams. The study also put forth that managers' degree of task related interdependence with peer managers across the firm influenced the direction of their relationship, with low interdependence reversing it.

In order to obtain a greater competitive edge and raise the standards of service delivery, construction companies needed to have transformation capabilities related to technology governance, knowledge management, and the development of new resources and processes, (Yepes, V., & López, S. , 2021) analysis of dynamic capabilities for construction organizations in the fourth industrial revolution era. The dynamic capabilities and organizational resilience of manufacturing firms were reviewed by (Akpan, I. J et al , 2022). They confirmed that sensing capability was positively correlated with organizational resilience measures, suggesting that sensing capability increased the resilience of manufacturing firms.

(Ngeche, J., & Kaluyu, V. , 2023) Reviewed organizational agility capabilities and sustainable competitive advantage in private multi practice hospitals. The study's findings established that organizational agility vide sensing capability had a significant positive effect on their sustained competitive advantage of private multi-practice hospitals. (Khalif, M et al., 2022) reviewed sensing capability and performance of commercial state corporations and the study found that sensing capability was positively and significantly related to performance of commercial state corporations and that strategic fit was a significant moderating variable in the relationship between sensing capability and performance of commercial state corporations.

Sensing capabilities draw from both the resource-based view of the firm and evolutionary economics (Bett, L. K., & Anene, E. , 2023) .From a resource-based perspective, sensing capabilities were originally conceptualized to redress a gap in the ability of the resource-based view to explain sustainable competitive advantage in dynamic, Schumpeterian environments (Monyei, 2023) .The emerging consensus is that sensing capabilities do not directly contribute to a firm's performance or its competitive advantage; instead sensing capabilities permit a firm to manipulate its resources (Ahmed, A et al., 2022). Sensing capabilities are a source of competitive

advantage when applied sooner, more astutely, and more fortuitously than competitors (Torres, R et al., 2018).

2.7.2 Seizing Capability and Organizational Performance

Seizing capabilities relates to sensing capabilities as sensed opportunities or possibilities need to be addressed either through new products, processes, services or a combination of these alternatives (Teece, D. J. , 2007). A seizing capacity allows a firm to capture the value of potential business opportunities and to decide what specific changes are needed throughout the organization to seize the value of the new opportunities (Yeow, A et al., 2018).

Seizing refers to developing and selecting business opportunities that fit with the organization's environment and its strengths and weaknesses (Teece, D. J. , 2007). Seizing thus means that market opportunities are successfully exploited and that threats are eluded. Seizing bridges external and internal information and knowledge, and it is closely linked with strategic decision making, particularly regarding investment decisions. Seizing capacity starts from a strategy that enables the recognition of valuable knowledge. Seizing capacity within an organization is high if the organization is able to decide whether some information is of potential value, to transform valuable information into concrete business opportunities that fit its strengths and weaknesses and to make decisions accordingly.

Seizing capabilities denotes activity of addressing opportunities and threats (Matysiak, L., Rugman, A. M., & Bausch, A. , 2018). (Teece, D. J. , 2007) describes seizing as the process in which substantial resources are dedicated to address new opportunities and threats, found by sensing which could be obtained as result of inauguration of new products and services (Teece, D. J. , 2007); (Roy, K., & Khokle, P. , 2016) plus performing incremental changes to prevailing business models (Helfat, C. E., & Peteraf, M. A., 2015). A seizing capacity allows a firm to capture the value of potential business opportunities and to decide what specific changes are needed throughout the organization to grasp the value of the new opportunities (Yeow, A et al., 2018).

Firms frequently sense opportunities but then fail to seize the value for many reasons, such as lack of commitment, aversion to risk or for financial reasons (Warner, K. S., & Wäger, M. ,

2019). To overcome such weaknesses, organizations need to improve rules and routines, build up their leadership and boost strategies to recognize, capture and assess prospective business opportunities (Teece, 2018). Thus, a seizing capability is vital to be able to capture value from new opportunities.

The impact of grabbing capability on Chinese enterprises' performance was examined by (Jingwen, Y et al., 2025). From all Chinese companies registered with local governments, a sample of 600 businesses representing all industries in each city or province was chosen at random. Using a stratified sample strategy, respondents were found. Data were collected using structured questionnaires and surveys face-to-face interviews with senior managers of the selected firms. The data were analyzed using a linear regression technique. Another study by (Umam, R., & Sommanawat, K., 2019) examined the relationship between strategic orientation and seizing capabilities and as drivers for organizational performance. The data was collected using a structured questionnaire administered on 106 randomly selected employees drawn from a maritime company in Brazil. The results of multiple regression analyses showed that the strategic orientation of entrepreneurs influence the effect of seizing capabilities on organizational performance. The study provided a new understanding of how seizing capability drives organizational 20 performances. The main limitation of the study was that it was done on only one case company and may, therefore, suffer the inability to be generalized among other companies operating in different industries.

2.7.3 Reconfiguring Capabilities and Organizational Performance

Reconfiguring means a continuous renewal and transformation of organizational routines (Yeow, A et al., 2018). Reconfiguring capabilities to transform organizational structures and assets as the firm grows and the environment changes are a key to sustained profitable growth (Teece, D.J. , 2007). Reconfiguration capabilities play important roles when it comes to transforming existing resources to align with new strategies, building new resources and supplementing current gaps in the resource base of a firm (Yeow, A et al., 2018).

The relationship between organizational performance, reconfiguration capacities, and business growth was examined by (Åberg, C., & Shen, W. , 2020) .Data was gathered from a sample of

600 respondents who were chosen at random from 11,248 senior executives of Korean SMEs and 134 respondents who were chosen from 6000 UK enterprises. Structural equation modeling was used to analyze the data. The study showed that increased reconfiguring capabilities leads to the expansion of entrepreneurial activity. It further showed that during its growth, a firm acquires new resources and new knowledge on how to configure those resources, which in turn leads to the development of adaptive capabilities that enable it to uncover new opportunities for increasing organizational performance. The study demonstrated that reconfiguring capabilities influence entrepreneurial action, which in turn influences organizational performance. The main limitation of the study was that although it used data from two similar locations, it cannot be ruled that different results could have been obtained if the study involved other geographical locations.

A study was conducted by (Cao, G., & Tian, N. , 2020) to test whether reconfiguring capabilities is related to the organizational performance of firms in Brazil. The study used a content analysis of literature instead of primary information collected directly from firms in Brazil. The results of data analysis using multiple linear regressions showed that the indirect effect of reconfiguring capabilities on performance. Organizational performance is mediated by reconfiguring strategy. The significance of the study was that it confirmed 13 the view held by (Tsai, M. C., & Wang, C., 2017) that reconfiguring capabilities affect organizational performance indirectly.

Reconfiguration capabilities are essential in transforming existing resources to align with new strategies, building new resources and augmenting present gaps in the resource base of a firm (Yeow, A et al., 2018). However, changing routines is both risky and costly (Teece, 2018). In more stable situations, firms therefore tend to fine-tune their asset base and build on existing resources (Kindström, D et al., 2013). When market conditions change more rapidly, more substantial reconfiguration is required (Helfat, C. E., & Peteraf, M. A. , 2015).Transformation process serves the purpose of sustaining competitive advantage over time through continuous reconfiguration (Kindström, D et al., 2013).

2.8 Adaptive Capability and Organizational Performance

The origin of the concept of adaptive capability can be traced back to thoughts of scientific management founded by Frederick Taylor in the early 1900s (Uddin, N., & Hossain, F. , 2015). While the concept of adaptive capability developed in natural resource management workshops by means of decision making, scientists as well as managers focused on making simulation models to discover key suppositions as well as uncertainties (Stankey, G. H et al., 2006).

Organizations have to deal with more and more complicated, unpredictable, and abrupt changes. We argue that the development of dynamic capabilities for environmental adaptation, or simply adaptive capabilities, is the process of learning to react to weak signals of environmental changes,Adaptive competencies can aid in initiating and directing strategic renewal activities (Hrebiniak, 2013).

An organization's ability to adapt to changing business needs by identifying and fostering its core competencies, resources, and other organizational processes is closely linked to its strategic plan (Karadağ, 2019). According to (Mwangi, 2022), adaptable flexibility provides a competitive edge, especially in circumstances that are constantly changing. Adaptive capability is conceptualized as the consideration of three dimensions: horizon scanning, change management, and resilience.

Adaptive capability represents the firm's internal capacity as the core of the response (Ansoff, 2018). It refers to the capability of a firm to coordinate quickly and reconfigure resources in response to sudden environmental changes while maintaining previous performance (Birkinshaw, J., & Gibson, C. , 2004). The three organizational activity areas that make up the adaptive capability are the firm's response to customer-market opportunities, marketing activities to respond to these opportunities, and a quick response in pursuing these opportunities. The adaptive capability has been understood as a capability related to problem solving and responding to customers (Hakansson, 2015).

A technique that enables one to attempt to discover and resolve issues in a communal and efficient manner can help accomplish this capability. Accordingly, SMEs need to be able to develop their capacity for adaptation by assessing shifts in market trends and distributing the

necessary resources (de Oliveira Cabral, 2010). MSMEs must possess the adaptability necessary to swap out outdated customs and practices for new ones (Akgün, A. E. et al., 2012) and be able to react to changes in line with organizational priorities (Wang, C. L., & Ahmed, P. K., 2004).

Thus MSMEs that have adaptive capabilities are able to identify and take advantage of opportunities offered in the market (Tseng, S. M., & Lee, P. S. , 2014) (Hofer et al., 2015). Therefore, by having this adaptive capability, MSMEs can monitor customers and markets (Morgan, N. A et al., 2009) and subsequently adapt products, prices, promotions and distribution, and develop new markets and products (Filipe and Montgomery, 2004; Wang and Ahmed, 2004; Hultman et al., 2009; Ahn, 2017).

2.8.1 Innovation Capabilities and Organizational Performance

Organizational innovation is the successful implementation of new organizational methods within a firm's practices, workplace and external stakeholder relations (Mohnen, P., & Hall, B. H., 2013). It is a prerequisite to embracing and adopting product, market and process innovation (Haddud, A et al., 2018). The relationship between innovation capability and performance the moderating influence of measurement was studied by (Saunila, M et al., 2014). Small and medium-sized businesses (SMEs) were the focus of an online evaluation that guided the investigation. An aggregate of 311 reactions were collected from a sample of 2,400 arbitrarily chosen business enterprises. Steady with expectations, the connection between innovation capacity and firm execution is critical within the sight of firm performance. Execution estimation would thus be able to be utilized as a device for improving the performance of SMEs through innovation capacity.

The study conducted by (Abdala, Datche., et al 2023) examined the impact of product, process, market, and technological innovation capabilities on the performance of manufacturing firms in Nairobi. The results were consistent with previous research conducted by (Wakiso, G. S., & Kinyua, G. M., 2021), (Wongsansukcharoen, J., & Thaweepaiboonwong, J., 2023). Product innovation, process innovation, marketing innovation, and technological innovation capabilities have a positive and significant link with manufacturing firms' success, according to the results of

the Pearson's correlation study. But the findings contradicted those of some earlier research by (Mung'ora, M. N. , 2020) and (Ringo, D. S et al., 2023).

According to (Rajapathirana, R. J., & Hui, Y. , 2018) said that one of the challenges for the company is to achieve organizational performance through innovative activities. The two most important dimensions of the company are innovation and novelty (Salisu, Y., & Bakar, L. J. A. , 2019). Companies that adopt innovations include the generation, development, and implementation of new ideas or new behavior (Alshanty, A. M., & Emeagwali, O. L., 2019). Innovation can be in the form of new products or services, new technology in production processes, and new administrative structure (Kongo, Muathe & Kinyua, 2019; (Abbu, H. R., & Gopalakrishna, P. , 2021); (Alshanty, A. M., & Emeagwali, O. L., 2019). Companies that excel in innovation will have an impact on their performance (Battisti, M., & Deakins, D. , 2017); (Ahmed A. M., 2017.). Product innovation excellence is measured by product modifications to existing products so that it can produce unique products, develop and produce new products with good quality, and variety of products so that the price can be competitive (Parnell, J., & Brady, M. , 2019).

2.8.2 Technological Capability and Organizational Performance

The connection between economic growth and technological advancement was initially recognized by Joseph Schumpeter in 1911. These ideas serve as the foundation for innovation-based economic development. We postulate that technological aptitude and economic performance are positively correlated based on the relationship between knowledge and progress. Thus, if we believe that a company must be able to innovate in order to make money, then the more money a company invests in its technological capabilities, the better it should perform.

To operate present systems and create technical change from technological capabilities, one needs to have the necessary skills, knowledge, and experience. "Technological capability is a continuous process to absorb and create knowledge of technology from the interaction with the environment and the accumulation of skills and knowledge mastered by a firm" (Reichert, F. M., & Zawislak, P. A., 2014). Bell (2009) Recognize that efficiency is impacted not just by acquiring

technology from outside sources but also by the capacity to control internal modifications to the technologies used for production.

The impact of technical capability and dynamism on an organization's performance was investigated in a study conducted by (Tseng, S. M., & Lee, P. S., 2014). The poll and quantifiable scientific methods were used to obtain the best research on technological capability, dynamic capacity, and hierarchical execution. The results demonstrate that technology capabilities are an important midway hierarchical element that converts their benefits into corporate-level execution implications. In other words, associations' strong capacity is enhanced by technology capabilities.

The study (Ong, C. S., & Chen, P. , 2013) investigated the influence of technological capability on firm performance: the intermediating role of organizational competency. Review information from 211 firms shows that both operational change sensitivity and market underwriting dexterity can completely intervene the impact of technological capacity on firm performance. Furthermore, the relationship intensions of these two technological capabilities on firm performance are recognizing.

A study on the effects of technological capacity on commercial banks' performance was conducted by (Rabillo, A. N., & Rotich, G. , 2018). Establishing the relationship between business performance and technology capability was the main goal. The study used social survey methodology and data gathered through questionnaires to do this. A survey was conducted of all 42 banks. Technology capability was found to be directly related to bank performance. Therefore, having an organizational structure based on technical capabilities is crucial since it promotes the growth of knowledge capacity, which in turn improves bank performance.

2.8.3 Learning Capability and Organizational Performance

The majority of the measures used in studies of the learning organization and its relationship to performance are survey type tools designed to measure learning capability. After that, these metrics are connected to a collection of performance metrics. According to earlier empirical research on the subject, learning capacity was significantly and favorably correlated with job satisfaction but had no correlation with objective financial success (Goh, 2012). Learning

capability and financial performance, however, are positively correlated, according to a different study by (Yang, B. et al. 2004). The positive correlation between learning capability and financial performance was not definitively shown by these early empirical studies.

A group of studies, with a marketing perspective has also examined the relationship between learning capability and performance (Hanvanich, S et al., 2006), (Hult et al., 2003); (Jiménez-Jimenez, 2008); (Keskin, 2006). They suggest that a combination of market orientation and learning capability can lead to improvement in the overall performance of an organization such as financial performance and non-financial performance such as market share, innovation, or sales growth. These studies generally showed a positive link between those performance measures and learning capability.

The relationship between learning capability and organizational performance was studied by (Goh, S. C et al., 2012). Thirty-three publications were selected by the authors to be included in the meta-examination of a distributed investigation on learning capacity and hierarchical execution. Using the Hunter and Schmidt meta-examination algorithm, the data was examined. With more grounded results for non-monetary performance than monetary performance, the findings support a favorable relationship between learning ability and authoritative execution. This has important implications for validating associations' motivation in developing their learning capacity.

Learning capability is the capability of enterprises to address the openings linked by seeing capability through proposing new products services (Matysiak, L et al., 2018). (Pisano, 2015) Interpret literacy as a process by which reiteration and trial enable tasks to be performed more and more snappily and new product openings to be linked. Learning requirements to be attained from not only organizational internal deals, but also the external terrain (Hanvanich, S et al., 2006). While internal literacy refers to literacy processes inside the enterprises, substantially in the form of training multifunctional workers, external literacy inter-organizational literacy, substantially through connections with guests and suppliers (Khalil, S., & Belitski, M. , 2020). Without dynamic literacy procedures, airlines may not be completely suitable to achieve their objects to transfigure digitally (Barrales-Molina,V et al., 2014). According to (Shah, S et al., 2018), if the expected organizational performance is high, a significant and early investment in

this capability is required to enable businesses to answer the question of the current business environment and gain a competitive edge.

The effects of organizational learning on performance in Turkish enterprises were investigated by (Uğurlu, Ö. Y., & Kurt, M. , 2016). They used data from 202 Turkish organizations and used primary condition demonstration to evaluate the model precisely. From the perspectives of the representative, customer, and supplier, we discovered that organizational learning has a significant impact on non-monetary execution. There is a direct, but much less significant, effect on the financial execution.

2.9 Managerial Capabilities and Organizational Performance

2.9.1 Managerial Cognitive Capabilities and Organizational Performance

Managerial cognitive capability is the capacity of an individual manager to perform one or more of the mental activities that comprise cognition" (Helfat, C. E., & Peteraf, M. A. , 2015). The cognitive aspects are underpinning dynamic managerial capabilities (Helfat, C. E., & Peteraf, M. A. , 2015) which is related to the micro foundation of dynamic capabilities (Teece, 2007). Dynamic capabilities encompass creating change as well as reacting to it (Eisenhardt, K. M., & Martin, J. A. , 2000); its sensing component includes alertness and a discovery process (Gaglio, C. M., & Katz, J. A. , 2001). These sorts of sensing activities are likely to draw on at least two cognitive capabilities perception and attention (Helfat, C. E., & Peteraf, M. A., 2015).

