ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND

ECONOMICS

DEPARTMENT OF PROJECT MANAGEMENT

FACTORS AFFECTING DIGITAL TRANSFORMATION IN THE CASE OF WOREDA ADMINISTRATION OFFICES IN KOLFE KERANIO SUB-CITY, ADDIS ABABA, ETHIOPIA

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JUNE 2024

ADDIS ABABA, ETHIOPIA

Statement of Declaration

I, Lydia Berhanu, hereby declare that the work contained in this thesis: “Factors affecting digital transformation in the case of Woreda administration offices in Kolfe Keranio sub-city, Addis Ababa City, Ethiopia” is my original work. It has not been presented for a partial fulfillment of any educational qualification at this university or any other and in any projects by any means, and all the resource materials used for this thesis have been acknowledged accordingly. I understand that any false declaration will be subject to disciplinary action, up to and including expulsion from the master’s programs in Project Management at Addis Ababa’s University, Schools of Commerce.

Declared by: Lydia Berhanu

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Date _____

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Graduate Studies

Statement of Certification

This is to certify that the project work prepared by Lydia Berhanu, entitled: "Factors affecting digital transformation. In the case of Woreda administration offices in Kolfe Keranio sub-city, Addis Ababa, Ethiopia" and submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Project Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Abstract

This study aims to identify factors affecting digital transformation in the Woreda administration offices in Kolfe Keranio sub-city and provide actionable insights to enhance digital transformation efforts. socio-economic development. The study used a quantitative and qualitative research approach. It used a structured questionnaire to collect data from Woreda administration office employees selected using a double-stage cluster sampling technique. Additionally, interviews were conducted with two management-level employees to gain deeper insights. The data gathered were analyzed using SPSS, and descriptive statistics, correlation, and regression analysis were employed to analyze and interpret the data. The results indicate that the implementation of digital transformation in Woreda administration offices is currently low, with a moderate mean score. Key factors affecting digital transformation include technological infrastructure, digital knowledge and skills, trust and confidence, top management support, organizational culture, and change management. Recommendations include targeted training programs, increased budget allocation for technological enhancements, ensuring data security and confidentiality fostering a digital-friendly organizational culture, and improving the involvement of top management. Besides its importance to the Woreda administration offices, this research holds significant implications for policymakers, public service providers, and researchers aiming to develop inclusive, user-friendly, and culturally sensitive digital solutions for sustainable development in Ethiopia.

Keywords: *Digital transformation, Digitalization, Environmental factors, E-government, Organizational factors, Technological factors, Technology adoption, TOE framework, Woreda administration office*

Acknowledgment

First and foremost, I would like to express my deepest gratitude to God for His divine guidance, strength, and blessings throughout this research journey. Without His grace, this work would not have been possible.

I extend my heartfelt appreciation to my advisor, Dr. Mahir Jibril, for his invaluable guidance, insightful feedback, and support. I am profoundly grateful to my parents, Berhanu G/senbet and Zahra Hussien, and my brothers, for their support, and sacrifices. Their constant encouragement and belief in my abilities have been a source of motivation and inspiration.

Lastly, I would like to acknowledge everyone who contributed to my work in various ways. Your support, advice, and assistance have been vital in bringing this research to completion. Thank you all for your contributions and encouragement.

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List of Acronyms

DT	Digital Transformation
SPSS	Statistical Package for Social Science
TOE	Technology-Organization-Environment
ERP	Enterprise Resource Planning
ID	Identification
IT	Information Technology
ICT	Information Communication Technology
SD	Standard Deviation
ANOVA	Analysis of Variance

Chapter One: Introduction

1.1 Background of the Study

Digitalization, or digital transformation, has become an essential aspect of everyday life worldwide. It encompasses everything from individual lifestyles to organizational processes and financial transactions. What was once seen as support for businesses has now evolved into being a business itself, marking a significant shift in how we operate and interact in the modern world (Kresnawidiansyah Agustian, 2023).

Government offices, including administration offices at the Woreda level, are at the forefront of experiencing the digital era in Ethiopia. Given their proximity to society and their role in providing important and diversified services, efficient and reliable service provision is essential. However, it is not surprising to hear people complaining about the time it took them to get a Residence ID, or how they have been going back and forth from office to office to get a certain matter done and so many other complaints (MiNT, 2022).

The aim of digital services is to enhance customer service by providing fast, widely accessible, and cost-effective solutions. This involves delivering services that are quick, efficient, and flexible, available 24/7, and accessible from any location or enable to manage business remotely, while also reducing paper usage to minimize environmental impact (Tekle, 2023).

In recent years, Ethiopia, as a developing nation, has embarked on a transformative journey driven by digital technologies. This shift is evident in initiatives such as the

Digital Ethiopia 2025 strategy, which aims to leverage technology for socioeconomic development. Efforts to digitize vital records, land acquisition processes, and adopt ERP systems reflect Ethiopia's commitment to embracing digitalization across various sectors. Additionally, a Digital ID program has been launched in Addis Ababa, which may serve as a pilot for national expansion depending on its success. A national digital ID can significantly boost the digital economy (MiNT, 2022).

The government of Ethiopia is actively developing a digital and electronic service portal to make public service delivery more reliable and accessible. These digital services are interactive, internet-based platforms driven by user needs and integrated with related organizations. They aim to streamline government services online, meeting people's needs and enabling real-time transactions (Tekle, 2023).

Ethiopia's engagement in digitization, digitalization, and digital transformation is steadily increasing, as outlined in the Digital Ethiopia 2025 strategy (MiNT, 2022). The ultimate vision indicated in the strategy is digital transformation (achieving countrywide automation through digitalized processes) which encompasses digitization (converting manual processes to digital formats) and digitalization (integrating technology into existing processes. The rapid pace of digital transformation in Ethiopia brings both challenges and opportunities at the grassroots level, particularly within Woreda administration offices. Challenges such as limited digital literacy, infrastructural gaps, and bureaucratic hurdles can impede the effective implementation of digital systems. On the other hand, digital technologies offer opportunities for streamlining administrative processes, enhancing citizen engagement, and improving service delivery in areas like civil registration (the

former vital events), customs, education bureau, construction licensing bureau, and others (MiNT, 2022).

As indicated in the Digital 2024 Global Overview Report, as of April 2024, 69.7% of the world population uses mobile phones. The ongoing rise in mobile usage is driving an increase in digital adoption and activity. According to recent data, over two-thirds of the global population now owns a mobile phone, with the count of unique mobile users reaching 5.65 billion as of April 2024. Additionally, the number of cellular connections linked to smartphones is on the rise, with over seven billion smartphones currently in use, making up approximately 87 percent of all mobile phones worldwide. In Ethiopia, there are 77.39 million cellular mobile connections, reflecting the country's growing digital engagement. Furthermore, 67.1% of the world population uses the internet while the rate stands at 19.4% in Ethiopia. The majority of global internet users i.e., 96.3 percent, access the internet via mobile phones at least occasionally. Mobile phones currently account for about 57.8 percent of our online usage time and 60 percent of global web traffic. However, more than 60 percent of internet users in the world's largest economies still rely on laptops and desktops for certain online activities (Kemp, 2024).

1.2 Statement of the Problem

Digital transformation is very crucial in today’s day-to-day activity to keep up with the world’s rapid growth. Digital transformation in the public sector entails adopting new methods of collaborating with stakeholders, establishing innovative service delivery models, and forging new types of relationships (Xanthopoulou, 2021).

In Ethiopia specifically, Woreda administration offices in Addis Ababa serve as the backbone of local governance, directly impacting the lives of citizens through the delivery of essential services. As Ethiopia progresses toward its development goals, the modernization of Woreda administration offices through digital transformation becomes imperative for enhancing service delivery, promoting transparency, and fostering citizen engagement. The digitalization of Woreda administration offices is strategic in optimizing administrative processes, improving data management, and enabling evidence-based decision-making. It is a catalyst for efficiency gains, cost savings, and resource optimization, ultimately contributing to the overall effectiveness of public service delivery and governance. Digital transformation in Woreda administration offices in Addis Ababa, Ethiopia, represents a critical juncture in the country's journey towards modernization and efficiency in governance. However, this process is not without its challenges and complexities. Digital transformation (DT) is still not adequately implemented in many institutions, particularly government entities like Woreda administration offices. Additionally, there is a scarcity of research in this area, making it a compelling topic for study. Exploring DT in these offices can provide valuable insights into the challenges and opportunities, highlighting areas for improvement and strategies for more effective digital integration. This research could help enhance public sector efficiency and service delivery through better use of digital technologies.

1.3 Objectives of the Study

1.3.1 General Objective of the Study

To assess the factors affecting digital transformation in Woreda administration offices in Kolfe Keranio sub city, Addis Ababa City, Ethiopia.

1.3.2 Specific Objectives of the Study

- To explore the factors that affect digital transformation in Ethiopia.
- To examine the level of impact those factors have on the adoption of digital technologies.
- To investigate potential mechanisms that can be employed to ensure smoother adoption of digital technologies based on the culture and context of the institution.

1.4 Definition of Concepts and Terms

Digital literacy is the ability to access, manage, understand, integrate, communicate, evaluate, and create information safely and appropriately through digital technologies. It encompasses competencies often referred to as computer literacy, ICT literacy, information literacy, and media literacy, and is essential for employment, decent jobs, and entrepreneurship (UNESCO, 2018).

Digital technology is to the use of digital systems, tools, and devices that process, store, and transmit data electronically (Cohn, 2024).

Digital transformation is integrating digitalized processes to achieve countrywide automation (MiNT, 2022).

Digitalization is integrating technology into existing processes to enhance value by automating these processes (MiNT, 2022).

Digitization is the conversion of manual/paper records, data, or processes into a digital format (MiNT, 2022).

Technology adoption is the process through which individuals or organizations embrace and utilize new technologies. This process involves learning about and adapting to these innovations (Mirthinti, 2023).

Woreda administration office is a local government administrative office responsible for managing and overseeing public services, local governance, and administrative functions within a specific district, known as a Woreda, in Addis Ababa, Ethiopia. It is a synonym of District, the administrative structure below the sub-city, in the Ethiopia's administrative hierarchy.

1.5 Significance of the Study

While there is growing literature on digital transformation, there remains a gap in understanding the specific nuances of rapid digital adoption within Ethiopian administration offices, especially at the Woreda level. This study seeks to address this gap by examining how Technological, Organizational, and Environmental factors intersect with digital initiatives in the context of Woreda governance in the Kolfe Keranio sub-city, Addis Ababa, providing valuable insights for policymakers, practitioners, researchers, and others within the industry. It aims to contribute to the development of inclusive, user friendly and culturally sensitive digital solutions for Ethiopia's sustainable growth.

1.6 Delimitation/ Scope of the Study

Even though digital transformation has started being implemented in the whole country across various organizations, this study is limited to the digital

transformation taking place in government offices, specifically in the Woreda administration office. This is mainly because the intensity of its implementation is higher in Addis Ababa. In addition, due to time and resource limitations, the study will focus on Kolfe Keranio sub-city within the city. In terms of content, it will focus on the specific factors affecting the digital transformation in the aforementioned institution through qualitative and quantitative methodologies. Data will be collected from employees in the institution across different departments and hierarchical positions.

1.7 Organization of the Paper

The first chapter of this report, which has five chapters total, gives an overview of the study's background, problem statement, key research questions, objectives, definitions of key terms and concepts, significance, as well as scope of the study. The assessment of relevant studies to support the thesis in the second chapter includes a discussion of the study's theoretical review and conceptual framework. An overview of the research design/type, sampling technique, data sources, and data collection tool, as well as validity and reliability, and research ethics are provided in the third chapter. In chapter four, the research findings are provided by outlining how each research question will be addressed and how the findings taken together support the primary objective of the study. In chapter five, the thesis was completed with a summary, a conclusion, and a set of recommendations based on the results of the research. References are provided at the end of the document, along with appendices that include the survey questionnaires and interview questions used to gather the study's primary data as well as some of the findings.

Chapter Two: Literature Review

2.1. Introduction

This chapter discusses the definition of digital technologies and transformation, the process of its adoption, the challenges and opportunities of digital transformation, and factors affecting digital transformation in the world as well as in Ethiopia.

2.2. Theoretical Review

In discussions centered on digital transformation, device, and internet utilization stand out as fundamental elements invariably mentioned for their critical roles in driving and facilitating digital transformation across diverse domains and industries. The world's internet penetration rate reached 66.2% during the year 2024 while in Ethiopia it stood at 19.4% (Kemp, 2024). In addition, it is indicated by the international communication unit that the number of individuals who own a mobile cellular telephone and households with a computer is 58.3% and 5.03%, respectively.

Even though many studies have not been done in the past on digital transformation, it is now gaining momentum in recent years.

2.2.1. What is Digital Technology?

Digital technology refers to the use of digital tools, systems, and devices for data processing, storing, and transmission in an electronic format. This field includes a variety of technologies, such as smartphones, computers, software, the internet, and new developments like machine learning and artificial intelligence (Cohn, 2024).

Organizations integrate digital technologies like enterprise management software, modern collaborative platforms, big data analytics, cloud computing, and enhanced

connectivity, resulting in digital transformation and modifications to operational procedures and roles within the organization. Open design in digital technologies fosters novel methods of collaboration and interaction within ecosystems where organizations are active (Jorge Alberto Marino-Romero, 2022).

2.2.2. What is Digital Transformation?

There is frequently confusion between the phrases digitization, digitalization, and digital transformation. The act of converting physical objects into digital ones, or the "technical conversion of analog information into digital form," is known as digitization (Andreas Kallmuenzer, 2024).

Digitalization is a complex phenomenon that includes many different aspects, such as digital entrepreneurship, strategies, processes, and education. The process of converting organizational procedures, business structures, and internal and external communications into digital formats where data is represented and encoded digitally is known as digitalization. Digitalization is thought to be an essential tool for modern businesses to succeed. Its primary objective is to assist businesses in increasing their operational efficiency and enabling automation. Modern technology makes it possible to minimize inefficiencies while optimizing resource usage, lowering losses, and ultimately raising worker productivity. Effective customer relationship management and customer engagement depend heavily on digitalization (Andreas Kallmuenzer, 2024).

Digital transformation (DT) in public institutions refers to the strategic adoption and integration of digital technologies to improve efficiency, enhance service delivery, and meet evolving stakeholder expectations within the public sector. It is also defined

as a process that involves the adoption of transformational digital technologies that affect the functions, skills, and strategies of institutions. Digital transformation is often seen as a comprehensive stage encompassing a holistic shift aimed at creating innovative (digital) business models for organizations (Jorge Alberto Marino-Romero, 2022).

Ismail, Khater, and Zaki offered a more detailed definition of digital transformation, describing it as a process where companies integrate various new digital technologies, bolstered by extensive connectivity, to achieve optimal performance and sustained competitive advantage. This transformation affects multiple business dimensions, including the business model, customer experience (with digitally enabled products and services), and operations (encompassing processes and decision-making), while simultaneously impacting people (skills, talent, and culture) and networks (the entire value system) (Jimmy Bumann, 2019).

As defined by Morakanyane digital transformation (DT) is an ongoing evolution that utilizes digital technologies and capabilities to facilitate the creation of value through business models, operational processes, and customer experiences. Nonetheless, a study conducted by MITSloan and Deloitte indicates that many organizations find digital transformation challenging and not well comprehended (Resego Morakanyane, 2020).

2.2.3. What are the Factors Affecting Digital Transformation?

Adopting technology is seen as a challenge for the public sector across many countries in the world (Jorge Alberto Marino-Romero, 2022). Digital orientation involves more than solving situational problems or seizing new opportunities. A

major obstacle is the inability to experiment quickly, leading to prolonged assessment of new technologies before integration. This slow pace hinders competitive advantage. Additionally, the lack of a consistent framework unifying all teams and departments is a barrier. Digitalization requires all employees to continuously implement innovations and enhance customer value (Andreas Kallmuenzer, 2024).

The Oxford Internet Institute (OII) identified seven barriers to e-government in Europe: leadership failures, financial inhibitors, digital divides, poor coordination, organizational inflexibility, lack of trust, and poor technical design. In this study, six challenges specific to developing countries were identified: ICT infrastructure, policy issues, human capital development, change management, partnership strategy, and leadership. The World Bank Centre for Democracy and Technology highlighted three major challenges in developing countries: infrastructure development, law and public policy, and the digital divide (Abdalla, 2014).

The TOE (Technology, Organization, Environment) framework, that Tornatzky and Fleischer introduced in 1990, provides a comprehensive model for understanding how firms adopt innovative technologies. It identifies three key dimensions that influence this process: technology, organization, and environment. Technological factors encompass both existing technologies and those not yet introduced to the market by the enterprise. Organizational factors include characteristics related to resource utilization and adoption, such as organizational size, scope, management structure, and available resources. Environmental factors pertain to the broader context in which the enterprise operates, including government policies,

macroeconomic conditions, industry environment, and competition intensity. This framework has been extensively used in research to investigate the complex dynamics of technological innovation and adoption across various industries and regions (Xu Zhao, 2024) (Sekaran, 2003).

2.2.3.1. Technological Factors

Technological infrastructure

In terms of technological resources studies show that the availability of supporting technology and IT resources is crucial for digitization. Limited internet connections can hinder service accessibility in manufacturing. Organizations often lack awareness and IT skills, impacting digitalization. However, openness to innovative technologies can reduce costs and create new business opportunities (Luca Dörr, 2023).

Lack of funding hinders digital orientation, as early adopters spend significantly more on integrating new technologies compared to reactive firms (Andreas Kallmuenzer, 2024).

Digital knowledge and skill

Another factor is employees' lack of necessary skills and competencies, requiring extensive training (Jarosław Brodny, 2022). Companies with digital orientation should have recruitment standards that is high to ensure employees have adequate digital literacy (Hannah Trittin-Ulbrich, 2021). Competencies are also crucial in digitalization. Public institutions often lack the necessary skills or have varying levels of digital knowledge. To overcome these hurdles, developing relevant skills

through IT and soft skills training, best practice sharing, job rotation, knowledge sharing, and tutorials is essential. Additionally, introducing change management competencies and hiring experienced external staff or facilitators can help. Higher expertise reduces resistance and increases the likelihood of successful digital tool implementation (Luca Dörr, 2023).

Additionally, digital capabilities are essential for any organization contemplating digital adoption. Business capabilities are defined as capacities or abilities within a firm that are interconnected as business processes to achieve specific outcomes (Daniel Beimborn, 2005), must align with desired digital outcomes. Warner and Wäger, (2019) argue that adopting digital technology requires building dynamic capabilities, leading to strategic renewal of the business model, collaborative approach, and culture (Karl S.R. Warner, 2019). Warner and Wäger (2019) emphasize talent and resource maturity rather than overall organizational maturity. Thus, understanding and developing digital readiness, maturity, and dynamic capabilities are critical for successful and sustainable digital adoption (Karl S.R. Warner, 2019) (Al-Rashdi, 2022).

Trust and confidence on digital technology

The success of digital government initiatives hinges on establishing digital trust, which is the confidence user have in the government's ability to protect their data, ensure privacy, and provide reliable online services. Digital trust is built on security, transparency, reliability, and user-centric design. Security is crucial, requiring robust cybersecurity measures to protect personal information from unauthorized access and cyber threats. Transparency allows users to see how the government operates, makes

decisions, and uses data, enhancing trust. User-centric design focuses on creating intuitive, inclusive, and responsive digital interfaces that meet diverse user needs (Mounir M. El Khatib, 2024).

Trust is crucial for influencing employees' attitudes and behaviors toward technological change and is essential for their acceptance and adoption of new technology. In digitalization, trust in management is vital for employee cooperation and the successful implementation of digital initiatives. As the work environment evolves, continuous adaptation is necessary, making trust in management key to achieving positive outcomes and reducing resistance to change. Employee trust in management is essential for successfully implementing digitalization, and examining institutional factors that influence this trust is crucial (Angelika Lau, 2022).

2.2.3.2. Organizational Factors

Top management

Another crucial element for understanding digital adoption is leadership and change management. Digital adoption impacts an organization's processes, technology, and people, and its success depends on a shift in the leadership mindset. Leaders must drive change and adopt new ways of working, transitioning from traditional risk aversion to embracing a fail-fast approach and fostering a risk-taking culture that drives digital transformation. Beyond their traditional roles, leaders need new skills to facilitate digital transformation, such as risk-taking and fostering intensive collaboration (Al-Rashdi, 2022).

Digital transformation necessitates a new leadership skill set, diverging from traditional leadership models that focus on behaviors, styles, or traits. This transformation demands intensive collaboration and trust-building among participants, shifting the focus from individual leaders to the relationships between leaders and followers. Consistent, values-driven leadership is crucial for driving change, as leaders must align their actions with their espoused values to avoid a leadership crisis that could hinder digitalization efforts. Thus, leadership remains a core element in achieving successful digital transformation. As leadership evolves in the context of digital transformation, there is a growing need for stronger change management practices. For successful digital transformation, leaders must address these barriers and foster a positive attitude toward new technologies (Al-Rashdi, 2022).