Dynamic managerial talents in terms of grasping possibilities and reacting to new dangers are based on cognitive capacities. Making significant and occasionally irrevocable investments in both tangible and intangible assets may be necessary to achieve this. In order to do this, cognitive abilities for reasoning and problem-solving are likely to help the design of the business model and the capacity to make prudent strategic investments (Helfat, C. E., & Peteraf, M. A., 2015).

According to Tikkanen et al. (2005), management cognition often refers to the mental process of gaining, retaining, and using knowledge and understanding through experience, thought, or the senses in order to use it for control and decision-making inside a business or organization. This procedure is thought of as a human information processing process whereby decision makers

gather information, evaluate it, compile it, identify it, assess and rationalize it, draw conclusions and judgments, and ultimately take action (Dickson, 2014). There are numerous ways that people can think, perceive, pay attention, see patterns, learn, remember, process language, solve problems, and reason. Cognition produces knowledge, which is then preserved and stored. Usually, people use this information to form opinions and make choices. This information primarily depends on managers' inherent decision-making skills. Decisions about the degree of diversification, divestiture activity, new product development initiatives, and research and development are among the many important strategic decisions that are strongly correlated with these managerial orientations (Tikkanen, H et al., 2005). All of this affects organizational effectiveness .

According to (Kabongo, J. D., & Boiral, O. , 2017) investigated how the organizational performance of eco-efficient businesses was impacted by directorial cognitive capability. Interviews and questionnaires were used to gather primary data from directors of 12 businesses in Canada that process waste accessories. Based on the results of multiple regressions, eco-efficient businesses' organizational performance is primarily dependent on how well their directorial cognitive capacities work in tandem with their capabilities, invention, and technical advancement. It also depends on changes in marketing, networking, and the operation of mortal resources. This study added to the body of knowledge on digital transformation capabilities by providing new insights into the role that operating capability plays in business performance. Because (Kabongo, J. D., & Boiral, O. , 2017) used a small sample, the results might not be generalizable.

The association between managerial cognitive ability and performance was studied by (Abugre, 2020) the operationalization of managerial cognitive capability was done in terms of establishment-specific experience and social networking. ROA served as the operationalization of performance. Using a questionnaire, senior directors of 106 companies listed in the Ghana Business Directory's 2001 edition provided primary data.. The results of data analysis using multiple regression ways suggested that managerial social capital developed through social connections enhance firm performance. One limitation of the study was that it did not consider non- fiscal performance.

In order to realign organizational operations, (Roy, K., & Khokle, P., 2016) support the importance of management in developing digital transformation capabilities through the use of clear communication, but they place a strong emphasis on the formation of cross-functional teams with shared resources and the identification of organizational weaknesses. Strategic transformation is influenced by managerial cognitive ability, which is demonstrated by the effects of recognizing opportunities on market creation and identification, problem solving, strategic investment, business model adjustment, and resource restructuring (Bendig, D. et al., 2018); (Wang, C. L., & Ahmed, P. K., 2004)

2.9.2 Managerial Coordination capabilities

It is intimately tied to both client and competitor exposure and refers to the directors' strategic use of the establishment's money to deliver outstanding value for the target audience (Mamat et al., 2011). It stems from the idea that businesses should carry the combined efforts of all departments to provide guests with better value. It's a coordinated application of company coffers in creating superior value for target guests (Tiantian, G., & Yezhuang, T. , 2015). It focuses on the coordinated application of labor force and other coffers throughout the establishment to produce value for the target guests. Enterprises that seek collaboration by understanding that community among company members are needed to produce value for guests (Tiantian, G., & Yezhuang, T., 2015). (Protogerou, A et al., 2012) argue that every department or association unit must be well defined and understood by all workers and know their part in perfecting performance. (Udoyi, 2014) stressed the need for commerce; cooperation and form a relationship to satisfy client requirements through vertical communication among members hence understand marketing information.

(Tamrat, W., & Teferra, D. , 2018) looked at Ethiopian higher education institutions' capacity for managerial coordination. Focus groups and questionnaires were utilized to collect primary data from nine public and six private institutions. According to the study, academic quality and standards, teaching and resource mobilization, international research initiatives, and organizational effectiveness are all impacted by an institution's ability to coordinate. However, it was shown that organizational performance was more of an ad hoc and reactive process than a methodically carried out proactive endeavor in the majority of the colleges evaluated. Therefore,

the study suggested that both at the national and institutional levels, there is a need for unified policies, strategic directions and operational efficiencies.

2.10 Research Gap in the Literatures

This section summarizes the literature related to the influence of digital transformation capabilities on organizational performance .

The study entitled "Influence of Digital Transformation Capability on Operational Performance" by (Yu, J., Wang, J., & Moon, T., 2012) explores the critical role of digital transformation in adapting to market changes and enhancing business processes. It constructs a framework based on dynamic capability theory, identifying three key dimensions of digital transformation capability: sensing, organizing, and restructuring. The study analyzes data from 162 enterprises, revealing that strategic orientation positively impacts digital transformation capability, which in turn positively affects operational performance. Notably, the study demonstrates that digital transformation capability serves as a mediator between strategic orientation and operational performance. The findings underscore the importance of developing digital transformation capabilities to secure competitive advantages and foster sustainable development in the digital economy.

Another study on the titled "Conceptualizing Digital Transformation in Business Organizations" by (Morakanyane, R., Grace, A. A., & O'reilly, P. , 2017) systematically examines the current understanding of digital transformation, revealing a lack of consensus on its definition and key concepts. Utilizing a concept-centric matrix, the authors categorize dimensions such as characteristics, drivers, impacts, and transformed areas. They propose a more inclusive definition that highlights the evolutionary nature of digital transformation, emphasizing the need for a strategic orientation toward customer and technology needs. The study calls for further research to reconcile discrepancies in the literature and to explore the specific impacts of digital transformation across various industries, aiming to provide a clearer framework for both academic inquiry and practical implementation

Another study on the titled "Exploring the Impact of Digital Transformation on Business Operations and Customer Experience" by (Kothapalli, 2022) investigates how digital

transformation reshapes organizational processes and enhances customer interactions. It employs a systematic review of secondary data, focusing on the benefits of technologies such as AI, cloud computing, and data analytics in improving operational efficiency and customer satisfaction. The study identifies key trends, including the automation of processes and the implementation of omnichannel strategies that deliver seamless experiences. However, it also highlights significant challenges, such as high implementation costs and data privacy risks. Kothapalli's findings emphasize the necessity for organizations to develop robust digital transformation capabilities to navigate these challenges effectively and achieve competitive advantages in an increasingly digital marketplace

The study on the titled "Dynamic Capabilities for Digital Transformation" by (Ellström, D., Holtström, J., Berg, E., & Josefsson, C. , 2022) investigates the essential routines of dynamic capabilities sensing, seizing, and reconfiguring that facilitate digital transformation in organizations. Utilizing a qualitative approach, the authors conducted interviews with representatives from a firm undergoing digital transformation and focus groups with a consultancy firm experienced in this area. The study identifies six critical routines tailored specifically for digital transformation, including digital sensing across industries and improving internal digital infrastructure. Findings emphasize the necessity of a clear digital strategy and the ability to adapt organizational resources effectively. The research contributes valuable insights into managing digital transformation, highlighting the need for firms to develop dynamic capabilities that align with their strategic objectives to navigate the rapidly changing digital landscape successfully

The study entitled "Emerging Challenges and Prospects of Digital Transformation and Stakeholders Integration in Urban Land Administration in Ethiopia" by (Gebrihet, H. G., & Pillay, P. , 2021) examines the critical role of information and communication technology (ICT) in enhancing urban land administration. The study employs a qualitative methodology, conducting interviews with 78 participants, including officials, auctioneers, and experts in Mekelle City. Findings reveal that while digital transformation offers opportunities for improved service delivery and stakeholder integration, significant challenges persist, such as financial constraints and a lack of effective leadership. The authors highlight the necessity for a well-functioning digital infrastructure and the need for stakeholders to collaborate effectively to

enhance governance and client satisfaction. This research fills a gap in the literature by providing empirical evidence on the interplay between digital transformation and stakeholder dynamics in the context of urban land administration, ultimately suggesting that overcoming these challenges is essential for successful implementation and improved service outcomes

The study entitled "Examining the Influence of Artificial Intelligence (AI) Adoption on Operational Decision-Making" by (Ferede, D., & Negash, S. , 2025) investigates the transformative impact of AI on decision-making processes within organizations. The authors highlight that the integration of AI introduces new opportunities and challenges, significantly altering traditional decision-making methods. Utilizing a mixed-method approach grounded in input-process-output and dynamic capability theories, the study aims to address significant gaps in understanding AI's effects on operational decision-making, particularly in the Global South. The findings suggest that while AI enhances decision-making efficiency and effectiveness, there are still many uncertainties regarding its integration into human-centered processes. The research emphasizes the need for further empirical studies to explore AI's implications for organizational dynamics and offers insights for policymakers and practitioners on leveraging AI for improved decision-making in various sectors.

Table 2.3 Literature review

Author & Year	Objective/Purpose	Approaches/Methodology	Model used	Key Finding & Limitation
Jiatong Yu, Jiajue Wang, and Taesoo Moon(2012	To investigate the influence of digital transformation capability on operational performance and its relationship with strategic orientation	Survey method; collected data from 162 enterprises using SPSS and SmartPLS 3 for analysis.	Dynamic capability theory, focusing on three hub factors: sensing, organizing, and restructuring	Strategic orientation positively impacts digital transformation capability. Digital transformation capability positively affects operational performance **Limitation** Limited to the specific context of the surveyed enterprises; may not represent all industries. Reliance on self-reported data could introduce bias.
Morakanyane, R., Grace, A. A., and O'Reilly (2017)	To clarify the ambiguous nature of digital transformation and propose a comprehensive framework.	Utilizing a concept-centric matrix, they categorize dimensions such as characteristics, drivers, impacts, and transformed areas.	concept-centric matrix	a more inclusive definition that emphasizes the evolutionary nature of digital transformation and the necessity for a strategic orientation toward customer and technology needs **Limitation** The study highlights the need for further research to reconcile discrepancies in the literature and to explore the specific impacts of digital transformation across various industries

Kanaka Rakesh Varma Kothapalli (2022)	To investigate how digital transformation reshapes organizational processes and enhances customer interactions.	A systematic review of secondary data, focusing on the benefits of technologies such as AI, cloud computing, and data analytics	The study does not specify a formal model but discusses trends and challenges related to digital transformation	The study identifies significant benefits, including improved operational efficiency and customer satisfaction through automation and omnichannel strategies. **limitations** regarding the generalizability of the findings and reliance on secondary data are noted.
Hafte Gebreselassie Gebrihet and Pregala Pillay, (2021)"	To examine emerging Challenges and Prospects of Digital Transformation and Stakeholders Integration in Urban Land Administration in Ethiopia"	A qualitative methodology was employed, involving interviews with 78 participants, including officials, auctioneers, and experts in Mekelle City.	The study does not explicitly mention a specific model but focuses on qualitative insights regarding digital transformation and stakeholder integration.	The findings indicate that digital transformation has the potential to improve service delivery and stakeholder integration. However, challenges such as financial constraints and ineffective leadership hinder progress. The authors emphasize the need for a robust digital infrastructure and effective collaboration among stakeholders to enhance governance and client satisfaction. The study fills a gap in the literature by providing empirical evidence on the relationship between digital transformation and stakeholder dynamics, though it may be limited by its qualitative nature and context-specific focus

Dereje Ferede and Solomon Negash, (2025)"Examining the Influence of Artificial Intelligence (AI) Adoption on Operational Decision-Making"	To investigate the transformative impact of AI on decision-making processes within organizations	A mixed-method approach is utilized, grounded in input-process-output and dynamic capability theories	The study employs input-process-output and dynamic capability theories to frame its analysis	The findings indicate that AI adoption enhances decision-making efficiency and effectiveness but also highlight uncertainties surrounding its integration into human-centered processes. The study underscores the necessity for further empirical research to better understand AI's implications for organizational dynamics

2.11 Chapter Summery

According to the assessment of related literature, a greater understanding of digital transformation capabilities and their effects on organizational performance requires addressing a number of important challenges. To investigate the stated research issues, this study uses a survey. A summary of the importance of digital transformation, an explanation of the research literature review procedure, and definitions of important terminology and topics are all included in this chapter. Additionally, it examines the concept of digital transformation, discusses organizational performance metrics, and explores the Resource-Based Theory as a supporting framework. The analysis also highlights digital transformation capabilities, such as dynamic, adaptive, and managerial capabilities, while identifying critical research gaps that need more research. This comprehensive approach sets a solid foundation for understanding the relationship between digital transformation and organizational performance.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Overview

(Kothari, C. , 2012) describes exploration methodology as the scientific study of how exploration is carried out and believes that it is essential for addressing all problems in research. Similarly, (Cresswell, 2014) emphasizes the importance of a well-defined methodology in guiding the research process and ensuring the validity of findings. In this context, the thesis investigates various approaches to exploring research issues in detail, exploring the rationale behind each method. This chapter outlines the exploration methodology employed in the study, including the design selection, target participants, sampling system, data collection methods, and the processes for analyzing, interpreting, and presenting data. Finally, it concludes with a brief summary, providing clarity and understanding for the reader.

3.2 Research Design

According to Saunders et al. (2009), research design is a blueprint for any study that addresses at least four issues: what questions to ask, what data are important, what data to collect, and how to interpret the results. Furthermore, according to this accurate definition (Yin, 2009), research design is a general process that outlines how you will approach your research question. It is the reasoning that connects the facts to be gathered and the conclusion to the study's original question. This is the primary topic that our research thesis covers.

Researchers employ qualitative, quantitative, or mixed methods to understand and explain specific phenomena, with the choice of approach depending on the research purpose, nature of the study, problem area, and research questions (Cresswell, 2014). In this research design, both qualitative and quantitative approaches are utilized to investigate the influence of digital transformation capabilities and organizational performance in the Federal Housing Corporation (FHC).

The quantitative approach focuses on examining the influence of digital transformation on organization performance metrics through structured surveys distributed to employees. This component aims to test specific hypotheses related to the relationship between Digital transformation capabilities and organizational perfromnce. By employing a descriptive method, the research analyzed numerical data to explore correlations and drew conclusions about the influence of digital transformation on organizational performance.

Mugenda and Mugenda (2008) indicate that correlational research design is basically concerned with assessing relationships among variables. It is thus based on the premise that if a statistically significant relationship exists between two variables, then it is possible to predict one variable using the information available on another variable. Through correlational analysis, the study was able to determine the relationships between the independent variables and how they influenced the dependent variable. Organizational performance served as the study's dependent variable, and digital transformation capabilities, which were assessed using three dimensions, were the independent variable. These were: dynamic capabilities, adaptive capabilities, and management capabilities.

The qualitative component on the other hand involves conducting semi-structured interviews and focus group discussion with key stakeholders, such as IT managers and employees, to gain in-depth insights into their experiences and perceptions regarding digital transformation capabilities. This qualitative data will help identify the challenges and facilitators of Digital transformation and provide context to the quantitative findings.

The hybrid methodology that combines qualitative and quantitative components provides a comprehensive understanding of how digital transformation capabilities influence performance, enabling FHC to make informed strategic decisions for enhancing digital transformation in the organization.

3.3 The Study Population and Sampling Method

3.3.1 The Study Population

According to (Bloomfield, J., & Fisher, M. J. , 2019), a population is a collection of items, families, services, events, and/or unique elements. This entails complete study subjects as directed by research objectives where a sample is to be carefully selected (Rahi, S., 2017). A census inquiry represents a complete enumeration of all items within this population (Kothari, 2004).This study aims to assess the influence of digital transformation capabilities and organizational performance of the Federal Housing Corporation (FHC), which has six branch offices five of them located in Addis Ababa and one in Dire Dawa. The total target population consists of 1,652 employees, including 65 leaders such as team leaders, directors, and the CEO.

This approach not only streamlines the data collection process but also ensures that the perspectives gathered are representative of both upper management and frontline employees. Ultimately, this targeted methodology enhances the quality of insights, enabling a clearer understanding of the factors that drive successful IT alignment in the organization.

Table 3.1 Population of FHC included in the study

No	FHC head office and Branches	Number of employees
1	FHC head office	577
2	Branch 1	147
3	Branch 2	196
4	Branch 3	234
5	Branch 4	210
6	Lyu Branch	176
7	Diredawa	85
8	**Total**	**1,625**

Source**:** FHC Human Resource Records (2025)

3.3.2 Sampling Design

Sampling concerns procedure of selecting a suitable number of subjects from a distinct population (Sheehan, 2018). In sampling, it is imperative to establish the right respondents who will give reliable and valid information to be able to answer research questions properly (Kalu, F. A., & Bwalya, J. C. , 2017). Probability random sampling means that every item in the population has an equal chance of being included in sample. One way to undertake random sampling would be if researcher was to construct a sampling frame first and then used a random number generation computer program to pick a sample from the sampling frame .Probability or random sampling has the greatest freedom from bias but may represent the most costly sample in terms of time and energy for a given level of sampling error (Taherdoost, 2016).