Strong leadership is vital for successful digitalization projects, requiring soft skills like negotiation, influence, change management, motivation, risk-taking, and inspiring shared ambition. Both managers and employees must update their skills to address digitalization challenges. Top management's support and commitment are crucial for setting strategies, engaging employees, allocating resources, and communicating the project vision. Additionally, rewards, employee acceptance of changes, dedicated teams, trust, cooperation, and collaboration facilitate digitalization success (Bertha Joseph Ngereja, 2024).

Organizational culture and change management

A risk-averse culture significantly impacts digital transformation efforts. Many companies prioritize safety and security over potential benefits, avoiding risks in

most situations (Jarosław Brodny, 2022). Such a cautious approach conflicts with digital orientation, which requires frequent experimentation with new tools and the integration of innovative technologies (Andreas Kallmuenzer, 2024). Organizations vary in their willingness to adopt digital technologies. Assessing digital capabilities requires understanding an organization's digital maturity or readiness. Readiness and maturity differ: readiness assessment occurs before the maturing process, while maturity assessment captures the current state during the process. As an organization matures, its readiness for digital adoption increases. Evaluating digital maturity provides insight into organizational readiness for digitalization, though the best assessment approach is debated. There are three primary digital maturity models (Al-Rashdi, 2022).

Resistance from employees to embracing digital changes presents a notable barrier. Academic research highlights that many employees are hesitant to adopt organizational changes, especially the integration of new digital technologies. This resistance poses a significant challenge to organizations, compelling them to employ various strategies like recruiting change advocates, expanding training initiatives, offering financial incentives, and implementing other tactics to address it. Such resistance is a pivotal obstacle that can hinder digital transformation efforts and disrupt a company's digital trajectory (Andreas Kallmuenzer, 2024) (Hannah Trittin-Ulbrich, 2021).

The culture within a business shapes its operational methods. To successfully digitalize, it is essential to foster a digital entrepreneurial culture across the entire organization, involving collaboration among all departments. However, positive

attitudes towards digitalization are not always present, and resistance to change is common, necessitating a cultural shift (Luca Dörr, 2023).

2.2.3.3. Environmental Factors

(Basu, 2004) emphasized that for the implementation of digital transformation to be effective in Africa, it is crucial to consider the social, cultural, and economic differences in digital transformation (Basu, 2004). Additionally, Heeks and Bailur in their study stressed the importance of accounting for contextual factors beyond just technological advancement (Richard Heeks, 2007). The environment largely relates to political, cultural, economic, and regulatory aspects (Bolgherini, 2007) (Bakry, 2004).

Regulatory Environment

Public administrations face the challenge that implementing new technologies requires institutional agreements approved by policymakers, which can delay the adoption process (Andreas Kallmuenzer, 2024). This necessitates a comprehensive legal framework to regulate data access and usage and to establish clear accountability (Jorge Alberto Marino-Romero, 2022). The quality of these digital services is a key concern for users, measured by comparing their expectations to the actual performance of the services provided. To ensure this, the government safeguards privacy rights and protects personal data by securing sensitive information. The government is committed to maintaining individual privacy and data security, ensuring that information is not publicly accessible without consent from individuals, businesses, governments, and nongovernmental organizations (Tekle, 2023).

Basu (2004) emphasizes that DT success depends heavily on the government's role in forming a robust legal framework (Basu, 2004). The open nature of e-government systems increases the vulnerability of data to manipulation, making the protection of confidential information crucial and necessitating stringent privacy laws. A key goal of e-government is to ensure broad access to technology, particularly the Internet. However, access rates in developing countries remain significantly lower than in developed nations. Governments must ensure successful e-government projects that provide equitable access to technology and information (Abdalla, 2014). Many in developing countries are excluded from Internet access due to the absence of appropriate policies and strategies. To safeguard digital activities, governments should be able to develop a legal framework that preserves public policy, assigns data ownership, and rights, and enforces legal requirements (Basu, 2004).

Economic Environment

Recent e-government literature underscores the strong link between e-government progress and a country's economic development (UN, 2010). Modern technologies can accelerate economic growth, promote sustainable local development, and reduce poverty. Although ICT's significant impact on economic growth was not evident until the early 1990s, more recent studies highlight its crucial role in economic growth and reducing poverty. Digital technology adoption in developing countries enhances productivity, cost-effectiveness, and industry competitiveness. In sub-Saharan Africa, governments are leveraging telecommunications growth and economic liberalization to establish e-government systems (Mutula, 2008) (Schuppan, 2009).

Cultural Environment

In different studies, culture is defined differently as the way of life of a people, or as a system of collectively held values. Successful DT applications are linked to cultural sensitivity. Researchers study how technology usage, perception, and adoption are affected by cultural values and beliefs affect. Studies on e-government adoption have identified factors such as language, social norms, education, fear of technology, and lack of trust in technology (Altameem, 2007). Transferring e-government across cultural contexts is challenging and complex. There is a gap in understanding how national culture influences DT, with existing models limited and often criticized for a static view of culture using quantitative methods (Abdalla, 2014).

Political Environment

The political environment is crucial for digital transformation initiatives, as politics involves the authoritative allocation of societal values and goals (Abdalla, 2014). Heeks (2003) notes that digital transformation often fails in developing countries due to a mismatch between the 'role culture' of e-government, which values rules and logic, and the 'power culture' of the political environment, which values self-interest and hidden agendas (Heeks, 2003). Political turbulence, civil wars, and low levels of democratization further hinder e-government development. Citizens' trust in government decreases with histories of dictatorship, political instability, or corruption, limiting e-government benefits. However, strong political support for IT solutions can mitigate these negative impacts. Successful digital transformation requires politicians' will and capacity to enact change (Abdalla, 2014).

2.3. Conceptual Framework

In this research, the conceptual framework used by the researcher used the Technology-Organization-Environment framework which was initially devised by Tornatzky and Fleischer in 1990. It provides a comprehensive model for understanding how firms adopt innovative technologies. Three key dimensions are identified that influence digital transformation: technology, organization, and environment (Louis G. Tornatzky, 1990).

In this study, the assessment will be conducted using this framework to identify the factors affecting digital transformation in Woreda administration offices.

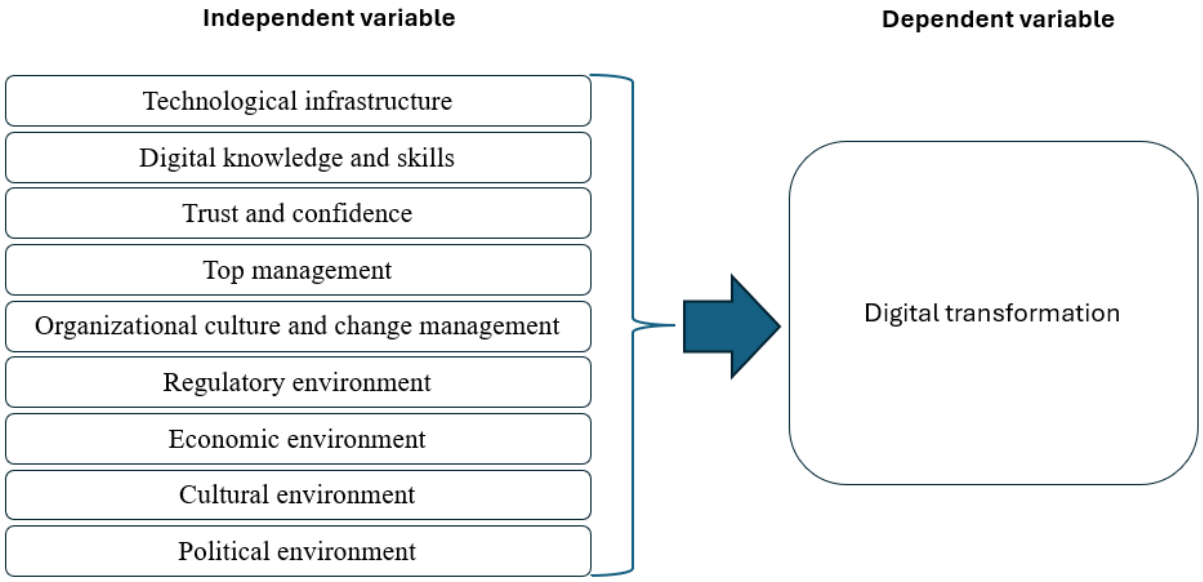


Figure 1: Conceptual framework for factors affecting digital transformation (Louis G. Tornatzky, 1990).

(slightly modified by the researcher, based on literature review)

2.4. Hypothesis

Based on the literature review and other insights, the following hypotheses have been formulated.

H1: Technological infrastructure in Woreda offices affects digital transformation.

H2: Digital knowledge and skill in Woreda offices affects digital transformation.

H3: Trust and confidence in Woreda offices affects digital transformation.

H4: Top management in Woreda offices affects digital transformation.

H5: Organizational culture and change management in Woreda offices affects digital transformation.

H6: Regulatory environment in Woreda offices affects digital transformation.

H7: Economic environment in Woreda offices affects digital transformation.

H8: Cultural environment in Woreda offices affects digital transformation.

H9: political environment in Woreda offices affects digital transformation.

Chapter Three: Research Design and Methodology

3.1. Introduction

This chapter outlines the methods used for the study, focusing on the research design, data type and source, data collection tools, population, sample size, data analysis and presentation methods, data validity and reliability, and ethical considerations.

3.2. Description of the Study Area

The Woreda administration office is a local governmental body under the sub-city within Addis Ababa's city administration. These offices manage public services, local governance, and administrative tasks within their respective districts, or Woredas, in Addis Ababa. Addis Ababa comprises eleven sub-cities, including Addis Ketema, Akaky Kaliti, Arada, Bole, Gullele, Kirkos, Kolfe Keranio, Lideta, Nifas Silk-Lafto, Yeka, and Lemi Kura. This study focuses specifically on the Woreda administration offices within the Kolfe Keranio sub-city, which encompasses 11 Woredas.

3.3. Research Approach and Design

This study utilized a mixed-methods approach, bringing together both quantitative and qualitative research designs. Mixed methods research enhances the study by integrating results from diverse methodologies, such as semi-structured interviews and questionnaires. This combination enriches the understanding of the issues being studied, as it offsets the limitations inherent in using only one method (Marja J Verhoef, 1997) (Kelle, 2008).