3.3.3 Sampling Frame

Sampling frame entails complete itemized elements in the study population where a sample will be obtained (Ding, 2021). This study found a sampling frame from personnel records of Federal Housing Corporation to get the number of employees in the company.

3.3.4 Sampling Technique

Rahi, S. (2017) defines sampling as a method in which the researcher aims to learn more about the entire population and applies the results to the entire population by identifying a particular procedure by which sample units have been carefully selected. A stratified slice is commonly employed in situations where a population exhibits significant variance. (Singh, A. S., & Masuku, M. B., 2014) .Its goal is to guarantee all strata are fairly represented. The study used by dividing the population into strata (or subgroups), stratified sampling involves selecting a random sample from each grouping. Respondents were divided into two groups for the study: operational staff, which included employees from every department at FHC headquarters, and management, which included department managers and supervisors. This approach is employed when a study population exhibits inconsistencies, as stated by (Braun & Clarke 2021). The technique is further supported by the author because of its general correctness, ease of assessment, and capacity to divide the population into simple categories that allow for equal representation and comparison.

3.3.5 Sampling Size

Sample size is termed as a reduced group of elements carefully chosen from the entire study population (Moser, A., & Korstjens, I., 2018.) Sample size determination regards the number of units that a study intends to include so as to allow appropriate analysis, provide desired level of accuracy and validity of research results. (Mugenda, O.M. and Mugenda, A.G., 2003) proposed that a sample size should be at least be 10% of the study population to suitably represent that target population as well as increase accuracy of study results.

Thus, to determine sample size from the total population of the study the researcher was used the sample size determination (Yamane., 2004) and summarized as follows:

$$\boldsymbol{n = \frac{N}{1 + N(e^2)}}$$

Where**:** n = represents sample size,

N= is population size,

e = is maximum variability or margin of error.

To calculate sample size of employees for distributing questuionarie, we used a degree of variability (proportion) of 0.05 and a confidence level of 95%. Accordingly out of the total population of the study (N=**1625**) the sample size of 320 employees is used for the survey .

Therefore, to calculate sample size (n):

$$\boldsymbol{n = \frac{N}{1 + N(e^2)}}$$

$$\boldsymbol{n = \frac{1625}{1+1625(0.05^2)}}=$$

320 (total sample size of the study)

The 320 employees were chosen from the selected departments of FHC head office and branches using the stratified random sampling approach. The sample distribution is done proportional based on the number of employees working at head office and branches as shown in Table 3-2 below.

Table 3.2 Sample Size Distribution

Head office and Branches	Number of employees	sample size allocation where n=sample size, N1=Number of employee N=Total Population. $n = \frac{n * N1}{N}$	Number of employees selected
FHC head office	577	$= \frac{320*577}{1625}$= 114	114
Branch 1	147	$= \frac{320*147}{1625}$= 29	29
Branch 2	196	$\frac{320*196}{1625}$= 39	39
Branch 3	234	$\frac{320*234}{1625}$=46	46
Branch 4	210	$\frac{320*210}{1625}$=41	41
Lyu Branch	176	$\frac{320*176}{1625}$=34	34
Diredawa	85	$\frac{320*85}{1625}$=17	17
Total	1,625	Total Sample size=320	320

3.4 Data Collection Methodology

Data collection, according to (Cooper, D. R., & Schindler, P., 2014) is the process of gathering necessary information from study participants in a methodical and established way in order to address the research questions or objective.

To investigate how the Federal Housing Corporation (FHC) can effectively manage digital transformation capabilities and organizational performance, this study employs a mixed-methods approach, utilizing both quantitative and qualitative data collection methods. The empirical analysis was focused on gathering insights from various stakeholders within FHC through interviews and questionnaires.

3.4.1 Quantitative Data Collection Method

3.4.1.1 Questionnaires Design

“A questionnaire is a systematic compilation of questions that are submitted to a sampling of population from which information is desired” (Pandey, P., & Pandey, M. M., 2015) In general, the word questionnaire refers to a device for securing answers to questions by using a form which the respondent fills in himself.” (Roopa, S., & Rani, M. S. , 2012).

The structured questionnaires consisted of two sections. The first part comprised demographic information of the respondents including their gender, age, educational background, position they occupy in the company and number of years in employment. This data was necessary in determining a comprehensive profile for the sample. Questionnaires about the two variables (dependent and independent) were included in the second section.

The second part of the questionnaire entailed questions developed in a 5-point Likert system. Instruments developed using Likert system was proven to satisfactorily provide reliability and validity in various settings. Research objectives guided the design of this second part. Further, the respondents were provided with statements which they were required to show their extent of agreeing or disagreeing, given 1 as the option with strong disagreement and 5 as the option they mostly agree with.

3.4.1.2 Questioner Process

The questionnaire process systematically gathers information aligned with research objectives, starting with defining those objectives and identifying the target audience, such as employees or customers. It involves selecting the format of questions, conducting a pilot test for feedback, and finalizing the questionnaire to ensure clarity and user friendliness. After distributing the questionnaire through effective methods, researchers systematically collect and analyze responses. Finally, they summarize the findings and discuss their implications, providing valuable insights for further study or practical application**.**

1. Define the Research Objectives

- Clearly outline what you want to achieve with the questionnaire.
- Identify the specific information you need to gather.

2. Identify Your Target Audience

- employees, stakeholders, customers.
- Consider their demographics and experience related to your research topic.

3. Choose the Questionnaire Format

- Decide whether to use open-ended questions, closed-ended questions, or a mix of both.
- Closed-ended questions can include multiple choice, Likert scales, or yes/no

4. Draft the Questions

- Write clear and concise questions that directly relate to your research objectives.
- Avoid jargon and complex wording to ensure respondents understand the questions.

5. Pilot Test the Questionnaire

- Conduct a pilot test with a small group from your target audience.
- Gather feedback on question clarity, length, and overall experience

6. Organize the Questionnaire

7. Finalize the Questionnaire

- Ensure the final version is error-free and formatted appropriately.
- Include instructions for completion and an estimated time for filling it out.

8. Revise Based on Feedback

- Make necessary adjustments to improve clarity, eliminate bias, and enhance the overall structure.

9. Distribute the Questionnaire

- Choose the most effective method for distribution (online, paper).
- Consider using tools like Google Forms, Survey Monkey, or similar platforms for online distribution

10 .Collect and Analyze Responses

- Gather responses systematically.
- Analyze the data using appropriate statistical or qualitative methods based on your research objective

11. Report Findings

- summarize the results and draw conclusions based on the data collected.
- Discuss the implications of the findings in relation to your research objectives

3.4.1.3 Operationalization of Variables

Operationalization of variables refers to the process of defining and measuring variables to remove ambiguity in a way that allows them to be quantified and analyzed in research studies (Arias Gonzáles, 2021).

Table 3.3 Overview of the operationalized variables within this research

Variables	Operational definition of the variable	Operational Indicators	Measurement tools	Measurement Scale
Independent Variables	Dynamic capabilities ➢ organization's ability to integrate, build, and reconfigure internal and external competencies	Dynamic capabilities ➢ sensing capabilities ➢ seizing capabilities ➢ transforming capabilities	structured questionnaires and interviews	5 point Likert scale
	Adaptive capability ➢ Organization's ability to learn, adjusts, and responds effectively to unexpected changes and disruptions in the environment.	Adaptive capabilities ➢ Innovative capabilities ➢ Technological capabilities ➢ Learning capabilities		
	Managerial capabilities ➢ skills, knowledge, and abilities of managers to effectively lead and manage digital transformation initiatives	Managerial capabilities ➢ Managerial Cognitive Capabilities ➢ Managerial Coordination capabilities		
Dependent variable (organizational performance)	Organizational performance ➢ overall effectiveness and efficiency of the FHC in achieving its strategic goals	organizational performance ➢ Market share ➢ Profitability growth ➢ Efficiency ➢ Service quality		

3.4.1.4 Document Review

The study also conducted review of relevant documents, including strategic plans, internal reports, and organizational records. This documentation was provided additional context and support the data collected from interviews and surveys. Excerpts from these documents was analyzed to capture insights into the organization's digital transformation initiatives and challenges.

3.4.2 Qualitative Data Collection Method

3.4.2.1 Interviews

The qualitative component primarily consisted of semi-structured interviews, conducted in either English or Amharic, depending on the participants' preferences. The English interview question is translated to Amharic by using the Google translation tool and checking with the researcher to relate to the nature of the question. This interview featured open-ended questions designed to elicit in-depth responses regarding participants' experiences, perceptions, and insights related to digital transformation and organizational performance. This approach allowed for rich, verbatim quotations that provided contextual understanding and depth.

3.4.2.2 Observations

In addition to interviews, observational methods was employed to gather data on organizational processes and interactions. This was involved field observations of activities, behaviors, and communications within FHC, capturing detailed field notes that provide context and insight into the dynamics of the organization. Observations was helpd illuminate the real world application of Digital Usage.

3.5 The Research Validity and Reliability

A pair of primary criteria was used to assess the study's quality. These standards are reliability and validity. In order to produce trustworthy results, validity and reliability are related to the methods used for data collection and analysis (Andersson, 2024). The findings and the data gathering strategy must match the desired measurements. Errors and biases from the subjects or participants as well as those from the observers will be almost eliminated. Internal consistency is

Table 3.4 Realiablity of Model factors

Construct	Cronbach's Alpha	MEASUREMENT ITEMS
Dynamic Capabilities	.805	A1. The organization looks for new business opportunities in its environment.
		A2. It's important for our organization to understand changes in competition.
		A3 .The organization puts new ideas into action to improve its services.
		A4. The organization supports learning about digital transformation through workshops and training.
		A5 .The organization is updating its traditional systems to embrace digital products and services.
Adaptive Capabilities	.878	B1The organization helps employees implement digital innovations in their work areas
		B2 The organization invests in digital technologies to improve products and services.
		B3 The organization quickly learns about market and customer trends.
		B4 The organization changes its practices based on customer feedback regarding digital services.
		B5 The organization quickly responds to changes in digital technology and competitor actions.
Managerial Capabilities	.862	C1 The organization management supports digital initiatives**.**
		C2 The organization management communicates effectively about digital transformation.
		C3 The organization management responds quickly to market competition through new technology adoption.
		C 4 The organization encourages learning from past experiences.
		C 5 The organization recruits skilled leadership to meet strategic goals.
Organizational Performance	.850	D1 Our organization's performance has greatly improved because of digital transformation.
		D2 We use technology to enhance our work performance.
		D3 Our revenue has increased because of digital transformation.
		D4 Our services to customers is improved because of digital transformation.
		D5 Our employees become more creative and innovative because of digital transformation.
		D6 Digital transformation has improved our ability to generate profit from our asset.
Overall	.892	26

Source: SPSS survey result (2025)

considered excellent if the alpha value is greater than 0.9, good if it is between 0.8 and 0.9, acceptable if it is between 0.7 and 0.8, questionable if it is between 0.6 and 0.7, poor if it is between 0.5 and 0.6, and unacceptable if it is less than 0.5, according to Kothari (2004).

Furthermore, the information gathered was used with the highest integrity and only for this study endeavor the research findings were presented without any deviation from the actual outcomes of the study. Additionally, proper acknowledgements were given to all the reference materials utilized in the research. In the context of researching Digital transformation and organization performance within the Federal Housing Corporation (FHC), ensuring the validity and reliability of the research instruments such as questionnaires and interview guides is crucial for obtaining accurate and meaningful results. The overall Cronbach's Alpha value for all the items has a value of 0.892 which shows good consistency.

3.6 Data Analysis

Data analysis is a technique typically used to produce systematic interpretations and find unique aspects from the obtained data (Aspers, P., & Corte, U. , 2019). The researcher used questionnaires that were thoroughly reviewed and examined to ensure their completeness and clarity in order to gather data for this investigation. The study used both descriptive and inferential analysis. According to (Kaur, P et al., 2018) described descriptive analysis as the statistic that could be used to represent information concerning a population. Descriptive statistics was used to obtain useful summaries of responses employing mean, percentages, as well as standard deviation.

Likewise, inferential statistics was conducted statistics utilizing Pearson correlation analysis to determine the association between the dependent and independent variables. Correlation analysis was applied to depict the nature, strength and significance of the relationship of the study variables. Statistical Package for Social Sciences (SPSS) will be utilized in the analysis of data. Along with other formats like pie charts, graphs, and frequency tables, data will be presented using lengthy explanations and descriptions.

Regression analysis was done to measure the significance level of the variables in exhibiting the effect of independent variables on dependent variables. Equally, regression has been used to determine which independent variable ranks highly among the rest when combined to assess association with the dependent variable. The study findings were presented in tables, graphs, and charts. The study also used the regression equation indicated below:

$$Y=\beta 0+\beta 1X1+\beta 2X2+\beta 3X3+\varepsilon$$

Where ,Y = is the dependent variable (Organizational performance) being predicted and the independent variables such as

X1= Dynamic Capability

X2= Adaptive Capability

X3= Managerial Capability

ε = Error term

β and 0 are the constant terms in the equation, while β1, β2 and β3 are coefficients of the independent variables.

3.7 Research Model

The theoretical representation of the subject under investigation is known as a research model. Researchers must choose how to divide real-world knowledge into different constructs (whether visually or otherwise) and arrange these constructs on the presentation space in a comprehensible manner in order to display abstract information. A reader's ability to comprehend and use an idea to solve problems is greatly influenced by the manner a researcher communicates it (Palvia P., et al 2006).

Two-tiered (P) Simple Influence Diagram: This model, which is typically shown as a diagram, clearly outlines the dependent and independent variables as well as the connections between them. In the simple effect diagram, the dependent variable or factors are at level 2, while the independent variables are at level 1. There may be multiple variables at each level. The essence of a simple influence diagram is prescriptive. The approach for analyzing the relationship between organizational performance and digital capabilities in the Federal House Corporation is illustrated in the picture

Drawing from the theoretical and empirical reviews, this research hypothesizes the relationships among the study variables as illustrated in Figure 3.1. In this model, the independent variables

include dynamic capabilities, adaptive capabilities, and managerial capabilities, while the dependent variable is organizational performance. This framework serves as the research model for the study, providing a clear structure for examining how these capabilities influence organizational outcomes.

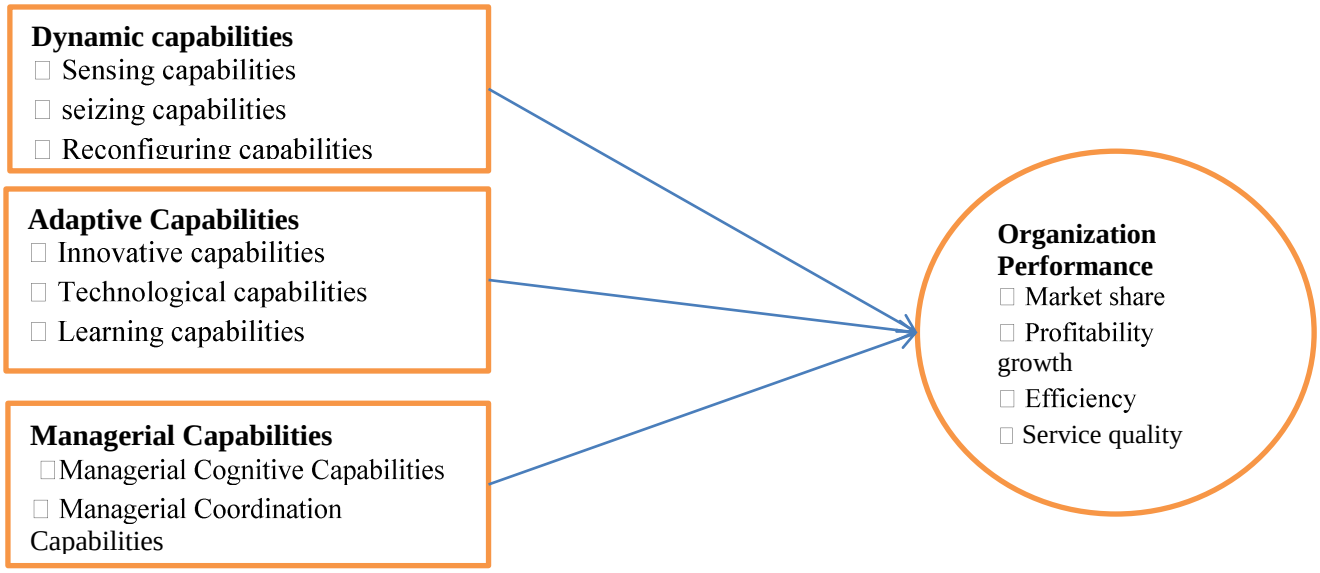

Figure 3. 1 Research conceptual model
Source lee et.al (2003)

3.7.1 Dynamic Capabilities and Organizational Performance

Dynamic capabilities play a crucial role in enhancing organizational performance through three key components: sensing, seizing, and reconfiguring capabilities. Sensing capabilities involve identifying and assessing technological opportunities in relation to customer needs (Teece, D. J. , 2014) and are positively correlated with organizational resilience (Akpan, I. J et al., 2022) and sustained competitive advantage (Ngeche, J., & Kaluyu, V. , 2023), enabling firms to adapt effectively to market changes. Seizing capabilities refer to the ability to capture the value of sensed opportunities by developing new products or processes (Teece, D. J. , 2007), which allows organizations to enhance performance by exploiting market opportunities (Chen, Y., & Lin, Z., 2021); (Umam, R., & Sommanawat, K. , 2019) and making strategic decisions aligned with their strengths. Lastly, reconfiguring capabilities involve transforming organizational structures and resources to adapt to new strategies (Yeow, A et al., 2018) and facilitate

entrepreneurial activity, leading to improved performance (Åberg, C., & Shen, W. , 2020) by aligning resources with evolving market conditions. Together, these capabilities significantly contribute to a firm's success in a dynamic environment.

H1: Dynamic capabilities positively influence on organizational performance.

3.7.2 Adaptive capabilities and organizational performance.

Innovation Capabilities: Adaptive capabilities facilitate the successful implementation of new organizational methods, which is essential for embracing product, market, and process innovations (Mohnen, P., & Hall, B. H. , 2013). Firms that excel in innovation can respond to changing market demands and enhance their performance (Bienhaus, F., & Haddud, A. , 2018). Evidence shows that strong innovation capabilities correlate with improved firm performance, particularly in dynamic environments (Saunila, M et a., 2014).

Learning Capabilities: Adaptive capabilities enable organizations to learn from environmental signals and develop new products or services in response to customer needs (Matysiak, L et al., 2018). Studies indicate a positive relationship between learning capabilities and organizational performance, suggesting that firms that invest in learning processes can achieve competitive advantages through better market responsiveness (Goh, S. C et al., 2012).

Technological Capabilities: The ability to quickly reconfigure resources and adopt new technologies is a critical aspect of adaptive capabilities (Birkinshaw, J., & Gibson, C. , 2004) Research highlights that technological capabilities are significant mediators of performance outcomes, enabling firms to leverage innovations effectively and improve overall performance (Tseng, S. M., & Lee, P. S. , 2014); (Rabillo, A. N., & Rotich, G. , 2018).

H2: adaptive capabilities positively influence the organizational performance.

3.7.3 Managerial Capabilities and Organizational Performance.

Managerial Cognitive Capabilities: Defined as the capacity of managers to engage in cognitive processes such as problem-solving and decision-making (Helfat, C. E., & Peteraf, M. A., 2015), these capabilities form the foundation for dynamic managerial capabilities. Research indicates

that strong cognitive capabilities enhance a firm's ability to seize opportunities and respond to threats, which is vital for strategic transformation and investment decisions (Kabongo, J. D., & Boiral, O. , 2017); (Abugre, 2020). Studies show that managerial cognitive capabilities, particularly through social networking and experience, significantly contribute to improved organizational performance.

Managerial Coordination Capabilities: This dimension involves the coordinated application of organizational resources to create superior value for customers (Mamat et al., 2011). Effective coordination among departments is essential for enhancing performance and meeting client needs (Tamrat, W., & Teferra, D. , 2018). Research has demonstrated that firms with strong managerial coordination capabilities can foster a collaborative culture that leads to improved organizational outcomes (Ahmed, 2016).

H3: managerial capabilities positively influence the organizational performance.

3.8 Chapter Summery

This chapter gives a thorough summary of the research methodologies and methodology that were selected, explaining the methodological approach used in the thesis. It makes sure the reader understands the reasoning behind these techniques and methodologies by outlining the steps involved in their selection. To collect the data required for the study, researchers employed both quantitative and qualitative questionnaires. The study model (framework), assumptions, and techniques for data interpretation and analysis are also described. SPSS version 25 will be used to do the analysis. The data analysis and interpretation will be presented in the following chapter.

CHAPTER FOUR
ANALYSIS, DISCUSSIONS AND FINDING

4.1 Overview

The research approach used for this study was covered in the preceding chapter. Inferential as well as descriptive statistics have been thoroughly examined in this chapter. Specifically, this chapter is divided into four sections. A descriptive analysis of the variables was presented in the first part. The evaluation of correlation and the degree of relationship between the studied variables are addressed in the second section. The results of the diagnostic test for the conventional linear regression model assumption were shown in Section three. Lastly, the regression analysis's findings are shown in the fourth section.

This chapter presents and analyzes the data collected for research on the impacts of digital transformation capabilities on organizational performance at the Federal Housing Corporation. The study initially targeted 320 samples for data collection and successfully gathered data from 235 respondents. Data collection was facilitated using both physically distributed questionnaires and online questionnaires via Google Forms; however, only 16 respondents completed the survey online. The methodology employed for this study utilized SPSS version 25, a powerful tool for quantitative analysis. In addition, we gathered qualitative insights from the limited responses to provide a deeper understanding of the experiences and perceptions of respondents regarding digital transformation. Thematic analysis was conducted to identify key themes and patterns that emerged from these qualitative responses, enriching the overall understanding of the research topic.

4.2 Response Rate

According to the data collected, out of the 320 questionnaires administered, 235 were filled out and returned, which represents a 73.4% response rate. This response rate is considered very well in making conclusions for the study, and the collected data from the respondents is seen below in table 4.1. Mugenda, O.M. and Mugenda, A.G. (2003) observed that a 50% response rate is

adequate, 60% is good, and 70% is rated very well. This implies that, based on this assertion, the response rate of 73.4% attained in this study is therefore very good. But Table 4.1 presents the response and non response rate.

Table 4.1 proportional gatherd data

Status of questionarie	**Head office and Branches**	**Gatherd data From Respondant**	
		Frequency	**Percentage** (%)
Returned	FHC	105	32.8%
	Branch 1	20	6.2%
	Branch 2	25	7.8%
	Branch 3	29	9.0%
	Branch 4	26	8.1%
	Luy Branch	22	6.8%
	Dire Dawa	8	2.5%
	Response	235	73.4%
Non response	Non response	85	26.6%
	Total	320	100%

Source:- SPSS survey result (2025)

4.3 Background of respondents

The first section of the questionnaire consists of five items about demographic characteristics of respondents, such as gender, age, educational qualification, work position and years of service of the respondent in the corporation. The following table summarizes the data pointed out by the respondents.

4.3.1 Gender distribution of respondents

According to Table 4.2, the percentage of male respondents by gender was 67.2%, that is, 158; on the other hand, 32.8% were females, that is, 77 respondents. The survey showed that there were more (34.4%) males as compared to female respondents in the study.

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Table 4.2 Gender Distribution

	Gender	Frequeny	Percent(%)
Valid	Male	158	67.2%
	Female	77	32.8%
Total		235	100 %

Source:- SPSS survey result (2025)

4.3.2 Age Distribution

According to Table 4.3, the age distribution of respondents in the study on the impacts of digital transformation capabilities within the Federal Housing Corporation indicates a predominantly young workforce. Specifically, 14.0% of participants are aged 18-27 years, while 47.7% fall within the 28-37 age group, and 19.6% are aged 38-45 years. Together, those under 45 years represent over 67% of respondents, highlighting a strong presence of young to middle-aged professionals. In contrast, only 18.7% are aged 46 and above, suggesting limited representation of older workers. This youthful demographic may enhance the organization's adaptability to new technologies and digital practices, facilitating successful digital transformation initiatives.

Table 4.3 Age distribution

		Frequency	Percent	Valid Percent(%)	Cumulative Percent(%)
Age range	18-27 years	33	14.0	14.0	14.0
	28-37 years	112	47.7	47.7	61.7
	38-45 years	46	19.6	19.6	81.3
	46-55 years	32	13.6	13.6	94.9
	56 years and above	12	5.1	5.1	100.0
	Total	235	100.0	100.0	

Source: SPSS survey result (2025)

4.3.3 Educational background Distribution

Referring in the Table 4.4, the educational qualifications of respondents in the Federal Housing Corporation, ordered from smallest to highest, reveal a clear emphasis on higher education. Only 0.9% of the workforce holds secondary education, with just 2 individuals, indicating minimal roles requiring such qualifications. Following this, 7.7% are diploma holders, comprising 18 individuals, suggesting some technical roles but still a minority. A significant portion, 40.0% or 94 individuals, hold master's degrees, equipping them for specialized and leadership positions. The largest group, at 51.5%, consists of 121 bachelor's degree holders, indicating that this qualification is essential for various roles in the organizational performance .This distribution highlights the organization's focus on higher education, which is crucial for driving digital transformation and enhancing organizational performance.

Table 4.4 Educational Distribution

		Frequency	Percent (%)
Educational Background	Secondary	2	0.9
	Diploma	18	7.7
	Degree	121	51.5
	Masters	94	40.0
	Total	235	100.0

Source:- SPSS survey result (2025)

4.3.4 Work Experience

The analysis of work experience among respondents in the Federal Housing Corporation, as shown in Table 4.5, reveals a diverse range of experience levels that significantly impact organizational performance. Only 3.8% of the workforce, or 9 individuals, have less than a year of experience, indicating a preference for more seasoned employees. The group with 2-3 years of experience comprises 21.3% (50 individuals), offering fresh perspectives, while those with 4-5 years (14.9% or 35 individuals) are likely transitioning into more specialized roles. The largest segment, 40.0% (94 individuals), has 6-10 years of experience, providing valuable mid-level expertise crucial for project management and decision-making. Finally, 20.0% (47 individuals)

have over 10 years of experience, contributing senior leadership and mentorship. This distribution highlights a well-rounded workforce, fostering knowledge sharing and skill development, which ultimately enhances organizational performance and supports the successful implementation of digital transformation initiatives.

Table 4.5 Work Experience

		Frequency	Percent(%)
Employee Work experainace	Less than a year	9	3.8
	2-3 years	50	21.3
	4-5 years	35	14.9
	6-10 years	94	40.0
	More than 10 years	47	20.0
	Total	235	100.0

Source: SPSS survey result (2025)

4.3.5 Work postion

The table 4.6 presents the distribution of positions held by respondents within the organization, with a total of 235 participants. Among them, Top Level -Managers constitute a mere **1.7%** with only 4 individuals, indicating limited senior leadership representation. Middle -Level Managers make up 21.7**%** or 51 individuals, playing a crucial role in connecting top management and operational staff. Low-Level Managers account for 10.2% of the respondents, totalling 24 individuals, while the largest group, Non-Managerial level employees, represents 66.4% with 156 individuals. This majority underscores the significant presence of staff not in managerial roles. Overall, the data highlights a predominance of non-managerial personnel, followed by middle-level management, with top-level and low-level management roles being less represented, providing insight into the organizational structure.

Table 4.6 Work Postion

		Frequency	Percent(%)	Valid Percent (%)	Cumulative Percent(%)
Respondant Postion	Top -Level Manager	4	1.7(%)	1.7(%)	1.7(%)
	Middle -Level Manager	51	21.7(%)	21.7(%)	23.4(%)
	Low- Level manager	24	10.2(%)	10.2(%)	33.6(%)
	Non -Managerial level	156	66.4(%)	66.4(%)	100.0(%)
	Total	235	100.0	100.0	

Source: SPSS survey result (2025)

4.4 Descriptive Analysis

We can gain insight into data using descriptive statistics without having to examine every piece of information in depth. In order to determine the data's distribution, we compute important numerical quantities. We also create visual graphs that illustrate the distribution of the data. Where is the data centre located (location)? what is the data's range (Scale) ?What is the data's shape (Form)? The summary statistics can be used to describe them.

This part included questionnaire research related questions, including five on managerial capacities, five about adaptive capabilities, five about dynamic capabilities, and six about organizational performance. The following likert scale technique, which is shown in the table below, was thus used to advise the respondents: strongly disagree (SD) = 1, disagree (D) = 2, neutral (N)= 3, agree (A) = 4, and Strongly Agree (SA)=5 .

4.4.1 Dynamic Capabilities and Organizational Performance

The first independent variable considered in this research is dynamic capabilities, which encompass the organization’s ability to adapt, integrate, and reconfigure internal and external competences in response to changing environments. The details and summary of descriptive statistics output regarding dynamic capabilities are shown below.

In Table 4.7 Item Number 1 states that, the organization actively seeks new business opportunities in its environment. According to the results, 48.5% of respondents strongly agree, while 38.3% agree, indicating a strong consensus that FHC is proactive in exploring new

opportunities, 10.6% are neutral, 2.1% disagree and .4% is strongly disagree. The mean score for this item is 4.33, reflecting a positive perception among respondents.

In addition Table 4.7 Item Number 2 illustrates the importance of understanding changes in competition. Here, 52.8 % of the respondents strongly agree, 36.6 % agree, 6.8 % are neutral, 3.0 % disagree, and .9 % strongly disagrees. The mean score is 4.37, suggesting that the majority recognizes the necessity of being aware of competitive dynamics to enhance organizational performance.

Also Table 4.7 Item Number 3 reflects that, the organization puts new ideas into action to improve its services. With 37.0% of respondents strongly agreeing, 45.5 % agreeing, 12.8% remaining neutral, 4.3% disagreeing and .4% strongly disagree .the mean score of 4.14 indicates a positive perception of FHC's implementation of innovative ideas.

Futher Table 4.7 Item Number 4 addresses the support for learning about digital transformation through workshops and training. This item shows that only 26.8 % strongly agree and 40.0 % agree, while a, 21.3 %, remains neutral 10.2% disagreeing and 1.7% strongly disagree. The mean score of 3.80 suggests that there is room for improvement in training initiatives related to digital transformation.

Finally Table 4.7 Item Number 5 states that, the organization is updating its traditional systems to embrace digital products and services. The responses indicate that 33.3 % strongly agree and 40.6% agree, 19.7 remaining neutral, 4.7% disagreeing 1.7% strongly disagree resulting in a mean score of 3.99. This reflects a favorable view of FHC's modernization efforts.

According to the mean values in the table 4.7, 5.88% of respondents expressed disagreement (both strongly disagree and disagree) regarding the impact of dynamic capabilities on organizational performance, while 14.24 % remained neutral. The remaining 79.88% expressed agreement (both strongly agree and agree).Therefore, the researcher concludes that more respondent positively accepted dynamic capabilities influence the organization performance.

Table 4.7 Response related to Dynamic capabilities

No	Dynamic Capabilities	Response rate (%)						
		5(SA)	4(A)	3(N)	2(D)	1(SD)	Mean	Standard Deviations
1	The organization looks for new business opportunities in its environment	48.5	38.3	10.6	2.1	.4	4.32	.783
2	It's important for our organization to understand changes in competition	52.8	36.6	6.8	3.0	.9	4.37	.809
3	The organization puts new ideas into action to improve its services	37.0	45.5	12.8	4.3	.4	4.14	.830
4	The organization supports learning about digital transformation through workshops and training	26.8	40.0	21.3	10.2	1.7	3.80	1.00
5	The organization is updating its traditional systems to embrace digital products and services	33.3	40.6	19.7	4.7	1.7	3.99	0.93
	Average (Mean) Response Value	39.68	40.2	14.24	4.86	1.02	4.12	0.87

Source: SPSS survey result (2025)

4.4.2 Adaptive Capabilities and Organizational Performance

The second independent variable considered in this research is adaptive capabilities, which refer to the organization's ability to implement digital innovations and respond effectively to market changes. The details and summary of descriptive statistics output regarding adaptive capabilities are shown below.

Table 4.8 Item Number 1 states that, the organization helps employees implement digital innovations in their work areas. According to the results, 26.4 % of respondents strongly agree and 44.7% agree, while 17.0% remain neutral, 11.1% disagree, and 0.9% strongly disagrees. The

mean score for this item is 3.85, indicating a generally positive perception of support for digital innovation implementation.

Also Table 4.8 Item Number 2 illustrates that, the organization invests in digital technologies to improve products and services. Here, 26.8% of respondents strongly agree and 44.3% agree, while 17.9% are neutral, 9.4% disagree, and 1.7% strongly disagrees. The mean score is 3.85, suggesting that the majority perceive the organization as committed to enhancing products and services through technological investment.

Further Table 4.8 Item Number 3 reflects that ,the organization quickly learns about market and customer trends. With 22.6% of respondents strongly agreeing and 46.0% agreeing, while 22.6% remain neutral, 7.7% disagree, and 1.3% strongly disagree, the mean score of 3.85 indicates a positive perception regarding the organization's responsiveness to market dynamics.

Table 4.8 Item Number 4 addresses changes in organizational practices based on customer feedback regarding digital services. This item shows that 17.7% strongly agree, 44.7% agree, 26.0% are neutral, 11.1% disagree, and 1.3% strongly disagree. The mean score of 3.65 suggests that while there is agreement on adapting practices based on feedback, there is a notable level of neutrality among respondents.

In addition Table 4.8 Item Number 5 states that, the organization quickly responds to changes in digital technology and competitor actions. The responses indicate that 17.0% strongly agree, 37.9 % agree, 31.5 % remain neutral 10.2% disagree, and 1.7% strongly disagree, resulting in a mean score of 3.57. This implies that there is some uncertainty regarding the organization's agility in responding to technological changes and competitive pressures.

According to the mean values in the table 4.8, 11.28% of respondents expressed disagreement (both strongly disagree and disagree) regarding the impact of adaptive capabilities on organizational performance, while 23.0 % remained neutral. The remaining 65.48% expressed agreement (both strongly agree and agree).Therefore, the researcher concludes that more respondent positively accepted adaptive capabilities influence the organization performance.