The research focuses on evaluating the factors influencing digital transformation. This involves identifying, analyzing, interpreting, and reporting the various elements affecting digital transformation in the Woreda administration offices, providing a comprehensive view of these factors. Explanatory and descriptive research are particularly suitable for this type of assessment, as they allow to investigate the cause-and-effect relationship between the dependent and independent variables and for an in-depth investigation of one or more variables related to the study. This approach is ideal for identifying characteristics, significance, trends, and categories of the relevant variables (Tegan George, 2023) (McCombes, 2023).

3.4. Type and Source of Data

The data for this study was obtained from primary sources. It was obtained from 125 employees working in Woreda bureaus using a formal sample survey. This primary data was gathered through a questionnaire survey from these 125 participants, who were considered the subjects of the study. The questionnaire was designed based on a literature review of several factors affecting digital transformation in Woreda administration offices. In addition, interviews were conducted to obtain qualitative data for the qualitative analysis. Semi-structured interview questions were used to gather this data.

3.5. Sampling Design

3.5.1. Target Population

The target population for this study comprises Woreda administrators, heads of different departments within the Woreda, and other staff in various departments who

utilize digital tools as part of their day-to-day activities within Woreda administration offices in Kolfe Keranio sub-city, Addis Ababa, Ethiopia. These individuals play integral roles in shaping and implementing digital transformation initiatives at the local government level, making them key informants for assessing the factors influencing digital transformation within this context. The total target population in the sub-city is 4299.

S/N	**Woredas in Kolfe Keranio sub-city**	**Number of employees in the woreda**
1	Woreda 01	447
2	Woreda 02	459
3	Woreda 03	282
4	Woreda 04	439
5	Woreda 05	418
6	Woreda 06	376
7	Woreda 07	410
8	Woreda 08	402
9	Woreda 09	430
10	Woreda 10	385
11	Woreda 11	251
Total		**4299**

Table 1: Target Population (Kolfe Keranio Subcity, 2024)

3.5.2. Sampling Technique

Sampling involves selecting a subset of the population of interest for a research study, as involving the entire population is often impractical. Sampling from a population is more practical time- and cost-effective. However, since the sample is used to infer characteristics about the entire population, understanding how the data was collected is crucial for accurate analysis and conclusions (Turner, 2020). There are two main sampling methods, and this study employs the combination of both probability and non-probability sampling. The sampling technique used in this study was double-stage cluster sampling to make the data collection more manageable. In double-stage cluster sampling, the population was first divided into clusters based on existing administrative clusters. Using probability sampling a random sample out of these clusters was then selected, ensuring all clusters were mutually exclusive and collectively exhaustive. In the second stage, non-probability sampling, specifically convenient sampling, was used where sample individuals were chosen from within each selected cluster based on convenience to the researcher.

3.5.3. Sample Size

The researcher used a condensed formula to estimate the sample size for this study. The sample size is determined using the formula below, with a 95% confidence level being assumed at an e-value of 0.05.

The total target population of the Kolfe Keranio sub-city is 4299. In the first stage, 3 Woreda administration offices were selected randomly from the eleven woredas. The selected Woreda offices are Woreda 07, Woreda 04, and Woreda 06.

In the second level, the sample was calculated from the number of populations in the three selected woredas i.e., 1225.

Confidence Level and Margin of Error: 95% confidence level (Z ≈ 1.96), margin of error 5% (0.05)

$Nr = N / [1 + N * (e)^2]$

Where:

Nr = size of sample

N = size of population

e = acceptable error (the precision), assumed to be ±8%

$Nr = 1225 / [1+1225*(0.05)^2] = 302$

The reduced sample size required

The formula for this is: $Na = Nr / \{1 + [(Nr – 1) / N]\}$

Where

Na = the adjusted sample size,

Nr = the original required sample size and

N = population size

Na = Nr / {1 + [(Nr – 1) / N]} = 302/{1+[(302-1)/1225]} = 242

Thus, the sample size was determined to be 242, and the study utilized the aforementioned sampling framework to appropriately allocate the samples among the selected Woredas.

3.5.4. Sampling Procedure

Respondents were contacted and informed about the objective of their participation. The researcher explained the objectives of the questionnaire and interview, emphasizing the importance of their honest responses. Participants were assured that the questions aimed to gather their opinions. Subsequently, the researcher distributed the questionnaires and conducted the interviews. Finally, the researcher thanked them for their time and insights.

3.6. Data Collection Instrument and Methodology

For this study, data was obtained using both questionnaires and interviews. As highlighted by Zikmund, the design of a questionnaire is crucial for achieving reliable survey results and ensuring a high response rate. The questionnaire for this research was developed based on an extensive literature review and tailored to the characteristics of the digital sectors. It comprised two main sections: the first section collected general demographic information about the respondents, while the second section addressed factors influencing digital transformation. This section included both closed-ended and open-ended questions, organized under technological, organizational, and environmental factors, totaling forty-two questions. The questionnaires were administered in paper format, with Amharic as the medium of instruction to facilitate effective data collection and ease of understanding for the respondents.

Additionally, for qualitative analysis, data was collected through in-person interviews using semi-structured questions, also conducted in Amharic. This dual

approach of utilizing both questionnaires and interviews enabled a comprehensive collection of data to support the research findings.

3.7. Data Analysis Methods

The data that was collected was analyzed using both quantitative and qualitative methods. The quantitative information from the questionnaire was examined using the statistical software SPSS (Statistical Package for Social Sciences). A numerical code was provided to each participant's response, making it simpler to enter and analyze data into the software. The data was analyzed using correlation and multiple regression techniques in an effort to fully comprehend the data that had been gathered and to offer a balanced interpretation of the research findings.

In order to assess the semi-structured interview, common concepts from the respondents' data were gathered and included in the recommendation and conclusion.

3.8. Validity and Reliability

3.8.1. Validity

In order to determine how well an instrument measures what it is supposed to measure, validity is the most important requirement. It shows the extent to which variations discovered using a measuring tool accurately reflect variations among the subjects of the test. There are three types of data validation: construct, criterion-related, and content validity (Kothari, 2004). To ensure validity, surveys covered all variables thoroughly, unbiased sampling techniques were used, and randomly selected Woreda administration office employees reviewed structured questionnaires. Carefully chosen, the study target increased validity.

3.8.2. Reliability

The reliability test is another measure of sound measurement. A measuring instrument is reliable if it consistently delivers the same results. While reliability contributes to validity, a reliable instrument is not necessarily valid (Kothari, 2004). Reliability concerns the repeatability and consistency of measurements, ensuring the same data is collected in repeated observations of the same phenomena. A sample was taken to test the reliability of the questionnaire with 20 Woreda administration office employees. Internal consistency was measured using Cronbach's alpha. Cronbach's alpha of 0.70 and above is generally considered good, 0.8 and above is better, and 0.9 and above is the best in this test. The data has improved internal consistency when viewed from this measuring angle. With this methodology, the study's dependability is ensured.

S.N.	Variables	Cronbach’s Alpha
1	The current status of the institution in terms of DT	0.902
2	Do the factors identified have an impact on DT	0.934

Table 2: Cronbach’s Alpha test

3.9. Ethical Consideration

In conducting the research, ethical standards were strictly followed. Only individuals directly involved in the study had access to the information, ensuring the confidentiality of respondents' identities. Data collected was kept anonymous and not disclosed to any third party. Participants were fully informed about the study's purpose, procedures, and potential benefits, and their participation was entirely voluntary. They were assured that their responses would remain confidential unless

explicit permission was given. The researcher emphasized maintaining the quality and integrity of the project while ensuring that the study posed no harm to respondents. These measures collectively demonstrate a strong commitment to ethical research practices.

Chapter Four: Data Analysis and Presentation

4.1. Introduction

The factors affecting Woreda administration offices' digital transformation are analyzed and discussed in this chapter. Inferential statistics, frequency, percentages, means, variances, standard deviation, and frequency are displayed in tables and figures that represent the data analysis, presentation, and interpretation. The main findings of this study are presented in this chapter together with the descriptive analysis of the study's variables and the regression analysis's outcomes. Following the coding and entry of all the data into the SPSS version, conclusions were drawn from the statistical data.

4.2. Response Rate

Of the total 1225 employees in the three selected Woreda administration offices, the sample size for this study was 242 employees. Out of this number the researcher was able to obtain the response of 176 sample individuals indicating 73% participation rate with valid participant response due to other undertakings and time constraint the employees in the organization have. Regarding the interview, the researcher aimed to interview twelve employees in the Woreda administration offices who are in management positions since they would have more institution-wide information to obtain insightful information. However, the researcher was able to interview only two employees in the management position in the Woreda administration offices due to their tight schedule and limited time.

4.3. Descriptive Analysis on Demographic Characteristics of Respondents

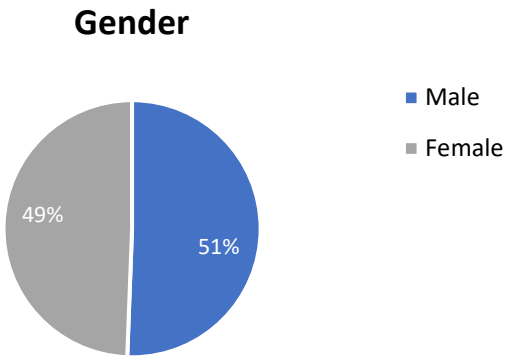


Figure 2: Gender distribution of the respondents

Based on the demographic data obtained from the survey, the gender distribution of the participants inside the company appeared to be comparable. 89 respondents, or 51% of the sample, were male, and 87 respondents, or 49% of the sample, were female

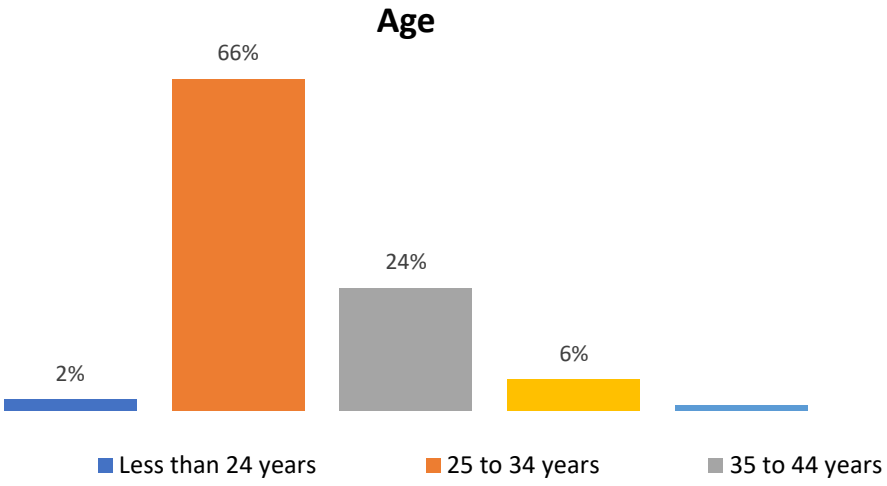


Figure 3: Age distribution of respondents

The age distribution of the respondents in the organization that are equal to or less than 24 is 4 with 2%, respondents whose age ranges from 25-34 years are 116 with 66%, ranging from 35-44 years of age are 43 respondents with 24%, respondents whose age ranges from 45-54 years are 11 with 6%, lastly, 2 respondents are of 55 years and above 55 making 1% of the total respondents.

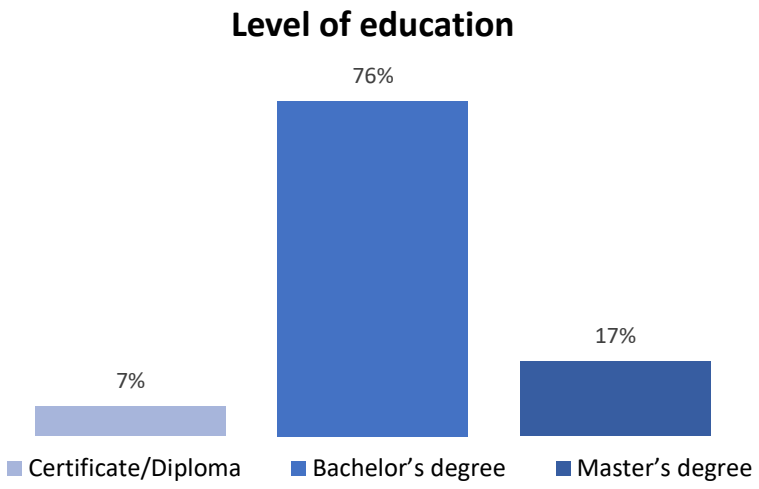


Figure 4: Level of education distribution of respondents

The level of education within the Woreda administration office has fallen into the three categories that were given in the questionnaire. 12 respondents have a Certificate/Diploma putting together 7% while 134 of the respondents have completed their bachelor's degree making 76% of the respondents. 30 respondents have a master's degree giving 17% of the total.

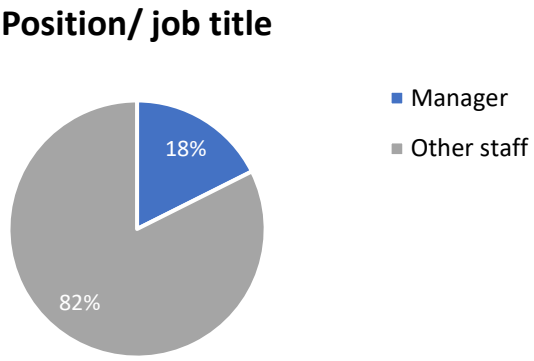


Figure 5: Position/Job title distribution of respondents

The position of the employees in the institution was grouped into two categories in the questionnaire. As a result, from the total, 31 respondents giving 18% are in managerial position and 145 respondents which is 82% are other staff across different departments.

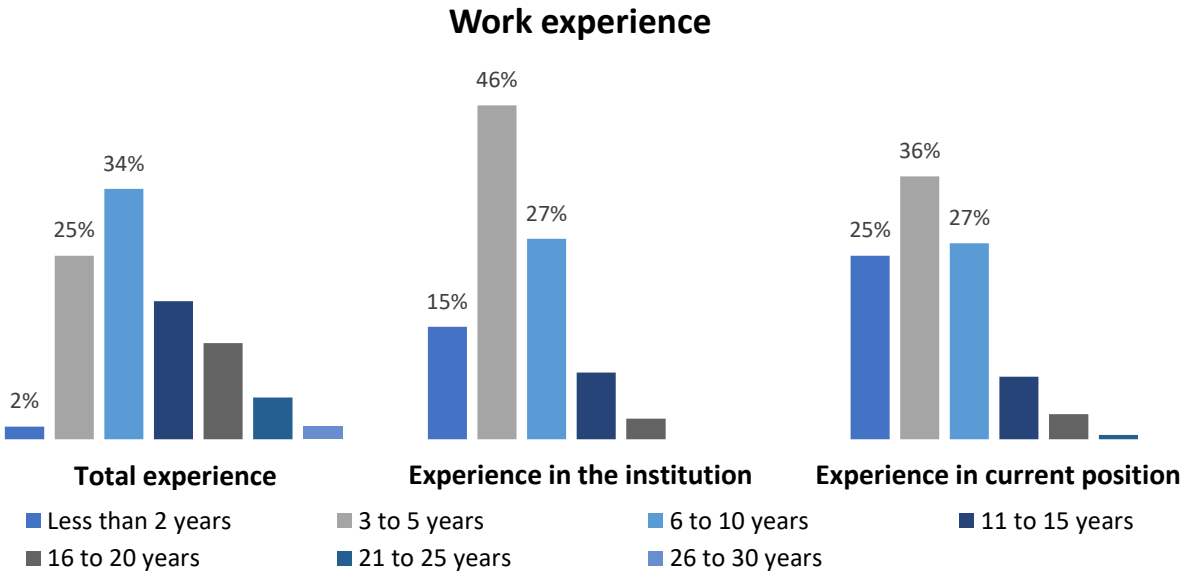


Figure 6: Distribution of respondents by work experience

In terms of working experience, the respondents were asked about their total experience in their lifetime, the number of years they stayed in this institution, and the number of years they stayed in their current position as each would have a separate relationship with the variable being assessed in this study. As a result, the response shows that most respondents' work experience under the three categories falls within the range of 3 to 5 years.

4.4. Descriptive Analysis on Factors Affecting Digital Transformation in Woreda Administration Offices

The researcher summarized the factors affecting DT using mean variance and standard deviation to see the general perception of the respondents regarding the factors affecting DT in Woreda administration offices. (Jum C. Nunnually, 1994) define a very low mean score as one between 1 and 1.8, a low mean score as one between 1.8 and 2.6, a moderate mean score as one between 2.6 and 3.4, a high mean score as one between 3.4 and 4.2, and a very high mean score as one greater than 4.2. the higher the mean, the more respondents agree with the statement, and the lower the mean, the more respondents disagree (Jum C. Nunnually, 1994).

4.4.1. Technological Factors

Technological infrastructure

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
There is adequate technology infrastructure in your institution	176	15%	43%	26%	15%	1%	2.44	0.93	0.97

The adequacy of technological infrastructure plays a role in supporting DT initiatives within the institution	176	2%	9%	35%	32%	22%	3.64	0.99	0.99

Source: Survey Data 2024 analyzed with SPSS

Table 3: Technology infrastructure

The findings of this study are in Table 4.2. indicated that less than half of the respondent said that there is adequate technology infrastructure in their institution giving a low mean score. Also, in the open-ended questions most respondents mentioned the lack of adequate digital infrastructure as a major barrier for the adoption of digital technology and implementation of digital transformation. On the other hand, 55% of the respondents agree that technological infrastructure has a positive impact on digital transformation.

Digital knowledge and skill

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
I believe I have an adequate level of digital literacy (knowledge and understanding of digital technologies and tools) and skills for performing my job responsibilities	176	9%	27%	28%	28%	8%	2.98	1.24	1.11

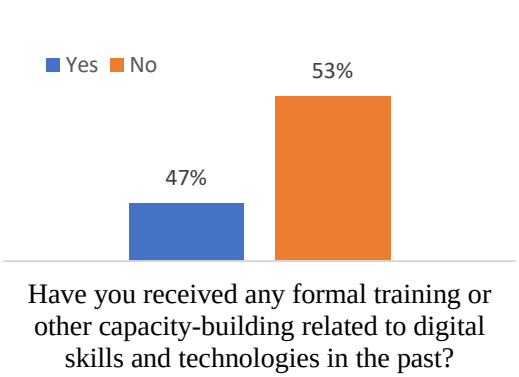
Digital literacy and skills are very important for effectively participating in digital transformation within the institution	176	2%	2%	32%	30%	34%	3.91	0.93	0.96
The IT professionals in this Woreda office are skilled enough to facilitate and support the digital transformation	176	13%	34%	30%	20%	3%	2.68	1.08	1.04
I believe the level of skill of the IT professionals in this institution has an impact on the adoption of digital technology and digital transformation	176	6%	9%	42%	29%	15%	3.38	1.06	1.03

Source: Survey Data 2024 analyzed with SPSS

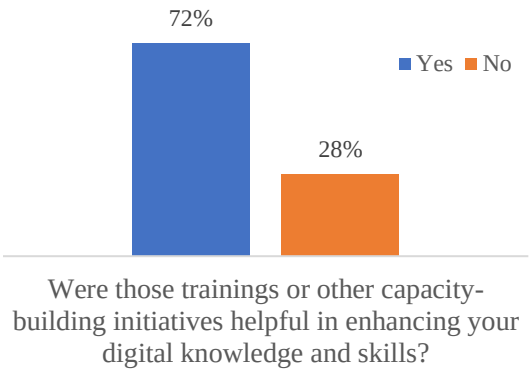
Table 4: Digital knowledge and skill

To understand where the institution lies in terms of digital knowledge and skill across the employees, they were asked if they believe they have an adequate level of digital literacy and skills for performing their job responsibilities and the IT professionals in the Woreda office are skilled enough to facilitate and support the digital transformation. 36% and 23% of respondents respectively had positive answers to those questions. The mean score for both questions is moderate. 64% of the

respondents agree that the digital literacy and skill of the staff have a positive relationship with DT and 44% agree that the level of skill of the IT personnel in the institution positively impacts the implementation of DT.



Have you received any formal training or other capacity-building related to digital skills and technologies in the past?



Were those trainings or other capacity-building initiatives helpful in enhancing your digital knowledge and skills?

Figure 5: Response on training provision

53% of respondents have stated that they have not received training, or any capacity-building activity related to digital transformation or technology adoption. Out of the respondents that have responded yes to whether or not they have received training, 72% found it helpful.