Table 4.8 Response related to Adaptive capabilities

NO	**Adaptive capabilities**	Response rate(%)						
		5(SA)	4(A)	3(N)	2(D)	1(SD)	Mean	Standard Deviation
1	The organization helps employees implement digital innovations in their work areas	26.4	44.7	17.0	11.1	.9	3.85	.966
2	The organization invests in digital technologies to improve products and services	26.8	44.3	17.9	9.4	1.7	3.85	.978
3	The organization quickly learns about market and customer trends	22.6	46.0	22.6	7.7	1.3	3.81	.91
4	The organization changes its practices based on customer feedback regarding digital services	17.0	44.7	26.0	11.1	1.3	3.65	.932
5	The organization quickly responds to changes in digital technology and competitor actions	17.0	37.9	31.5	10.2	1.7	3.57	.965
	Average (Mean) Response Value	21.96	43.52	23	9.9	1.38	3.746	0.95

Source : SPSS survey result (2025)

4.4.3 Managerial Capabilities and Organizational performance

The third independent variable considered in this research is managerial capabilities, which refer to the organization's ability to support digital initiatives and enhance overall performance. The details and summary of descriptive statistics output regarding managerial capabilities are shown below.

In Table 4.9 Item Number 1 states that, the organization management supports digital initiatives. According to the results**,** 26.4% of respondents strongly agree and 46.4% agree, while 20.4%

remain neutral**,** 6.4% disagree, and 0.4**%** strongly disagrees. The mean score for this item is 3.92, indicating a generally positive perception of management's support for digital initiatives.

Further, Table 4.9 Item Number 2 illustrates that , the organization management communicates effectively about digital transformation. Here, 22.1% of respondents strongly agree and 47.7% agree, while 21.3% are neutral, 8.5% disagree, and 0.4% strongly disagrees. The mean score is 3.83, suggesting that the majority perceive management as effective in communicating about digital transformation.

In Table 4.9 Item Number 3 reflects that, the organization management responds quickly to market competition through new technology adoption. With 19.1% of respondents strongly agreeing and 45.1% agreeing, while 23.8% remain neutral, 11.1% disagree, and 0.9% strongly disagree, the mean score of 3.71 indicates a slightly lower perception regarding management's responsiveness to market dynamics.

In Addition Table 4.9 Item Number 4 addresses that, the organization encourages learning from past experiences. This item shows that 28.5% strongly agree, 43.8% agree, 17.9% are neutral, 8.9% disagree, and 0.4% strongly disagree. The mean score of 3.91 suggests a strong perception of the organization’s efforts to promote learning from past experiences.

Table 4.9 Item Number 5 states that, the organization recruits skilled leadership to meet strategic goals. The responses indicate that 26.8% strongly agree, 40.9% agree, 21.7% remain neutral, 8.5% disagree, and 2.1% strongly disagree. This results in a mean score of 3.82, reflecting a generally positive view on leadership recruitment

According to the mean values in the table 4.9 10.24 % of respondents expressed disagreement (both strongly disagree and disagree) regarding the impact of managerial capabilities on organizational performance, while 21.46% remained neutral. The remaining 68.34% expressed agreement (both strongly agree and agree).Therefore, the researcher concludes that more respondent positively accepted managerial capabilities influence the organization performance

Table 4.9 Response related to managerial capabilities

No	Managerial capabilities	Response rate (%)						
		5(SA)	4(A)	3(N)	2(D)	1(SD)	Mean	Standard Deviations
1	The organization management supports digital initiatives.	28.1	43.4	20.9	6.4	1.3	3.91	.924
2	The organization management communicates effectively about digital transformation	22.1	45.1	23.0	8.9	.9	3.79	.918
3	The organization management responds quickly to market competition through new technology adoption	20.0	42.6	24.7	11.9	.9	3.69	.953
4	The organization encourages learning from past experiences	28.9	44.7	16.6	8.9	.9	3.92	.942
5	The organization recruits skilled leadership to meet strategic goals	27.7	39.1	22.1	8.5	2.6	3.81	1.018
	Average (Mean) Response Value	25.36	42.98	21.46	8.92	1.32	3.83	0.91

Source: SPSS survey result (2025)

4.4.4 Organizational Performance

Organizational performance, the dependent variable taken into consideration in this study, indicates how successfully the organization accomplishes its aims and objectives, especially when it comes to digital transformation. A comprehensive evaluation based on the provided descriptive statistics can be seen below.

In Table 4.10 Item 1 assesses whether the organization's performance has greatly improved due to digital transformation. Here, 33.2% of respondents strongly agree and 47.7 % agree, while 15.3% remain neutral, 3.0% disagree, and 0.9% strongly disagrees. The mean score of 4.09 reflects a significant majority recognizing the positive impact of digital initiatives on overall performance

In Table 4.10 Item 2 explores the use of technology to enhance work performance. A combined 31.1% strongly agree and 53.2% agree, with 12.3% neutral, 3.0% disagree, and .9% strongly disagree. This impressive mean score of 4.11 indicates a robust belief in technology's effectiveness in improving productivity and efficiency.

Also Table 4.10 Item 3 evaluates whether revenue has increased as a result of digital transformation. 33.6% strongly agree and 41.7% agree, while 18.3% remain neutral, 5.5% disagree, and 0.9% strongly disagrees. The mean score of 3.96 underscores the perceived financial benefits derived from digital initiatives.

Table 4.10 Item 4 focuses on improvements in customer service due to digital transformation. Here, 30.6% strongly agree and 48.1% agree, with 17.0% neutral 3.0% disagree, and 1.3% strongly disagrees, yielding a mean score of 4.04. This finding reflects a favorable assessment of how digital initiatives have enhanced service delivery.

Table 4.10 Item 5 examines whether employees have become more creative and innovative because of digital transformation. A combined 30.6% strongly agree and 41.3% agree, while 23.8% remain neutral, 3.0% disagree, and 1.3% strongly disagrees. This mean value 3.99 suggests that digital transformation positively influences employee creativity and innovation.

Finally Table 4.10 Item 6 assesses whether digital transformation has improved the organization’s ability to generate profit from its assets. 30.2% strongly agree and 46.0% agree, with 17.0% neutral, 6.4% disagree, and 0.4% strongly disagree, resulting in a mean score of 3.99. This indicates a strong perception of enhanced profitability linked to digital efforts.

Based on the mean values from the respondents, 79.50% expressed agreement (both strongly agree and agree) regarding improvements in organizational performance due to digital transformation. Approximately 15.82% remained neutral, while 4.83% expressed disagreement across various statements. Therefore, the researcher concludes that organizational performance is positively influenced by managerial capability, dynamic capability, and adaptive capability, as accepted by the respondents.

Table 4.10 Response related to Organizational performance

NO	Organizational Performance	Response rate(%)						
		5(SA)	4(A)	3(N)	2(D)	1(SD)	Mean	Standard Deviations
1	Our organization's performance has greatly improved because of digital transformation	33.2	47.7	15.3	3.0	.9	4.09	.822
2	We use technology to enhance our work performance	31.1	53.2	12.3	3.0	.4	4.11	.762
3	Our revenue has increased because of digital transformation	30.2	43.4	19.6	5.5	1.3	3.96	.914
4	Our services to customers is improved because of digital transformation	30.6	48.1	17.0	3.0	1.3	4.04	.844
5	Our employees become more creative and innovative because of digital transformation	30.6	41.3	23.8	3.0	1.3	3.97	.884
6	Digital transformation has improved our ability to generate profit from our asset	30.2	46.0	17.0	6.4	.4	3.99	.877
	Average (Mean) Response Value	30.98	46.61	17.5	3.98	0.93	4.02	0.85

Source: SPSS survey result (2025)

4.4. 5 Over All Variables of Descriptive Statistics

Based on a sample of 235 respondents, table 4.11 displays descriptive statistics for four important variables: organizational performance, managerial capabilities, adaptive capabilities, and dynamic capabilities. The results show that most participants' mean scores for every variable are fairly close to one another. The mean and standard deviation of each independent variable, which show how far it deviates from the mean, are used to characterize it .The descriptive statistics results for the overall variables reveal that Dynamic Capabilities have a mean of 4.12 and a standard deviation of 0.87. Similarly, Adaptive Capabilities has a mean of 3.74 and a standard deviation of 0.95, Managerial Capabilities has a mean of 3.83 and a standard deviation

of 0.91 and organizational performance has a mean of 4.02 and a standard deviation of 0.85.consquently,these values indicate the degree of deviations from their respective mean values

Table 4.11 over all variables of descriptive statistics

Descriptive Statistics					
Variables	N	Minimum	Maximum	Mean	Std. Deviation
Dynamic_Capabilities	235	5	25	4.12	0.87
Adaptive_Capabilites	235	5	25	3.74	0.95
Managerial_Capabilites	235	7	25	3.83	0.91
Organizational_Performance	235	8	30	4.02	0.85
Valid N (listwise)	235				

Source: SPSS survey result (2025)

4.5 Inferential Statistics

Using data analysis and statistics to make conclusions about a population is called statistical inference. In this section, the result of inferential statistics was supported by Pearson correlation coefficient and multiple regressions were elaborated.

4.5.1 Correlation Analysis

The purpose of the study is to investigate how the organizational performance of the Federal Housing Corporation is affected by digital transformation capabilities. The independent variables (managerial, adaptive, and dynamic capacities) and dependent variable (organizational performance) are linked using Pearson correlation. The researcher employed Pearson correlation coefficient methods, one of the most widely utilized types of correlation coefficients, due to the statistical correctness that typically comes from this approach.

According to, Larson, R., and Farber, (2019), the strength of the relationship between variables is described by correlation. The correlation coefficient has a range of -1 to 1. A correlation value of 1 means there is a perfectly positive relation beteween two variables, whereas a correlation coefficient of -1 means there is perfectly negative relation between two variables. However, if the correlation coefficient is zero, it means that there is no relationship between variables.

4.5.2 Correlation Analysis between the Independent Variables and Dependent Variable

As can be seen from the table 4-12, there are notable and beneficial associations between the independent variables of managerial, adaptive, and dynamic capabilities and the dependent variable of organizational performance. The statistically significant level, which is consistently smaller than 0.01 in a correlation study using Pearson correlation, indicates that there is a strong association between the variables.

The results indicate a positive and significant relationship between Dynamic Capabilities and Organizational Performance, with an r value of 0. 591 ($p < 0.01$), suggesting that enhancements in dynamic capabilities are associated with better organizational performance. The correlation of Adaptive Capabilities with Organizational Performance also shows a positive and significant relationship, as the r value is .586 ($p < 0.01$). This implies that organizations with higher adaptive capabilities tend to achieve superior performance outcomes. Furthermore, the correlation of Managerial Capabilities and Organizational Performance reveals a strong positive relationship, with an r value of .677 ($p < 0.01$), indicating that effective management practices significantly contribute to organizational success.

In general, the correlation matrix's result gives assurance that the variables that were chosen have correlations with one another. The correlation analysis shows that the independent variables and organizational performance have positive, significant correlations; the correlation coefficients are significant at the 1% level.

In conclusion, the results highlight the significance of cultivating management, dynamic, and adaptable skills to improve organizational performance. The significant correlations among these variables highlight their critical role in achieving better outcomes, reinforcing the need for organizations to focus on these areas for improvement (Larson, R., & Farber, B., 2019).

Table 4.12 correlation analysis of independent variables and dependent variable

			Dynamic Capabilities	Adaptive Capabilities	Managerial Capabilities	Organizational Performance
correlation analysis	Dynamic Capabilities	Pearson Correlation	1	.431**	.534**	.591**
		Sig. (2-tailed)		.000	.000	.000
		N	235	235	235	235
	Adaptive Capabilities	Pearson Correlation	.431**	1	.531**	.586**
		Sig. (2-tailed)	.000		.000	.000
		N	235	235	235	235
	Managerial Capabilities	Pearson Correlation	.534**	.531**	1	.677**
		Sig. (2-tailed)	.000	.000		.000
		N	235	235	235	235
	Organizational Performance	Pearson Correlation	.591**	.586**	.677**	1
		Sig. (2-tailed)	.000	.000	.000	
		N	235	235	235	235
	**. Correlation is significant at the 0.01 level (2-tailed).					

Source: SPSS survey result (2025)

4.6 Regression Analysis

In this section, multiple linear regression analysis is a statistical method used to examine the relationship between two or more independent variables and a single dependent variable (Smith, J., & Johnson, A. 2020).With this general principle this particular study tried to employ linear multiple regressions to analyses, the impacts of digital transformation capabilities on the organizational performance in the Federal housing corporations. The dynamic capabilities,

Adaptive capabilities and managerial capabilities considered as the independent variables and organizational performance is dependent variable.

Prior to testing multiple linear regressions, the researcher made four assumptions that must be met; otherwise, the regression cannot be performed. Below are the tests for the four multiple regression assumptions.

4.6.1 Linearity Test

When testing for linearity in multiple linear regression analysis, one commonly used method is the Normal Probability Plot. The Normal Probability Plot is a graphical tool that helps assess whether the residuals of the regression model follow a normal distribution, which is an important assumption in regression analysis (Smith, 2018). It is anticipated that the points in the Normal Probability Plot would lie on a fairly straight diagonal line that runs from bottom left to top right. This would imply no significant departures from the norm. To check for linearity, the study used the Normal P-P Plot of Regression Standardized Residual (Figure 4.1). A linearity pattern was seen because the points were symmetrically distributed along a diagonal line. Thus, linearity was attained, as seen by the straight-line relationship between the residuals and the anticipated dependentvariablescores.

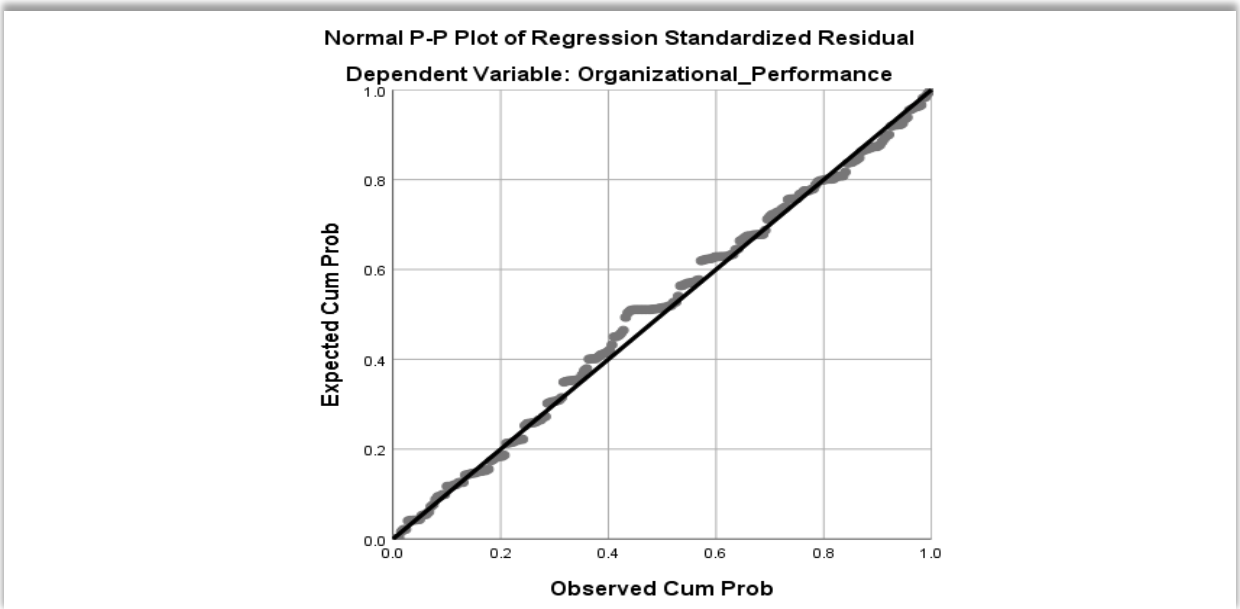

Figure 4. 1 Normal Point Plot

Source: Own survey output, (2025)

4.6.2 Normality Distribution Test

Multiple regression analysis requires that the independent variables should have a normal distribution. Skewness and kurtosis are statistical tools that help researchers assess normality. According to (Hatem, G et al., 2022), kurtosis indicates the thickness or thinness of a distribution's tails compared to a normal distribution, with thicker tails suggesting more extreme values. Skewness measures the symmetry of the distribution; a dataset is symmetric if it mirrors itself around its center point. For a dataset to be considered normally distributed, the skewness and kurtosis values should fall within the acceptable range of -1.0 to +1.0. The normality test results for skewness and kurtosis are presented in Table 4-13 below. Since all values fall within this range, we conclude that the data is normally distributed, which is essential for valid multiple regression analysis.

Table 4.13 Normality test

Descriptive Statistics							
Variables		Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Dynamic Capabilities	235	20.91	2.994	-.758	.159	.453	.316
Adaptive Capabilities	235	18.71	3.906	-.509	.159	-.037	.316
Managerial Capabilities	235	19.23	3.642	-.433	.159	-.143	.316
Organizational Performance	235	24.58	3.750	-.311	.159	-.658	.316
Valid N (listwise)	235						

Source: SPSS survey result (2025)

4.6.3 Test for Heteroscedasticity

Homoscedasticity is the assumption made by the linear regression model (LRM) that the variance of the error term is constant. They are considered heteroscedastic if the variance of the error term differs. The researcher employed the scatter plot approach to verify whether this assumption was violated. Plotting the standardized residual against the standardized projected value is the outcome. Heteroscedasticity is implied if there is a pattern in the plots.On the other hand, there is no proof that heteroscedasticity exists if the plots show a pattern. The graph below appears to be a random array of dots, or the plots lack any pattern, as shown in figure 4.2.