Trust and confidence in Digital technology

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
The data security and privacy measures of digital systems and technologies used in the Woreda administration office are strong	176	17%	34%	31%	16%	2%	2.51	1.02	1.01

Data privacy and confidentiality influences the employee's willingness to adopt new digital tools and systems in the work	176	2%	6%	45%	34%	14%	3.52	0.74	0.86
Transparency and openness in the design and implementation of digital solutions help to enhance trust among users in the Woreda administration office	176	3%	5%	35%	38%	19%	3.63	0.92	0.96

Source: Survey Data 2024 analyzed with SPSS

Table 6: Trust and confidence in Digital technology

Regarding trust and confidence in digital technology, respondents were asked three questions. Only 18% of the respondents believe that the data security and privacy measures of digital systems and technologies used in the Woreda administration office are strong giving a low mean score. 48% and 56% of the respondents respectively have agreed with the statement data privacy and confidentiality influence the employee's willingness to adopt new digital tools and systems in the work and transparency and openness in the design and implementation of digital solutions help to enhance trust among users in the Woreda administration office.

4.4.2. Organizational Factors

Top management

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
There is adequate organizational support and leadership commitment toward DT initiatives in the institution	176	17%	40%	25%	15%	4%	2.50	1.12	1.06
The support and leadership commitment in the institution impact the DT	176	5%	9%	39%	31%	16%	3.44	1.06	1.03
Leadership support motivates employees to adopt digitalization	176	3%	7%	43%	31%	15%	3.48	0.91	0.96
Leadership behaviors and attitudes play an important role in shaping the organizational culture regarding DT	176	5%	5%	39%	33%	18%	3.54	1.03	1.01

Source: Survey Data 2024 analyzed with SPSS

Table 7: Top management

19% of the respondents have stated that there is adequate organizational support and leadership commitment towards digital transformation initiatives with a low mean score. 47% of respondents believe that the support and leadership commitment in the institution motivates employees and positively impacts digital transformation.

Organizational culture and change management

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
The level of collaboration and teamwork among different departments or teams within the institution is strong	176	9%	30%	36%	22%	3%	2.80	0.98	0.99
The level of collaboration and teamwork in the institution has an impact on DT	176	1%	3%	36%	38%	22%	3.76	0.77	0.87
I believe that DT enhances collaboration and teamwork in the institution	176	1%	6%	32%	36%	25%	3.78	0.83	0.91
The organizational culture and change management in the institution is strong and favors DT	176	8%	43%	23%	24%	2%	2.68	0.96	0.98
The employees in this institution are open to change rather than resisting	176	16%	34%	26%	23%	2%	2.61	1.12	1.06
The organizational culture has a significant impact on the adoption of DT	176	2%	4%	39%	38%	17%	3.64	0.79	0.89

initiatives in the institution									
The institution's approach to change management and agility or resistance to change impact its ability to embrace DT	176	2%	5%	39%	35%	19%	3.63	0.85	0.92

Source: Survey Data 2024 analyzed with SPSS

Table 8: Organizational culture and change management

The study sought to determine the effect of organizational culture and change management on digital transformation. With this regard, 7 questions were provided to respondents. As such, the result has indicated that the level of collaboration and teamwork has a moderate mean score with 25% agreeing that it is strong within the institution. 60% of respondents believe that a strong level of collaboration and teamwork impacts DT positively. Also, 61% of respondents agreed that digital transformation enhances collaboration and teamwork in the institution. Only 26% of the respondents said that the organizational culture and change management in the institution are strong, the rest have either remained neutral or disagreed. In terms of resistance to change among employees only 24% of them believe that the employees in the institution are open to change with a moderate mean score. More than 55% of respondents agree that the organizational culture and the institution's approach to change management have an effect on digital transformation in the Woreda administration offices.

4.4.3. Environmental Factors

Regulatory environment

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
The existing regulatory environment and framework is promising for DT implementation	176	9%	37%	34%	17%	3%	2.68	0.92	0.96
Overall, the regulatory environment and policy framework regarding DT in Ethiopia affect the DT within the Woreda administration office	176	5%	9%	37%	37%	13%	3.44	0.96	0.98
The regulatory environment regarding DT in the institution affects the DT within the Woreda administration office	176	3%	8%	39%	36%	14%	3.50	0.86	0.93

Source: Survey Data 2024 analyzed with SPSS

Table 9: Regulatory environment

Only 20% of the respondents agreed that the existing regulatory environment and framework are promising for DT implementation with a moderate mean score. Whereas the majority of respondents believe that the regulatory environment and framework affect DT in Woreda administration offices.

Economic environment

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
The current economic condition of Ethiopia is adequate for the implementation of DT	176	11%	38%	33%	15%	2%	2.59	0.92	0.96
Economic conditions have a significant impact on the DT in the Woreda administration office	176	1%	3%	38%	42%	17%	3.71	0.65	0.81

Source: Survey Data 2024 analyzed with SPSS

Table 10: Economic environment

Two questions were asked to understand the relationship between the economic environment and DT. Only 18% of the respondents believe that the current economic condition of Ethiopia is adequate for the DT implementation with a low mean score. While 59% agreed with the statement "Economic conditions have a significant impact on the DT in the Woreda administration office".

Cultural environment

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
The cultural environment in Ethiopia is favorable for DT in Woreda administration offices	176	7%	17%	59%	15%	2%	2.88	0.67	0.82
External factors such as community	176	2%	7%	37%	38%	17%	3.59	0.85	0.92

expectations or partnerships with other organizations impact the DT in the Woreda office									
Customer situations and interests affect the DT in the institution	176	3%	20%	17%	44%	16%	3.49	1.18	1.08

Source: Survey Data 2024 analyzed with SPSS

Table 11: Cultural environment

Under the cultural environment, three questions were asked. The mean score of the statement the cultural environment in Ethiopia is favorable for DT in Woreda administration offices is moderate where 17% of respondents agree with it. Most of the respondents agree that external factors such as community expectations or external partnerships, customer situations, and interests have a positive relationship with digital transformation.

Political environment

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
The political environment in Ethiopia is advantageous for the implementation of DT	176	6%	18%	59%	15%	2%	2.89	0.66	0.81
The political condition in Ethiopia impacts the DT in the institution	176	5%	24%	15%	38%	18%	3.40	1.36	1.17

Source: Survey Data 2024 analyzed with SPSS

Table 12: Political environment

Only 17% of the respondents have said that the political environment in Ethiopia does not favor the implementation of DT giving a moderate mean score. On the other hand, 56% believe that the political condition in Ethiopia impacts the DT in the institution.

4.4.4. Digital transformation implementation

Statement	N	SD	D	N	A	SA	Mean	Variance	SD
The implementation of digital transformation in this institution is a success in Woreda administration offices	176	6%	38%	44%	13%	1%	2.65	0.63	0.79

Source: Survey Data 2024 analyzed with SPSS

Table 13: Digital transformation implementation

As shown in the table above only 13% of the respondents believe that the implementation of DT is a success in Woreda administration offices with a moderate mean score i.e., 2.65%.

4.5. Results of Inferential Statistics

The aim of this study is to evaluate the variables influencing Woreda administration offices' digital transformation. The results are shown in the section below. The study uses regression analysis and correlation using the IBM Statistical Package for Social Sciences (SPSS) software. The findings of the regression and correlation analyses are shown in this section.

4.5.1. Correlation Analysis

	TIS	DKSS	TCS	TMS	OCCS	RES	EES	CES	PES	DTI
TIS	1									
DKSS	.360**	1								
TCS	.288**	.519**	1							
TMS	.240**	.389**	.434**	1						
OCCS	.356**	.470**	.526**	.339**	1					
RES	.199**	.432**	.456**	.426**	.707**	1				
EES	.234**	.425**	.880**	.428**	.485**	.390**	1			
CES	0.106553	.260**	.749**	.369**	.288**	.247**	.787**	1		
PES	.159*	.224**	.705**	.332**	.303**	.231**	.754**	.897**	1	
DTI	.428**	.635**	.748**	.490**	.752**	.593**	.697**	.495**	.504**	1

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

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

Table 14: Correlation analysis

4.5.2. Regression Analysis

Regression analysis is a statistical technique employed to investigate the correlations among variables. Regression analyzes the relationship between two continuous (scale) variables, much like correlation does. Regression analysis, on the other hand, is better suited for examining functional connections between factors, in which the level of one variable (X) is partially determined by another (Y). The study employed multiple regression analysis to ascertain the predictive value of the constructs being examined.

A multiple regression analysis was carried out for the dependent and independent variables in the study. The percentage of variation in the dependent variable or the degree to which changes in the independent variables may be explained by changes in the dependent variable is explained by the coefficient of determination. The nine independent variables—Technology infrastructure (TIS), Digital knowledge and skill (DKSS), Trust and confidence in digital technology (TCS), Top management (TMS), Organizational culture and change management (OCCS), Regulatory environment (RES), Economic environment (EES), Cultural environment (CES), and Political environment (PES) all contribute to the variance of digital transformation implementation (DTI). The model summary (Table 15) below shows that the relevant indications of the variable that was utilized to determine the DTI were investigated. That is, the amount of variance in the dependent variable (DTI) that the model is able to identify is determined by the value of the Adjusted R square.

Model summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890a	0.793	0.781	0.37098

a Predictors: (Constant), TIS, DKSS, TCS, TMS, OCCS, RES, EES, CES, and PES

Table 15: Table summary

A higher Adjusted R square value indicates a better model. As indicated in the above table (Table 15), the overall contribution of TIS, DKSS, TCS, TMS, OCCS, RES, EES, CES, and PES accounted for 78.1% (Adjusted R Square .781) of the variance in DTI. Other independent factors not covered in this study are represented by the

remaining 21.9%. Consequently, the finding implies that more research could look into the other (21.9%) factors influencing DT in Woreda administration offices.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.313	9	9.701	70.49	<.001b
	Residual	22.846	166	0.138		
	Total	110.159	175			

a Dependent Variable: DTI

b Predictors: (Constant), TIS, DKSS, TCS, TMS, OCCS, RES, EES, CES, and PES

Table 16: ANOVA

Regression mean square (MSR) is divided by residual mean square (MSE) to get the F statistic. The independent variables are able to adequately explain the variation in the dependent variable when the significant value of the F statistic is small (less than 0.05). The null hypothesis, which states that the population values for the regression coefficients are zero, is accepted if, on the other hand, the significance value of F is greater than 0.05, indicating that the independent variables may not account for the variance in the dependent variable. The model specification in this study, as indicated in Table 16, is considered valid because the p-value is less than 0.001b and the F statistic value is 70.49, both of which are acceptable and below the significance criterion of 0.05.