In order to determine whether homoscedasticity is actually a pressing issue in this specific study, the following scatter plot was created using the average findings of the independent variable constructions and the dependent variable organizational performance. Homoscedasticity assumption is not violated.

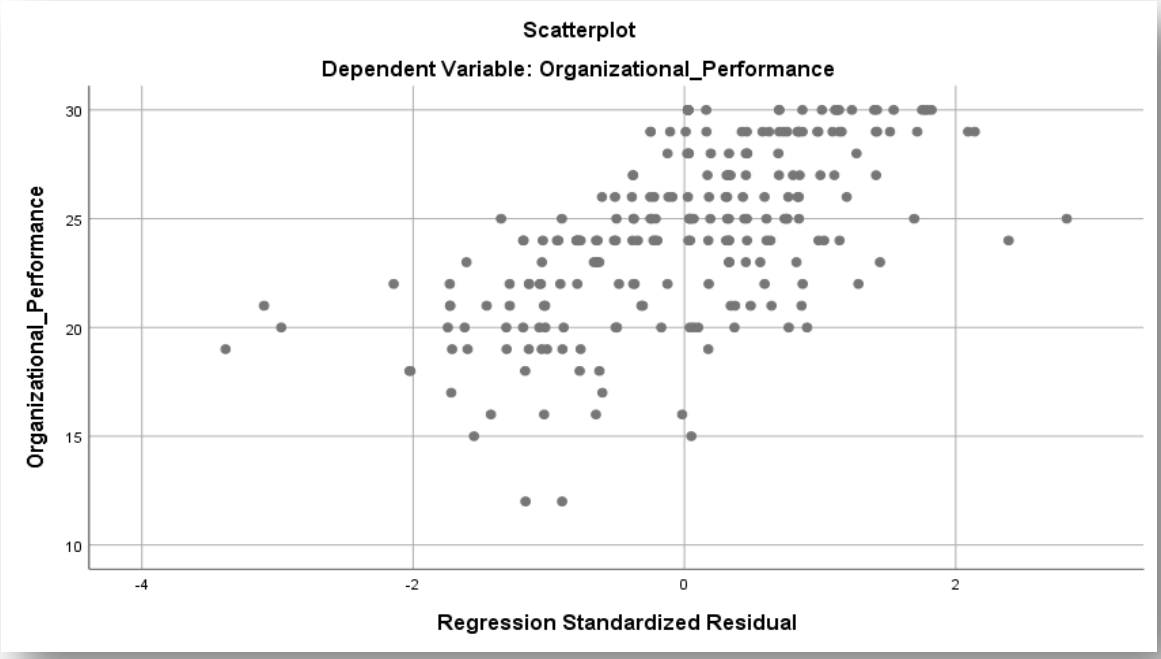

Figure 4. 2 Result of heteroscedasticity
Source; SPSS survey result (2025)

4.6.4 Multicollinearity Test

When two or more predictor variables in a multiple regression analysis are highly linked, it can be challenging to estimate the relationship between each predictor and the dependent variable. This phenomenon is known as multicollinearity . In the case of uncorrelated independent variables, the researcher can measure the significant impact of these factors on the dependent variable (Keith, 2006). Collinearity between variables was assessed using the Variance Inflation .

Table 4.14 Test for Multicollinearity result

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Dynamic Capabilities	.684	1.461
	Adaptive Capabilities	.687	1.455
	Managerial Capabilities	.604	1.656
Dependent Variable: Organizational Performance			

Source:SPSS survey result (2025)

Factor and the Tolerance Rate. a variety of colliding elements determine collinearity among variables Multicollinerity.

The analysis of multicollinearity among the independent variables reveals that there are no significant issues present. The tolerance rates indicate that all independent variables maintain acceptable levels, with tolerance coefficients of 0.684 (68.4%) for Dynamic Capabilities, 0.687 (68.7%) for Adaptive Capabilities, and 0.604 (60.4%) for Managerial Capabilities. These values suggest that the independent variables are not highly correlated with each other.

Additionally, the Variance Inflation Factor (VIF) values further support this finding, ranging from 1.455 for Adaptive Capabilities to 1.656 for Managerial Capabilities. According to (Ringle, et al & Völckner, F. , 2015) tolerance values below 0.10 and VIF values exceeding 10 would indicate potential multicollinearity problems. Since all observed tolerance values are well above the 0.10 threshold and the VIF values are below 2.0, it can be concluded that multicollinearity is not a concern in this model.

4.7 Regression Analysis Result

Multiple linear regression analysis was employed to examine the impacts of digital transformation capabilities on organizational performance within the Federal Housing Corporation. This constructive statistical technique analyzes the association between a single dependent variable and several independent variables. Since all the multiple regression assumptions were satisfied, the researcher proceeded with the regression analysis, focusing on three key elements of the regression output: the Model Summary, the ANOVA (Analysis of Variance) test, and the Beta coefficients. Based on the average responses collected from the participants, the dependent variable organizational performance was analyzed alongside the predictor variables, which are dynamic capabilities, adaptive capabilities and managerial capabilities. Each predictor variable was examined individually to assess its impact on organizational performance.

Table 4.15 Analysis model summary of R Square and Adjusted R Square

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change
1	.760[a]	.578	.572	2.512	.000

a. Predictors: (Constant), Managerial_Capabilites, Dynamic_Capabilities, Adaptive_Capabilites

b. Dependent Variable: Organizational_Performance

Source; SPSS survey result (2025)

4.7.1 Regression model summary

Dynamic capabilities, adaptive capabilities managerial capabilities and dependent variable: project performance is given by R value .760. Additionally, R square and adjusted R square value is given by .578 and .572, respectively. This is interpreted as 57.8% of variation in project performance (dependent variable) is explained by the independent variables, while 42.2% of variation in project performance can be attributed to other variables which are not considered in this study. If another factor is presented, it would further explain 57.2% as shown by the Adjusted R square.

4.7.2 The Analysis of Variance test ANOVA

The study of variations (ANOVA) was applied to see whether variations in digital transformation capabilities could explain organizational performance difference .The findings for the organizational performance are shown in the table below 4.21 The ANOVA results show F-value of 105.440 and a p-value of 0.000 at the 0.05 significance level, indicating a strong model fit. This suggests that dynamic capabilities, adaptive capabilities, and managerial capabilities significantly influence organizational performance at the Federal Housing Corporation.

Table 4.16 Anova result (analysis of variance)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1996.288	3	665.429	105.440	.000[b]
	Residual	1457.840	231	6.311		
	Total	3454.128	234			
a. Dependent Variable: Organizational_Performance						
b. Predictors: (Constant), Managerial_Capabilites, Dynamic_Capabilities, Adaptive_Capabilites						

Source :SPSS survey result (2025)

4.7.3 Regression Coefficient

Regression analysis's coefficient table displays how each independent variable affects the dependent variable. The independent variable's slope is its B coefficient. It shows how much the dependent variable changes for every unit change in the independent variable. The direction of the influence is indicated by the positive or negative sign of the coefficient. The multiple linear regression models the linear relationship between the dependent variable (organizational performance) and independent variables (dynamic capability, adaptive capability and managerial capability). The linear regression model; $\boldsymbol{Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3}$, where Y is organizational performance, β0 is constant and ε is the error term of the model. X1 is dynamic capability, X2 is adaptive capability and X3 is managerial capability. A multiple linear

regression analysis was performed to determine the relative contribution of each of the three independent variables to organizational performance. The results were summarized and presented in Table 4.17.

Table 4.17 Regression of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.137	1.150		4.466	.000
	Dynamic_Capabilities	.321	.062	.267	5.166	.000
	Adaptive_Capabilites	.254	.050	.260	5.045	.000
	Managerial_Capabilites	.404	.056	.396	7.201	.000
a. Dependent Variable: Organizational_Performance						

Source : SPSS survey result (2025)

The researcher focused highly on the standardized Beta coefficient values from the regression Coefficient table to determine the relative significance of each independent variable in predicting the dependent variable. Additionally, the researcher considered the unstandardized Beta coefficient to formulate the linear regression equation.

- **Standardized Beta Coefficient**

Often referred to as relative relevance weights, standardized beta coefficients are useful for comparing scores such as Z-scores because they are all assessed in standard deviation and are independent of the variable's unit of measurement (Field, 2006). In order to account for the effects of inter-correlations among predictors, relative significance weights are the proportionate contribution from each predictor to R2 (Lorenzo-Seva, U et al., 2010). This approach is advised when analyzing the proportional contributions of each predictor variable to the dependent variable (Johnson, R. B., & Onwuegbuzie, A. J., 2004).

Based on the relation observed on the table (4.17) we can see that the contribution of managerial capabilities 39.6%, dynamic capabilities 26.0% and adaptive capabilities 26.7% for the variation observe in the dependent variable (organizational performance). The highest contribute which has an effect on organizational performance according to the responses of respondents is

managerial capabilities 39.6%, it implies if managerial capabilities increase by one unit the variation of project performance is increase by 39.6%, The second indicator that contributed more, organizational performance is dynamic capabilities accounted for 26.7% of the beta coefficient followed by adaptive capabilities of 26.0% respectively.

- **Unstandardized Beta Coefficient**

The Beta Weights, also known as unstandardized beta coefficients, provide insight into the connections between the dependent variable and the independent variables. A positive value indicates a positive relationship between the predictor and the outcome, while a negative coefficient signifies a negative relationship (Field, 2013). (Kraha, A et al., 2012) explains that a β weight coefficient reveals the extent of change in the criterion variable (organizational performance) that can be expected with a one-unit change in the predictor variables (such as managerial capabilities ,dynamic capabilities and adaptive capabilities), while keeping all other predictor variables constant. AS illustrated in table (4.17) based on the unstandardized beta coefficient values, it can be shown that the impacts digital transformation capabilities factors on organizational performance at federal housing corporation the coefficient of regression analysis indicates managerial capabilities, dynamic capabilities and adaptive capabilities are the independent variables showed positive effect and statistically significant at 5% significance level. Therefore, in the next section the researcher present and discuss the linear multiple regression formula for the dependent variable (organizational performance) and the three independent variables managerial capabilities, dynamic capabilities and adaptive capabilities took the form of:

$$Y = a + b1X1 + b2X2 + b3X3 + e$$

Where, Y=the dependent variable project performance, a= y-axis intercept (the constant beta value), b1, b2, b3, =beta weight for each in dependent variables

X1,X2,X3 =representing, managerial capabilities, dynamic capabilities, and adaptive capabilities respectively.e= the error term (0.05 in our case)

$$Y = 5.137 + 0.404X1 + 0.321X2 + 0.254X3 + 0.05$$

The results shown in Table 4.16 indicate that all the independent variables (managerial capability, dynamic capability, adaptive capability and) had positive influence on organizational performance in FHC. Results show Managerial capability (X1) with ($\beta 1$=0.404) which indicates its enormous contribution to organizational performance followed by, dynamic capability (X2)

with ($\beta 2$=0.321) and adaptive capability (X3) with ($\beta 3$=0.254). All of these variables were significant at 95% confidence level. Therefore, the multiple linear regression model is;

$Y=\beta 0+\beta 1X1+\beta 2X2+\beta 3X3+\varepsilon$

$\boldsymbol{Y}$ = 5.137+ 0.404X1 +0.321X2 + 0.254X3+0.05

The regression coefficient showed that managerial capabilities had a ($\beta 1$=0.404), which implies that with 1 unit increase in managerial capability had made organizational performance to go up by 0.404 units. In addition, dynamic capabilities had a ($\beta 2$=.0.321) which implies that with 1 unit increase in dynamic capability, FHC organizational performance increased by $\beta 2$=.0.321 units. This was significant as illustrated with a p=0.000

In addition, adaptive capability had a ($\beta 3$=0.254), which implies that with a unit increase in adaptive capability made FHC organizational performance to go up by 0.254. This was statistically significant as shown with a p=0.000. The study thus implied that dynamic capability, adaptive capability and managerial capability have a significant and positive relationship with organizational performance

4.8 Hypothesis Testing

In order to measure independent variables that have an impact on the dependent variable that is, how managerial, adaptive, and dynamic capabilities affect organizational performance and to examine the relationship between the model's variables, hypothesis testing was done in this study.

For this investigation, linear regression analysis was employed to assess three hypotheses. It is used to measure the extent to which distinct variables affect dependent ones.

A modeling technique called linear regression analysis can be used to determine how one or more independent variables affect a dependent variable. A linear regression shows the impact of the independent variables on the dependent variable's variance or the extent to which the independent variables account for the dependent variable's variance. In addition, the influence of the independent variables or predictor on the dependent variable was examined using R-squared analysis, also known as linear regression.

In order to perform hypothesis testing both the independent variables and the dependent variable are integrated and tabulated in SPSS. Hypothesis testing relies on the standardized coefficient significant (P value) and also the standardized coefficient (Beta value). To support the hypothesis, the statistical significant value should be below 0.05 (the minimum probability to reject or accept the hypothesis) and the standardization coefficient (beta value) should be greater than 0.1 which is the accepted rate. In order to calculate standardized coefficient (Beta value) and the significant of the standardized coefficient (P value) the following steps were followed.

1. Independent variable: Dynamic capabilities against the dependent variable of the organization performance. (H1)
2. Independent variable: Adaptive capabilities against the dependent variable of the organization performance.(H2)
3. Independent variable: Managerial capabilities against the dependent variable of the organization performance.(H3)

Accordingly the following results were obtained:

Hypothesis 1: Dynamic Capabilities and organizational performance

The first hypothesis posits that dynamic capabilities positively influence organizational performance. The regression analysis yielded a standardized coefficient (Beta) of 0.267 and a p-value of 0.000. Given that the p-value is below the significance threshold of 0.05, we accept H1. This finding aligns with existing theory, particularly (Teece, D. J. , 2014) which highlights the importance of sensing capabilities in identifying opportunities that foster organizational resilience and competitive advantage.

Hypothesis 2: Adaptive Capabilities and organizational performance

The second hypothesis suggests that adaptive capabilities positively influence organizational performance. The analysis showed a standardized coefficient (Beta) of 0.260 and a p-value of 0.000. As the p-value is also below 0.05, we **accept** H2. This supports the theoretical framework by (Mohnen, P., & Hall, B. H., 2013), emphasizing the role of adaptive capabilities in facilitating innovation and responsiveness to market demands, which are crucial for enhanced performance.

Hypothesis 3: Managerial Capabilities and organizational performance

The third hypothesis asserts that managerial capabilities positively influence organizational performance. The regression results indicated a standardized coefficient (Beta) of 0.396 and a p-value of 0.000. Since the p-value is below 0.05, we **accept** H3. This finding underscores the significance of managerial cognitive and coordination capabilities, as discussed by (Helfat, C. E., & Peteraf, M. A. , 2015)), in driving organizational success through effective resource application and strategic decision-making.

The R-square is the amount of variance in the dependent variable (organizational performance) explained by the predictor variables taken together (dynamic capabilities, adaptive capabilities, managerial capabilities. According to the result of Table 4.16, $R2$=.578; Taken as a set, the predictors Managerial Capabilities, Dynamic Capabilities, Adaptive Capabilities r 57.8% of the variation in organizational performance (dependent variable) .

Table 4.18 R-Square analysis for organizational performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig. F Change
1	.760[a]	.578	.572	2.512	.000

a. Predictors: (Constant), Managerial_Capabilites, Dynamic_Capabilities, Adaptive_Capabilites

b. Dependent Variable: Organizational_Performance

Source : SPSS survey result (2025)

The ANOVA table demonstrates the statistical significance of the model. The results indicate that the overall regression model is statistically significant, as evidenced by $F(3,231)=105.440$ $p<0.000$. This suggests that the combined predictors managerial capabilities, dynamic capabilities, and adaptive capabilities significantly explain the variance in organizational performance.

Table 4.19 Anova result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1996.288	3	665.429	105.440	.000[b]
	Residual	1457.840	231	6.311		
	Total	3454.128	234			
a. Dependent Variable: Organizational_Performance						
b. Predictors: (Constant), Managerial_Capabilites, Dynamic_Capabilities, Adaptive_Capabilites						

Source : SPSS survey result (2025)

In order to compare the contribution of each of the independent variable, it is important to look at Beta the standardized coefficient (Beta) is 0.267. This indicates that a one standard deviation increase in dynamic capabilities is associated with a 0.267 standard deviation increase in organizational Performance. The significance level is p<0.000 supporting Hypothesis 1, which posits that dynamic capabilities positively influence organizational performance

The standardized coefficient is 0.260. This suggests that a one standard deviation increase in adaptive capabilities corresponds to a 0.260 standard deviation increase in organizational performance. The significance level of p<0.000 confirms Hypothesis 2, indicating that adaptive capabilities significantly enhance organizational performance.