4.6. Hypothesis Testing Using Multiple Regressions

The beta (β) coefficient in a regression model reveals whether the independent factors cause the dependent variable to increase or decrease. It can have a positive or negative sign. The beta indications for each of the independent variables show their influence, as seen in Table 17. This implies that the dependent variable increases in proportion to any proportionate rise in the independent variables.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.074	0.152		0.49	0.625
	Technology infrastructure	0.068	0.033	0.082	2.052	0.042
	Digital knowledge and skill	0.178	0.042	0.194	4.231	<.001
	Trust and confidence	0.202	0.066	0.257	3.055	0.003
	Top management	0.069	0.032	0.092	2.17	0.031
	Organizational culture and change management	0.336	0.049	0.387	6.919	<.001
	Regulatory environment	0.008	0.044	0.009	0.175	0.861
	Economic environment	0.124	0.069	0.149	1.787	0.076
	Cultural environment	-0.129	0.088	-0.133	-1.474	0.142

	Political environment	0.121	0.081	0.124	1.499	0.136

a Dependent Variable: DTI

Table 17: Coefficients

The multiple regression model with all 9 predictors produced adjusted $R^2 = 0.781$, F = 70.49, p < <.001b. As can be seen in Table 17, TIS (β = 0.068, p = 0.042), DKSS (β = 0.178, p = <.001), TCS (β = 0.202, p = 0.003), TMS (β = 0.069, p = 0.031), and OCCS (β = 0.336, p < 001) have a positive and significant relationship with DT implementation. Whereas RES (β = 0.008, p = 0.861), EES (β = 0.124, p = 0.076), and PES (β = 0.121, p = 0.136) have a positive but not significant relationship with DT implementation. Finally, CES (β = -0.129, p = 0.142) has a negative and not significant relationship with DT implementation.

The coefficient of regression in Table 17 was used to produce the model below:

DTI = 0.074 + 0.068TIS + 0.178DKSS + 0.202TCS + 0.069TMS + 0.336OCCS + 0.008RES - 0.124EES - 0.129CES + 0.121PES

Where:

TIS = Technology infrastructure,

DKSS = Digital knowledge and skill

TCS = Trust and confidence in Digital technology

TMS = Top management

OCCS = Organizational culture and change management

RES = Regulatory environment

EES = Economic environment

CES = Cultural environment

PES = Political environment

The model's regression findings were used to test the theories formulated in the second chapter. In order to support or reject the hypothesis, the researcher examined the association between digital transformation and each of the independent variables (TIS, DKSS, TCS, TMS, OCCS, RES, EES, CES, and PES).

H1: Technological infrastructure in Woreda offices affects digital transformation.

The positive beta sign and the statistically significant result of the technological infrastructure influence the implementation of digital transformation positively ($\beta = 0.068$, $p = 0.042$), which is significant for $P < 0.05$. It has a stronger significant relationship and supports the proposed hypothesis.

H2: Digital knowledge and skill in Woreda offices affects digital transformation.

The positive beta sign and the statistically significant result of the digital knowledge and skills influence the implementation of digital transformation positively ($\beta = 0.178$, $p = <.001$), which is significant for $P < 0.05$. It has a stronger significant relationship and supports the proposed hypothesis.

H3: Trust and confidence in Woreda offices affects digital transformation.

The positive beta sign and the statistically significant result of the trust and confidence influence digital transformation positively ($\beta = 0.202$, $p = 0.003$), which is significant for $P < 0.05$. It has a stronger significant relationship and supports the proposed hypothesis.

H4: Top management in Woreda offices affects digital transformation.

The positive beta sign and the statistically significant result of the top management influence the implementation of digital transformation positively ($\beta = 0.069$, $p = 0.031$), which is significant for $P < 0.05$. It has a stronger significant relationship and supports the proposed hypothesis.

H5: Organizational culture and change management in Woreda offices affects digital transformation.

The positive beta sign and the statistically insignificant result of the organizational culture and change management influence digital transformation positively ($\beta = 0.336$, $p < 001$), which is significant for $P < 0.05$. It has a significant relationship and supports the proposed hypothesis.

H6: Regulatory environment in Woreda offices affects digital transformation.

The positive beta sign and the statistically insignificant result of the regulatory environment influence digital transformation positively ($\beta = 0.008$, $p = 0.861$), which is insignificant for $P > 0.05$. It has an insignificant relationship but supports the proposed hypothesis.

H7: Economic environment in Woreda offices affects digital transformation.

The positive beta sign and a statistically insignificant result of economic environment influence digital transformation positively ($\beta = 0.124$, $p = 0.076$), which is insignificant for $P > 0.05$. It has an insignificant relationship but supports the proposed hypothesis.

H8: Cultural environment in Woreda offices affects digital transformation.

The negative beta sign and a statistically insignificant result of economic environment involvement influence digital transformation with (β = -0.129, p = 0.142), which is P > 0.05. Does not support the proposed hypothesis.

H9: Political environment in Woreda offices affects digital transformation.

The positive beta sign and the statistically insignificant result of the political environment influence digital transformation positively (β = 0.121, p = 0.136), which is insignificant for P > 0.05. It has an insignificant relationship but supports the proposed hypothesis.

Independent Variables	The expected result from the hypothesis	Regression result	Hypothesis final decision
Technology infrastructure	+	+	Supported
Digital knowledge and skill	+	+	Supported
Trust and confidence	+	+	Supported
Top management	+	+	Supported
Organizational culture and change management	+	+	Supported
Regulatory environment	+	+	Not supported
Economic environment	+	+	Not supported
Cultural environment	+	-	Not supported
Political environment	+	+	Not supported

Table 18: Summary of hypothesis testing

4.7. Discussion

Consistent with a previous study by (Luca Dörr, 2023), which highlighted the importance of technology and IT resources, including internet connectivity, for digital transformation (DT), this study identified that DT implementation in Woreda administration offices heavily relies on technological infrastructure (Luca Dörr, 2023) (Daniel Beimborn, 2005). Additionally, this study found that beyond the availability and adequacy of technological infrastructure, having the knowledge and skills to use it is crucial. Brodny, J., in his research, pointed out the lack of necessary skills and competencies, which requires extensive training (Jarosław Brodny, 2022). (Luca Dörr, 2023) also emphasized that introducing change management competencies and hiring experienced external staff or facilitators can help, as higher expertise reduces resistance and increases the likelihood of successful digital tool implementation.

According to (Angelika Lau, 2022) trust is crucial for influencing employees' attitudes and behaviors toward technological change and is essential for their acceptance and adoption of modern technology. Similarly, in this study, it is identified that trust and confidence of the employees in technology plays a very important role in implementing digital transformation.

(Al-Rashdi, 2022) and (Bertha Joseph Ngereja, 2024) in their studies stated that leaders need to drive change and technological adoption, requiring a new set of skills, attitudes, and behaviors to transform themselves and their employees for successful DT implementation. They also mentioned that leaders play an invaluable role in leading DT by engaging employees and allocating resources. This study in Woreda

administration offices confirmed that the role of top management is a crucial factor in the DT journey (Al-Rashdi, 2022) (Bertha Joseph Ngereja, 2024).

Another significant factor identified in this study affecting DT is organizational culture and change management. In line with this, (Al-Rashdi, 2022) mentioned that intensive collaboration among users is required for successful implementation. The findings also align with studies by (Andreas Kallmuenzer, 2024) and (Hannah Trittin-Ulbrich, 2021), who noted that employee resistance to adopting digital technologies is a significant barrier to DT.

Overall, the factors affecting digital transformation identified in Woreda administration offices align with and support studies conducted by various researchers in different settings.

Chapter Five: Summary, Conclusion, and Recommendation

5.1. Introduction

This chapter presents a summary of the main findings on factors affecting digital transformation in Woreda administration offices in Kolfe Keranio sub-city. It also gives conclusions, recommendations, and areas for further research study.

5.2. Summary of Major Findings

The objective of the research is to assess the factors affecting digital transformation. In the case of Woreda administration offices. To gather primary data, the researcher utilized questionnaires, targeting respondents with diverse characteristics such as age, gender, education level, job position, and years of experience. After that, tests for validity and reliability were run to verify the consistency of the data. SPSS was used to analyze the respondents' data after a reliability test verified the data's consistency for the analysis.

1. In the results it is indicated that the implementation of digital transformation in the Woreda administration offices is low with a 2.65 mean and 0.63 SD. Only 13% of respondents agreed that the implementation of digital transformation in Woreda administration offices is a success so far.
2. The findings also indicate that the average mean and standard deviation for technology infrastructure, reflecting the institution's state, are 2.44 and 0.97, respectively. This suggests that the technology infrastructure in Woreda administration offices remains insufficient. Regarding the question of whether technological infrastructure positively affects digital transformation, 32% and 22% of respondents agreed and strongly agreed, totaling 54%. Conversely, the

remaining respondents expressed disagreement, strong disagreement, or neutrality. This signifies that a majority of respondents consider technology infrastructure crucial for digital transformation implementation.

3. In terms of digital knowledge and skills, the average mean and standard deviation for questions regarding the organization's current digital landscape are 2.83 and 1.08, indicating a low level of digital expertise in Woreda administration offices. Concerning the impact of digital knowledge and skills on digital transformation implementation, 30% and 34% of respondents agreed and strongly agreed, totaling 64%. Similarly, for the importance of IT personnel's digital competence, 29% and 15% agreed and strongly agreed, totaling 44%.
4. The finding also shows that the average mean and standard deviation for the level of trust and confidence the employees have on the digital technology in the institution is 2.51 and 1.01, respectively. This indicates that the employees have low trust and confidence in digital technology. In terms of the influence of data privacy and confidentiality on employee's willingness to adopt new digital tools and systems in the work 34% and 14% agreed and strongly agreed, totaling 44%. Also 38% and 19% respectively have agreed and strongly agreed to the statement Transparency and openness in the design and implementation of digital solutions help to enhance trust among users. This shows that the higher the trust and confidence increased digital transformation is.
5. Regarding top management, the average mean and standard deviation reflecting the institution's status are 2.5 and 1.06, which shows inadequate support and commitment from top management. In terms of three related questions on top

management's importance, behavior, and motivation of employees towards DT implementation, 47%, 51%, and 47% respectively showed agreement.