Table 4.20 Regression coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.137	1.150		4.466	.000
	Dynamic_Capabilities	.321	.062	.267	5.166	.000
	Adaptive_Capabilites	.254	.050	.260	5.045	.000
	Managerial_Capabilites	.404	.056	.396	7.201	.000
a. Dependent Variable: Organizational_Performance						

Source : SPSS survey result (2025)

The standardized coefficient is 0.396, the highest among the predictors. This signifies that a one standard deviation increase in managerial capabilities leads to a 0.396 standard deviation increase in organizational performance. The significance level remains at p<0.000, thus supporting Hypothesis 3.

Table 4.21 Summarizes of Hypothesis

Hypothesis	Standardization coefficient	Significant	Acceptance/rejection of the hypothesis
H1	.267	.000	Accept
H2	.260	.000	Accept
H3	.396	.000	Accept

From the hypotheses tested above, all three relationships were found to be significant. Each capability dynamic, adaptive, and managerial positively influences organizational performance

4.9 Qualitative Results

To further comprehend the answers provided by the participants to the research model dimension, qualitative data analysis was carried out in alongside the quantitative study. Further, interviews were carried out as part of the qualitative method in order to clarify the survey results. Interviews have been conducted with managerial group in different department in Federal Housing Corporation. Therefore, in this research four directors' and one team leader were interviewed total of five persons engaged in this interview. After having respondents 'agreement to participate in the research, the researcher scheduled the time and date that the respondents will be free to communicate. Then the researcher distributed the questions to them for readiness for the interview. At time of the interview sessions, the researcher first explained the purpose of the research and started asking questions. All the respondents were interviewed by the researcher, taking the time is listed below.

Table 4.22 Interview List and Durations

Code	IR1	IR2	IR	IR4	IR5
Duration	15min	30min	16min	14min	37min

The identity of the respondents and all information they provide would be treated confidential and detailed personal information of the respondents removed to allow for anonymity in response. The interview guide is included in this report as Appendix 2

This qualitative data analysis was considered on the interview given to the respondents came from the selected department. Their answer was written as in form of summarized and combined together. Because, the given questions have synonyms but the numbers of questions vary depending on nearness to give the information distributed t to and their answers were also having relationship. Therefore, the questions and the answers as well as the suggestion of respondents were written as follows.

On the theme emerged from the qualitative data is IT strategy? The organization currently lacks a clear IT strategy to support its core objectives, as indicated by the directors and team leader If there is no strategy, why the organization did not have an IT strategy? They noted that while there is an acknowledgment of the need for such a strategy, the organization is in the process of preparing one. Historically, a strategy was developed between 2010 and 2017 E.C but it was not integrated into the broader ICT framework, reflecting a disconnect between past efforts and present needs. Additionally, the organization's long establishment may have led to complacency, resulting in insufficient attention to evolving technological requirements.

Respondents provided insights into the organization's technological infrastructure and IT services that support core business processes, particularly customer support services, highlighting several key components. The organization maintains a standard network that connects six branches through a Virtual Private Network (VPN), ensuring secure and reliable communication. Additionally, it benefits from fast internet access without interruptions, which is crucial for operational efficiency. The system architecture is designed with two primary components: one in-house and one at a private office. The in-house system, named SoftDoc, serves as a centralized repository for various knowledge sources, allowing easy access from any location. This setup promotes information sharing and enhances collaboration across the

organization. During the COVID-19 pandemic, the organization remained active, transitioning to online bidding for commercial properties to continue providing services. This initiative enabled candidates to engage effectively and meet requirements, while also supporting the law department in managing court appointments. For customer follow-up and management, the organization employs the Integrated Management Information System (IMIS), also known as ERP. Developed by XOKA Private Limited, this system consists of 13 modules, though the core processes are still being finalized. Key features include online house rent collection; online house renewal, and a portal for requesting house maintenance. Additionally, the organization leverages social media platforms like Telegram and Facebook to enhance communication. When asked about missing technologies required to support the organization's core objectives, respondents noted that technology is progressive and dynamic. They emphasized the importance of completing the ERP system as soon as possible, particularly for renovation tasks. As the organization engages in building houses and expanding its resources, learning from one project to another will be essential to achieve the efficiency and effectiveness. To improve operations further, they suggested the need for an AI-based system to enhance decision-making and efficiency.

A common theme with the respondents from the interview was about the impacts of managerial capability of digital transformation respondents indicated a general awareness of the benefits of digital transformation; however, one respondent noted significant gaps in its implementation. Another respondent highlighted that without a clear understanding of these benefits, some managers struggle to provide the necessary support for the transformation process. This lack of clarity can hinder progress and limit the effectiveness of digital initiatives. To facilitate digital transformation, managers are allocating substantial budgets and hiring capable software programmers both on a contract and permanent basis to finalize the Integrated Management Information System (IMIS). Their roles need to evolve to foster a more proactive approach, which includes consistent follow-up and support throughout the transformation process. This support is essential for ensuring that all team members are aligned and equipped to embrace new technologies effectively. Most respondents reported that there is no significant resistance from upper management regarding digital transformation. However, one respondent noted a more complex situation involving two groups within the organization. The first group is aware of the

advantages of digital transformation but resists change due to fears of losing control over their operations. The second group, which is less informed, worries that implementing new systems could threaten their job security. While top-down resistance is minimal, challenges primarily arise from the bottom-up, where employees may hesitate to embrace change. This highlights the importance of addressing concerns and fostering a culture of trust and support to ensure the successful implementation of digital transformation initiatives.

Customer experience emerged as a significant theme during the interview. The respondents noted that their customers primarily reside in Addis Ababa and Dire Dawa. This customer base includes representatives from the Council of Government Employees, the Prime Minister's Office, senior leaders of various government institutions, officials and the business community, including diplomats. These customers come from diverse backgrounds and have varying levels of experience with new technologies. This diversity presents challenges in adapting to digital solutions, indicating a need for targeted promotion of technology, starting in smaller areas and gradually expanding. Conversely, customers are increasingly advocating for enhanced online services, similar to those provided by more advanced service providers. They expressed satisfaction with the online house rent collection system, which allows them to pay rent without needing to visit the office, regardless of staff presence. In previous work, some employees requested additional fees for processing, highlighting the need for a streamlined leave management system. The proposed system would enable employees to manage their annual leave requests from anywhere, with responsible higher officials overseeing and processing these requests. Implementing an ERP (Enterprise Resource Planning) system could significantly address these issues by integrating various functions, including leave management, and improving overall efficiency. This convenience has led to improved customer satisfaction, particularly with the bidding process for commercial housing, which has effectively reduced complaints and increased overall contentment.

Relating to data analytics, the researcher posed questions about how data is utilized to drive decision-making within the organization and what tools or systems are employed. Respondents shared that, in the past, data was organized in a decentralized manner, stored in various formats such as Word documents, Excel spreadsheets, geospatial data in ArcGIS, and IFRS visualizations. Data collection was typically managed by committees, which would then organize

and deliver insights to decision-makers. However, the process has significantly evolved with the implementation of a centralized SQL database through an ERP (Enterprise Resource Planning) system. This transition has streamlined data management and facilitated more efficient decision-making. For instance, the first task undertaken with the new system was house rent collection. The SQL database allows for detailed analysis, such as:

- Tracking total birr collected.
- Identifying customers who have not paid their rent.
- Analyzing overall payment status and patterns.

The ERP system uses SQL queries to enable users to generate reports and insights quickly, making it easier to assess financial performance and customer compliance. Under the ERP system, each user can access data based on their privileges, ensuring that information is both secure and readily available to those who need it. This capability enhances the organization's ability to make informed decisions rapidly and effectively, demonstrating the transformative power of data analytics in driving operational success. The shift to a centralized SQL database not only improves data accessibility but also supports more robust analysis, ultimately leading to better strategic outcomes.

In the interview regarding measures of digital transformation initiatives, respondents provided varied perspectives on the use of Key Performance Indicators (KPIs) within the organization

Most respondents indicated that the organization lacks scientific measurement methods for assessing digital transformation efforts, relying instead on traditional approaches. This suggests a need for more structured frameworks to evaluate progress effectively. However, another group of respondents highlighted that the organization has established a Balanced Scorecard (BSC) as part of its measurement strategy. The BSC framework incorporates four perspectives, with a specific focus on the "Learning and Growth" perspective, which accounts for 15% of the overall evaluation. This perspective includes three or more objectives that guide the organization's development in this area. The organization is currently in the development stage of its ERP (Enterprise Resource Planning) system, which is set to transition into the rollout phase. For example, the HR module of the ERP consists of six sub-modules, which will facilitate tracking

user engagement with the system. Looking ahead, there are plans to further develop and integrate functionalities within the ERP to enhance its effectiveness. This includes analyzing how many users are actively utilizing the system and identifying areas that require improvement.

By assessing usage and performance, the organization aims to ensure that the ERP system meets its intended objectives effectively Examples of Successful Digital Transformation Projects. While specific examples of successful digital transformation projects were not detailed in the responses, the establishment of the BSC and the ongoing development of the ERP system represent significant steps toward enhancing digital capabilities. These initiatives indicate a commitment to evolving the organization’s approach to performance measurement and operational efficiency.

Finally considering challenges in digital transformation in the Federal housing corporation lack of clear IT Strategy, resistance to change, gaps in managerial understanding, incomplete technological infrastructure, need for structured measurement frameworks and dynamic technological requirements.

It is crucial to address infrastructure needs and establish a knowledge management system that promotes a culture of learning. Acknowledging the inevitability of a digital landscape, leaders should transition mindsets from traditional to digital paradigms. This includes providing the necessary financial, resource, and human support to foster collaboration. Strategic leadership is essential, with a focus on performance follow-up to ensure accountability. Lastly, IT investments should be regarded as long-term commitments rather than one-time expenses, facilitating sustainable growth and development.

4.10 Discussions

This thesis is explored the practice of digital transformation and its impact on the organizational performance. The research problem addresses the correlation between the Federal Housing Corporation's (FHC) performance and the impacts of digital transformation the variables incorporated in the analysis were: Dynamic capabilities, Adaptive capabilities, managerial capabilities ,organizational performance, assess current practice of digital transformation and explore specific digital transforamtion capabilites.

The study tried to answer the following research questions:-

1. What is the current practice of digital transformation at the Federal Housing Corporation, Ethiopia?
2. What are the capabilities of digital transformation affecting organization perfromce at the Federal Housing Corporation, Ethiopia?

4.10.1. Influence of Dynamic Capability on Organizational Performance

The first objective of this study is to investigate how dynamic capabilities affect organizational performance at the Federal Housing Corporation (FHC). The central research question is**:** What is the influence of dynamic capabilities on organizational performance at the Federal Housing Corporation, Ethiopia**?** Specifically, the study examines how the dynamic capabilities of sensing, seizing, and transforming positively mediate the relationship between digital transformation and organizational performance. The findings from the survey conducted among FHC employees reveal several critical insights that align with the literature review presented earlier, particularly in sections discussing dynamic capabilities and organizational performance.

The strong agreement among respondents (86.8% total) about FHC's proactive approach in seeking new business opportunities reflects (Teece, D. J et al., 1997) theory on sensing capabilities. This theory posits that organizations must continuously scan their environment to identify potential opportunities and threats. FHC's emphasis on exploration positions it well within the competitive landscape, supporting the notion that proactive organizations are more resilient and better prepared to adapt. It also aligns with the assertion by (Warner, K. S., & Wäger, M. , 2019) that dynamic capabilities significantly enhance organizational performance.

With a mean score of 4.37, the recognition of the need to understand competitive dynamics aligns with the concept of strategic agility articulated by (Doz, Y. L., & Kosonen, M. , 2010). They argue that firms with heightened awareness of their competitive context can better align their strategies and resources, thereby enhancing performance. The findings at FHC substantiate this theory, indicating that awareness of competition significantly influences organizational effectiveness

The positive perception of the organization's ability to implement new ideas indicates a culture of innovation, which is essential for successful digital transformation. This finding is consistent with the literature that highlights the role of organizational culture in facilitating digital initiatives (Fitzgerald, 2014). The literature emphasizes that continuous learning and development are essential for organizations to adapt and thrive in a digital landscape. This is particularly relevant for organizations undergoing digital transformation, as they must equip their workforce with the necessary skills and knowledge to navigate new technologies and processes effectively (Loonam, J et al., 2020).

While 66.8% of respondents expressed some level of agreement regarding support for learning about digital transformation, the relatively lower mean score (3.80) indicates a gap in reconfiguring capabilities. This finding resonates with (Eisenhardt, K. M., & Martin, J. A. , 2000) views, which highlight that organization, must invest in learning and development to sustain competitive advantage

The favorable view on modernization efforts (73.9% agreement) underscores the importance of reconfiguring capabilities as articulated by (Helfat, C. E., & Peteraf, M. A. , 2015). They assert that organizations must continuously renew their resource base to align with changing market conditions. FHC's commitment to updating its systems reflects an understanding of this theoretical imperative.

4.10.2 Influence of Adaptive Capability on Organizational Performance

The second objective of this study is to examine the influence of adaptive capabilities on organizational performance at the Federal Housing Corporation (FHC) in Ethiopia. The central research question is: How do adaptive capabilities impact organizational performance at the Federal Housing Corporation, Ethiopia**?** Specifically, the study examines how the adaptive capabilities of innovation, technological capabilities, and learning positively mediate the relationship between digital transformation and organizational performance.

Adaptive capabilities encompass an organization's ability to implement digital innovations and respond effectively to market changes. The concept of adaptive capability highlights the organization's internal capacity to swiftly coordinate and reconfigure resources in response to

sudden environmental changes (Birkinshaw, J., & Gibson, C. , 2004). The findings indicate a generally positive perception among respondents regarding the organization's support for adaptive capabilities, as evidenced by the descriptive statistics. For instance, a significant majority (71.1%) agree that the FHC helps employees implement digital innovations in their work areas, with a mean score of 3.85. This reflects a strong foundation for fostering a culture of innovation, which is crucial for enhancing organizational performance.

The results also highlight that the organization invests in digital technologies to improve products and services, with similar agreement levels (71.1%). This commitment to technological advancement aligns with the literature, which suggests that effective adaptive capabilities can lead to a competitive advantage, especially in dynamic environments (Kumkale, 2022). By allocating resources towards digital technologies, FHC is positioning itself to better meet evolving market demand

Respondents expressed a positive perception regarding the organization’s ability to quickly learn about market and customer trends, with 68.6% in agreement. This capability is essential for organizations operating in complex and unpredictable environments, as it allows them to respond proactively to changes (Hrebiniak, L. G., & Joyce, W. F. , 2005). The ability to adjust practices based on customer feedback regarding digital services also received a favorable response, though with a slightly lower mean score of 3.65. This indicates that while there is a willingness to adapt, some respondents remain neutral, suggesting an area for potential improvement.

However, with a mean score of 3.57, the results suggest some uncertainty about the organization's agility in reacting to requirements from the competition and developments in digital technology. This reaction highlights a crucial component of adaptive capabilities: the requirement that businesses not just recognize changes but also take meaningful action in response to them. Rapid resource reconfiguration is essential for preserving performance in face of disruptions, according to the literature (Birkinshaw, J., & Gibson, C. , 2004).

4.10.3 Influence of Managerial Capability on Organizational Performance

The third objective of this study is to assess the influence of managerial capabilities on organizational performance at the Federal Housing Corporation (FHC) in Ethiopia. The central

research question is: What is the effect of managerial capabilities on organizational performance at the Federal Housing Corporation, Ethiopia? Specifically, the study examines how the managerial capabilities Managerial Cognitive Capabilities and Managerial Coordination Capabilities positively mediate the relationship between digital transformation and organizational performance.

The data indicate that 69.6% of respondents agree that management supports digital initiatives, with a mean score of 3.91. This finding suggests that managerial support is crucial for fostering a culture of innovation, consistent with (Roy, K., & Khokle, P., 2016), who emphasize that effective management, is essential for successful digital transformation.

A mean score of 3.83 regarding effective communication about digital transformation suggests that management is largely successful in conveying its strategic vision. The findings imply that clear communication enhances alignment among employees, supporting the literature that highlights its role in facilitating collaboration and understanding (Tamrat, W., & Teferra, D. , 2018).

The slightly lower mean score of 3.71 for management's responsiveness to market competition suggests that there is room for improvement. Nearly 25% of respondents expressed neutrality or disagreement, indicating potential barriers to quick adaptation. This finding aligns with (Helfat, C. E., & Peteraf, M. A., 2015), who note that cognitive capabilities are essential for recognizing and responding effectively to market dynamics.

The high mean score of 3.91 for promoting learning from past experiences suggests a strong culture of continuous improvement at FHC. This finding supports (Goh, 2012), who argue that strong learning capabilities can enhance performance by allowing organizations to adapt based on previous experiences.

The data show a favorable view on leadership recruitment, with a mean score of 3.82. This suggests that the organization prioritizes skilled leadership to meet strategic goals. This finding aligns with (Abugre, 2020) which indicates that managerial social capital developed through effective leadership significantly enhances firm performance.

4.10.4 Analyze the current practice of digital transformation.

The fourth objective of this study is to analyze the current practice of digital transformation on organizational performance at the Federal Housing Corporation (FHC) in Ethiopia. The central research question is: What is the current practice of the digital transformation on organizational performance at the Federal Housing Corporation, Ethiopia? Specifically, the study examines how IT Strategy and technologies, and processes employed to enhance operational efficiency and service delivery.

According to Picard (2011) and Hess et al. (2016), digitization refers to the process of converting analog information into digital form, while digitalization or digital transformation encompasses the integration of digital technologies into business processes to enhance value creation. The FHC has made strides in digitizing its operations, such as implementing the Integrated Management Information System (IMIS) for customer management and transitioning to online bidding for commercial properties. However, the lack of a clear IT strategy indicates that the organization is still in the early stages of digitalization, which involves not just technology adoption but also aligning business and IT strategies (Holotiuk, 2017).

Customer experience emerged as a significant theme in the discussions. The FHC's efforts to implement online services, such as the house rent collection system, demonstrate a proactive approach to meeting customer needs. However, the diversity of the customer base ranging from government officials to private citizens poses challenges in effectively promoting digital solutions. This aligns with the literature's emphasis on tailoring digital offerings to different user profiles to maximize engagement and satisfaction (Solis et al., 2014).

While upper management supports digital initiatives, resistance from lower-level employees remains a challenge. The interviews indicated that fears of losing control and job security contribute to hesitance in adopting new systems. This phenomenon echoes findings in the literature, which highlight the importance of addressing cultural barriers to facilitate successful digital transformation (Roy & Khokle, 2016). Creating a culture of trust and open communication is essential for reducing resistance and enhancing employee engagement in digital initiatives.

The FHC has established a foundational technological infrastructure, including a secure VPN connecting multiple branches and the SoftDoc system for knowledge management. These tools align with the concept of digitization, which supports improved information processing capabilities (Imgrund & Janiesch, 2019). However, qualitative insights reveal that the FHC's current practices may not fully leverage these technologies for strategic advantage. The absence of a comprehensive IT strategy, as highlighted by the respondents, suggests a disconnect between current capabilities and the organization's overall goals.

4.10.5 Investigate the specific digital transformation capabilities affecting organizational performance .

The fifth objective of this study is to explore the specific digital transformation capabilities affecting organizational performance within the Federal Housing Corporation (FHC). The central research question is: What are the capabilities of digital transformation affecting organization perfromce? The investigation reveals critical insights into how these capabilities can enhance operational effectiveness and strategic alignment. Drawing on qualitative data from interviews with managerial staff, this discussion synthesizes the key themes related to the FHC’s digital transformation capabilities and their impact on organizational performance.

The research highlights several critical capabilities that influence the FHC's performance through digital transformation. These include technological infrastructure, managerial capabilities, and data management systems. The establishment of a robust technological framework, including the Integrated Management Information System (IMIS) and SoftDoc for knowledge management, reflects a commitment to enhancing operational efficiency. This aligns with the literature's assertion that digitization serves as a precursor to comprehensive digital transformation (Hess et al., 2016)

Managerial capabilities play a crucial role in the success of digital transformation initiatives. As noted by Teece (2007), dynamic capabilities enable organizations to adapt to changing environments by sensing opportunities and seizing them effectively. The FHC's management recognizes the benefits of digital transformation but faces challenges in implementing these changes. The interviews revealed that some managers struggle to understand the full implications

of digital tools, leading to inconsistent support for transformation initiatives. This aligns with the findings of Abugre (2020), which suggest that managerial cognitive capabilities significantly influence organizational performance.

Despite the progress made, several challenges impede the FHC's digital transformation efforts. The absence of a clear IT strategy, gaps in managerial understanding, and incomplete technological infrastructure are significant barriers. These challenges resonate with the findings of Gutterman (2023), which emphasize the importance of aligning organizational structures with strategic objectives to optimize performance. Addressing these barriers through targeted interventions will be crucial for enhancing the effectiveness of the FHC's digital initiatives.

4.11 Chapter Summery

This chapter presents the results of data analysis derived from quantitative data collected through surveys and qualitative data from interviews. It details the findings following the analysis, beginning with descriptive statistics that outline the respondents' backgrounds. The chapter then explores the influence of dynamic capability, adaptive capability, and managerial capability on organizational performance. It includes a section on regression analysis for each variable, assessing how these capabilities impact organizational performance. This section encompasses hypothesis testing and qualitative analysis, culminating in a comprehensive discussion of the results.

CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

5.1. Overview

This chapter concludes the study by summarizing the key findings in relation to the research aims and research questions, as well as the value and contribution thereof.It also reviews the limitation of the study and propose opportunities for future research.

5.2 Conclusion

This research aimed to investigate the influence of digital transformation capabilities on organizational performance at Federal Housing Corporation. The study aimed to determine the influence of dynamic capability on organizational performance in FHC, to assess the influence of adaptive capability on organizational performance in FHC, and determine the influence of managerial capability on organizational performance in FHC ,assess current practice of digital transformation and explore specific digital transforamtion capabilites..

A mixed research approach was employed, utilizing both physically distributed questionnaires and an online questionnaire distributed through Google Forms, along with interviews to collect data from respondents. The Statistical Package for Social Sciences (SPSS) was used as the data analysis tool. Linear regression analysis was conducted to examine the factors influencing digital transformation capabilities and their impact on organizational performance. The data were then analyzed using the deductive thematic analysis method. The reliability and validity of the variables in the research model met the minimum threshold value of 0.89. Based on the analyzed data, the following findings have been obtained:

This study aimed to investigate the impacts of dynamic capabilities on organizational performance. The results indicated a strong consensus among respondents regarding the organization's proactive approach to identifying new business opportunities, reflecting its dynamic capabilities. Additionally, the recognition of the need to understand competitive changes supports this view. The positive perception of the organization's ability to implement

new ideas suggests a culture of innovation, which is essential for successful digital transformation. However, there is room for improvement in training initiatives related to digital

transformation. The organization is actively updating its traditional systems to embrace digital products and services.

This study aimed to assess the influence of adaptive capabilities on organizational performance at FHC. The results indicated that adaptive capabilities significantly impact organizational performance. Specifically, the organization supports employees in implementing digital innovations in their work areas and invests in digital technologies to enhance products and services. Additionally, the organization demonstrates a swift response to changes in digital technology and competitor actions.

The study aimed to determine the influence of managerial capability on organizational performance at FHC. The findings indicate that the organization's management actively supports digital initiatives and communicates effectively about the importance of digital transformation. Additionally, the organization encourages learning from past experiences and recruits skilled leadership to achieve its strategic goals. These factors collectively enhance the organization's overall performance

When we summarize all the above findings the research examined the influence of digital transformation capabilities on organizational performance at the Federal Housing Corporation (FHC), focusing on dynamic, adaptive, and managerial capabilities. The findings indicated that dynamic capabilities foster a culture of innovation, while adaptive capabilities significantly enhance performance through support for digital initiatives and responsiveness to change. Additionally, strong managerial capabilities contribute by promoting effective communication and strategic leadership, ultimately improving overall organizational performance.

5.3 Limitation of the Study

While this research paper provides valuable insights into the impact of digital transformation capabilities on organizational performance, it is important to allow certain limitations that could inform future studies. The investigation primarily focused on examining how digital

transformation capabilities influence organizational performance with the aim of enhancing overall effectiveness. The following limitations were encountered during data collection and should be considered when interpreting the results. Despite the significant contributions of this thesis, some of the inherent limitations should be noted:-

- Participants' delayed response times hindered the step of data gathering.
- Some respondent don't respond at all.
- Due to the early stage of digital transformation in Ethiopia, it was particularly difficult to obtain relevant reference materials, which may have limited the depth of the analysis
- The results of this study may not be applicable to other organizations or contexts. The specific circumstances and characteristics of the FHC may limit the extent to which these findings can be generalized to different settings.

5.4. Recommendation

Based on a comprehensive analysis that triangulated quantitative survey data with qualitative interviews conducted within the FHC, this study identified key areas for improvement in the organization's digital transformation journey. This triangulation approach was used to *enhance the validity and reliability of the findings*, highlighting the interconnectedness of dynamic, adaptive, and managerial capabilities in driving organizational performance. To address the identified gaps and leverage the organization's strengths, the following recommendations are proposed to guide the Federal Housing Corporation (FHC) towards a more effective and impactful digital transformation.

First, a key finding from the study is that FHC lacks a comprehensive IT strategy. To address this, we recommend that FHC should create a cross-functional team to develop a formal, regularly reviewed IT strategy aligned with core objectives. This strategy should address infrastructure, data management, security, and emerging technologies.

Second, a finding from the study indicates a need for improved employee training, particularly in digital transformation. We recommend that FHC needs to develop targeted training programs in

digital technologies and processes, including change management training. It should communicate the benefits of digital transformation to alleviate employee concerns.

Third, a finding from the study is the importance of a fully functional IMIS. We recommend that FHC should allocate sufficient resources to finalize and continuously improve the IMIS system, integrating core business processes and ensuring user-friendly interfaces with ongoing monitoring based on user feedback.

Fourth, a finding from the study highlights the need to leverage data for decision-making. We recommend that FHC should provide training on data analytics, develop real-time dashboards, encourage data informed decisions, and explore AI-based systems to enhance efficiency.

Fifth, a finding from the study shows that customer's desire enhanced online services. We recommend that FHC should expand and promote online services, gathering customer feedback to drive continuous improvements in functionality and user experience.

Sixth, a finding from the study is the absence of structured measurement for digital transformation. We recommend that FHC needs to develop and regularly monitor KPIs within a Balanced Scorecard framework to assess the effectiveness of digital transformation initiatives.

Seventh, a finding from the study reveals resistance to change among employees. We recommend that FHC should communicate the benefits of digital transformation, involve employees in the process, provide support, and recognize innovative contributions.

Eighth, a finding from the study emphasizes the importance of managerial capabilities. We recommend that FHC should provide training to managers on digital technologies, change management, and data-driven decision-making, empowering them to support digital initiatives and promote innovation.

Ninth, building on the strong culture of continuous improvement, we recommend that FHC should formalize and expand internal knowledge sharing platforms. This will ensure that lessons learned from past experiences are readily accessible to all employees, promoting adaptation and innovation throughout the organization

5.5. Future work

While this study examined the influence of dynamic, adaptive, and managerial capabilities on organizational performance in the Federal Housing Corporation, further research is encouraged to employ advanced analytics techniques, including machine learning, and uncover hidden patterns and relationships within the data, helping to identify which specific digital capabilities most significantly influence performance outcomes.

As a continuation of the current study we also recommend the need for a comparative analysis that investigates other digital transformation capabilities across various government organizations and private companies. Such a comparison would provide a clearer understanding of how the full spectrum of digital transformation capabilities impacts organizational performance within property management contexts.

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APPENDIX I

QUESTIONER

Addis Ababa University

College of Natural and Computational Sciences

School of Information Science

My name is Solomon Legesse, a student in Master of Information Science Program at Addis Ababa University. I am conducting research titled **"The Impact of Digital Transformation on Organizational Performance"** at the Federal Housing Corporation.

I kindly request your participation in this study by completing the attached questionnaire. To ensure data accuracy, please answer all questions as honestly and thoroughly as possible. Your responses will remain **strictly confidential**, and only aggregated (non-identifiable) data will be used for academic purposes. The survey should take **no more than 10 minutes** to complete.

For questions, suggestions, or further information about this study, feel free to contact me directly:

- **Email**: legsolta@gmail.com
- **Phone**: +251 911 764 785

Thank you for your valuable time and contribution to this research

Objective /aim of the questioner

1. To evaluate how digital transformation capabilities affect organizational performance at the Federal Housing Corporation.

2. To identify and measure the specific digital transformation capabilities (dynamic, adaptive, and managerial) that contribute to improved organizational performance.

3. To gather employee insights on their experiences and views about digital transformation initiatives.

4. To draw conclusion about the relationship between the digital transformation and organizational performance

General instructions

 writing your name on the questionnaire is not required

 Please tick (✓) against the appropriate box

SECTION A: BACKGROUND INFORMATION OF RESPONDENTS

Please specify your answer by placing a [√] on the relevant area (s) provided.

1. Indicate your gender

❑ Male ❑ Female

2. What is your age bracket?

❑ 18-27 years ❑ 28-37 years ❑ 38-45 years ❑ 46-55 years ❑ 56 years and above

3. What is your highest education qualification?

❑ Secondary ❑ Diploma ❑ Degree ❑ Masters ❑ PHD

Others. (Specify)……

4. How many years have you been working in Federal Housing Corporations?

❑ Less than a year ❑ 2-3 years ❑ 4-5 years ❑ 6-10 years ❑ More than 10 years

5. What position do you hold currently in the organization (in your department)?

❑Top Level Manager ❑ Middle Level Manager ❑ Low Level manager

❑ Non Managerial level

SECTION B: DIGITAL TRANSFORMATION CAPABILITIES

Digital transformation capabilities refer to the competencies and resources that an organization utilizes to identify, adopt, and implement emerging digital technologies and trends. This includes the ability to integrate and optimize digital processes, foster a culture of innovation, and adapt organizational structures and strategies to enhance efficiency, improve customer experiences, and drive overall performance in a rapidly evolving digital environment."

Dynamic capabilities refers to an organization's ability to **sense opportunities and threats** in the environment, **seize these opportunities by mobilizing resources**, and **reconfigure** its assets and processes to adapt to changing conditions.

Adaptive capabilities refers to an organization's ability to **innovate by developing new products and services**, **leverage technology** to enhance operations, and foster a culture of **learnin**g that enables continuous improvement and responsiveness to change.

Managerial capability refers to an organization's ability to effectively plan and **coordinate** resources through strong **cognitive skills** and strategic decision-making, ensuring alignment and efficient execution of goals.

6. Please rate your opinion with the following statements about how digital transformation affect organizational performance based on the scale provided below.

Key

Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
5	4	3	2	1

SECTION B: DIGITAL TRANSFORMATION CAPABILITIES ASPECTS

A	**Dynamic Capability**	5	4	3	2	1
1	The organization looks for new business opportunities in its environment					
2	It's important for our organization to understand changes in competition					
3	The organization puts new ideas into action to improve its services					
4	The organization supports learning about digital transformation through workshops and training**.**					
5	The organization is updating its traditional systems to embrace digital products and services.					
B	**Adaptive Capability**	5	4	3	2	1
1	The organization helps employees implement digital innovations in their work areas					
2	The organization invests in digital technologies to improve products and services.					
3	The organization quickly learns about market and customer trends.					

4	The organization changes its practices based on customer feedback regarding digital services.					
5	The organization quickly responds to changes in digital technology and competitor actions					
C	**Managerial capability**	5	4	3	2	1
1	The organization management supports digital initiatives**.**					
2	The organization management communicates effectively about digital transformation.					
3	The organization management responds quickly to market competition through new technology adoption					
4	The organization encourages learning from past experiences					
5	The organization recruits skilled leadership to meet strategic goals.					

SECTION C: ORGANIZATIONAL PERFORMANCE

Organizational performance is about how well a company meets its goals using its resources. It focuses on achieving strong results and maintaining a competitive edge over time. How much do the following statements about the variables used to measure organizational performance reflect the level of performance in Federal Housing Corporation?

Please indicate the level of your agreement with each.

Key

Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
5	4	3	2	1

D	**Organizational Performance**	5	4	3	2	1
1	Our organization's performance has greatly improved because of digital transformation.					
2	We use technology to enhance our work performance					
3	Our revenue has increased because of digital transformation.					
4	Our services to customers is improved because of digital transformation					
5	Our employees become more creative and innovative because of digital transformation					
6	Digital transformation has improved our ability to generate profit from our asset					

Appendix II

Interview Questioner

This interview has been designed to gather data for the fulfillment of the thesis requirement for the Degree of the Masters Science of Information Science. Thank you for participating in the interview on the "The Impacts of Digital transformation on the organizational performance" in the Federal Housing Corporation.

The report of this study's findings will be handed to each individual that participate in the interview .This is to justify the transparency for each interviewee.

Participation on this study is voluntary .You may decline any interview question that don't wish to answer .There are no known or any anticipated risks participating in this study.

Because of the potentially sensitive nature of the study every effort has been made to protect your anonymity. The data collected from the survey will be maintained on the researcher's computer and the replied interview will be properly locked. The data will never be shared with others without your prior consent.

The objective

"*TO examine the Impacts of Digital transformation capabilities on the organizational performance" at the Federal Housing Corporation.*

1 Does the organization have a clear IT strategy that supports organization core objectives?

2. what are those strategies?

3 If there is no strategy, why the organization did not have an IT strategy?

4. what are the key technological infrastructures installed in the organization?

such as Network, Internet, software or legacy applications, etc.

5. What are the common IT services that support the core business processes such as customer support services?

6. Is there any missing technology that is required to be implemented to support the core Organizational objectives?

7. Are managers aware the benefits of digital transformation?

8. What kind of support do they provide to realize the digital transformation?

9. What role does leadership play in driving digital transformation within the organization?

11. Is there any resistance from the management for digital transformation?

12. How has digital transformation impacted customer engagement and experience?

13. What feedback have you received from customers regarding digital services and solutions?

14. How is data being utilized to drive decision-making in your organization?

15. What tools or systems are in place for data analytics and reporting?

16. What key performance indicators (KPIs) do you use to measure the success of digital transformation initiatives?

17. Can you provide examples of successful digital transformation projects within the organization?

18. What recommendations would you provide for enhancing digital transformation capabilities within the organization?

THANK YOU FOR YOUR PARTICIPATION!!!