6. The analysis also indicates that organizational culture and change management within the institution have a moderate score, with an average mean and standard deviation of 2.7 and 1.01. 38% and 22% of respondents agreed and strongly agreed on the importance of collaboration and teamwork for digital transformation. 60%, 55%, and 54% of respondents respectively agree with the statement the level of collaboration and teamwork in the institution has an impact on DT, the organizational culture has a significant impact on the adoption of digital transformation initiatives in the institution, and the institution's approach to change management and agility or resistance to change impact its ability to embrace digital transformation. Additionally, 61% believe that digital transformation positively impacts collaboration and teamwork in the institution.

5.3. Conclusion

Based on the comprehensive findings of the study, it was concluded that several key factors significantly influence the successful implementation of digital transformation within the Woreda administration offices located in Kolfe Keranio sub-city. Among these factors, the availability and quality of technology infrastructure, the level of digital knowledge and skills among staff members, the employee's trust and confidence on the technologies, the extent of top management's support, and the organizational culture and change management within the institution play crucial roles. One of the primary hindrances identified was the inadequacy of technology infrastructure, which not only obstructed the implementation of digital

transformation but also highlighted the urgent need for updated and well-maintained infrastructure. Respondents also highlighted the insufficient budget allocation and the low prioritization of digital initiatives as major obstacles. Moreover, the study revealed a noticeable gap in digital knowledge and skills among employees, with most having only basic proficiency in Microsoft Office tools. Low trust and confidence of employees in digital technology is also amongst the factors affecting digital transformation which also is related to data privacy and security. The lack of strong support and commitment from top management was identified as another significant barrier, impacting the overall momentum of digital initiatives and dampening employee enthusiasm for embracing digital transformations. Furthermore, the underdeveloped organizational culture and change management within the Woreda administration office were identified as contributing factors to the slow adoption of digital transformation. This highlights that the institution's operational methods, team integration, openness to change in terms of digital transformation, and other aspects of organizational culture and change management are still in the developmental stages.

5.4. Recommendation

Digital transformation is a key factor for effective and efficient service provision. This study highlights the need for Woreda administration offices to enhance their digital transformation efforts to improve service quality, efficiency, and customer satisfaction. Based on the findings, the study makes the following recommendations:

- The institution should increase the availability and adequacy of technology infrastructure, allocate budgets for building and maintaining it, and collaborate

with other institutions to address issues like poor internet connections and electricity outages.

- The study shows that the current knowledge and skills of employees in Woreda administration offices are insufficient for the effective use of digital tools and technologies. Capacity-building initiatives such as training and demonstrations should be conducted to empower employees with adequate skills and knowledge. Customized training manuals should be developed, training durations should be planned accordingly, and competent personnel should deliver the training. IT personnel should also be highly skilled, given their crucial role in facilitating digital transformation.
- The trust and confidence that employees have in the institution's digital technology are crucial for successful digital transformation. To address this, the institution must ensure that data is secure and confidential. Additionally, the design and implementation of digital technology should be transparent and accessible to employees when relevant. This approach will motivate employees to adopt the technology without concerns about data security and privacy.
- The success of digital transformation heavily relies on the support, involvement, and commitment of top management. Management should be more active in decision-making, resource allocation, employee motivation, and other critical activities.
- Increasing collaboration and teamwork within the institution will diversify skillsets, allow for the sharing of expertise, and ensure a holistic view of the customer experience, leading to the development of customer-centric digital

solutions. Furthermore, enhancing the change management approach and encouraging and educating employees to be open to new ideas and innovation, and building a strong and digital-oriented organizational culture are also important to improve the implementation of DT. As indicated by the participants, although the current organizational culture tends to favor a more traditional and risk-averse approach, a significant number of them expressed a preference for utilizing digital or hybrid (both digital and manual) working methods. This preference is driven by the belief that integrating digital tools can enhance their efficiency and effectiveness. However, many employees feel that they do not yet possess adequate digital knowledge and skills. Consequently, they advocate for a gradual transformation, preferring a smooth transition from manual to digital processes rather than an abrupt change. This gradual approach would allow them to adapt more comfortably and effectively to new digital practices.

Implementing these recommendations will enhance the effectiveness of digital transformation in Woreda administration offices, thereby improving public service delivery.

Further Research Recommendation

The factors affecting the digital transformation of the Woreda administration offices in the Kolfe Keranio sub-city have been the focus of this study. However, given the constraints including budgetary and time limitations as well as the published research findings, it is essential to offer recommendations for more study. For future study, it would be to use a mixed method with more respondents in a wider geographic area.

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Appendices

Research Instrument

Questionnaire

Addis Ababa University

School of Commerce

Department of Project Management

Dear Respondents,

This questionnaire is designed to collect data for the study on "**Factors affecting digital transformation. In the case of Woreda administration offices in Kolfe Keranio sub city, Addis Ababa, Ethiopia**" to be used for partial fulfillment of the requirement of MA in Project Management. I truly believe that your sincere answers will significantly improve the standard of this research endeavor. Please be aware that this research is just being done for academic purposes and that any information you choose to share will remain confidential. The researcher respectfully asks that you consider each question carefully, as your answers will be an important source of information that will help the research reach its intended conclusion. Your assistance will be much valued. Your support will be highly appreciated. Please contact me using my mobile number **0926285797** or email address **lydiaberhanu100@gmail.com** if you have any queries regarding this questionnaire.

Instruction:

- You are not required to write your name
- Please tick the appropriate boxes which best suit your view

Part I: Demographic information

1. Gender

   ☐ Male ☐ Female

2. Age

   ☐ <24 ☐ 25 – 34 ☐ 35 – 44

   ☐ 45 – 54 ☐ >55

3. Level of education

   ☐ Certificate/Diploma ☐ Bachelor's degree

   ☐ Master's degree ☐ PhD

4. Position of the job

   ☐ Manager ☐ Other staff (technical and support staff)

5. Total years of experience as an employee

   ☐ <2 years ☐ 3 – 5 years ☐ 6 – 10 years

   ☐ 11 – 15 years ☐ 16 – 20 years ☐ 21 – 25 years

   ☐ 26 – 30 years ☐ >30 years

6. Years of service in the institution

   ☐ <2 years ☐ 3 – 5 years ☐ 6 – 10 years

   ☐ 11 – 15 years ☐ 16 – 20 years ☐ 21 – 25 years

   ☐ 26 – 30 years ☐ >30 years

7. Years of experience in the position

   ☐ <2 years ☐ 3 – 5 years ☐ 6 – 10 years

☐ 11 – 15 years ☐ 16 – 20 years ☐ 21 – 25 years

☐ 26 – 30 years ☐ >30 years

Part II: Questions related to digital transformation.

The following questions are related to digital transformation and factors affecting it in the Woreda administration office. Please indicate your answer by putting a tick mark (✓) on the space that specifies your choice from the options that range from 'strongly agree' to 'strongly disagree.'

Key

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

S/N	Items	Rating				
		1	2	3	4	5
Section II: Technological factors						
Technology infrastructure availability and adequacy						
1	There is adequate technology infrastructure (devices, systems, connectivity) in your institution					
2	The adequacy of technological infrastructure plays a role in supporting digital transformation initiatives within the Woreda administration office					
Digital knowledge and skill						

3	I believe I have an adequate level of digital literacy (knowledge and understanding of digital technologies and tools) and skills for performing my job responsibilities					
4	Digital literacy and skills are very important for effectively participating in digital transformation within the institution					
5	The IT professionals in this Woreda office are skilled enough to facilitate and support the digital transformation					
6	I believe the level of skill of the IT professionals in this institution has an impact on the adoption of digital technology and digital transformation					
Trust and confidence in Digital technology						
7	The data security and privacy measures of digital systems and technologies used in the Woreda administration office are strong					
8	Data privacy and confidentiality influences the employee's willingness to adopt new digital tools and systems in the work					
9	Transparency and openness in the design and implementation of digital solutions help to enhance trust among users in the Woreda administration office					
Section III: Organizational factors						
Top management						
10	There is adequate organizational support and leadership commitment towards digital transformation initiatives in the Woreda administration office					

11	The support and leadership commitment in the institution impact the digital transformation					
12	Leadership support motivates employees to adopt digitalization					
13	Leadership behaviors and attitudes play an important role in shaping the organizational culture regarding digital transformation					
Organizational culture and change management						
14	The level of collaboration and teamwork among different departments or teams within the institution is strong					
15	The level of collaboration and teamwork in the institution has an impact on digital transformation					
16	I believe that digital transformation enhances collaboration and teamwork in the institution					
17	The organizational culture related and change management in the institution is strong and favors DT					
18	The employees in this institution are open to change rather than resisting					
19	The organizational culture has a significant impact on the adoption of digital transformation initiatives in the institution					
20	The institution's approach to change management and agility or resistance to change impact its ability to embrace digital transformation					
Section IV: Environmental factors						
Regulatory environment						

21	The existing regulatory environment and framework is promising for DT implementation					
22	Overall, the regulatory environment and policy framework regarding digital transformation in Ethiopia affect the digital transformation within the Woreda administration office					
23	The regulatory environment regarding digital transformation in the institution affects the DT within the Woreda administration office					
Economic environment						
24	The current economic condition of Ethiopia is adequate for the implementation of DT					
25	Economic conditions have a significant impact on the DT in the Woreda administration office					
Cultural environment						
26	The cultural environment in Ethiopia is favorable for DT in Woreda administration offices					
27	External factors such as community expectations or partnerships with other organizations impact the DT in the Woreda office					
28	Customer situations and interests affect the DT in the institution					
Political environment						
29	The political environment in Ethiopia is advantageous for the implementation of DT					
30	The political condition in the country impacts the DT in the institution					

Digital transformation implementation						
31	The implementation of DT in this institution is a success in Woreda administration offices					

32. What are the main technological challenges or barriers hindering the adoption of digital transformation in your Woreda office?_____

    _____

    _____

33. In your opinion, what measures need to be taken to improve the level of adoption of digital transformation, related to infrastructure availability?_____

    _____

    _____

34. Have you received any formal training or other capacity-building related to digital skills and technologies in the past?

    a. Yes
    b. No

35. If yes to the above question, were those trainings or other capacity-building initiatives helpful in enhancing your digital knowledge and skills?

    a. Yes
    b. No

36. If the trainings were not helpful, why? (maybe the duration of the training, the technical skill of the trainer, the training methodology, etc.)_____

_____

_____

37. What specific digital skills or competencies do you believe are most critical for successful participation in digital transformation initiatives?_____

_____

_____

38. Can you give an example if you have ever experienced any instances of technology-related issues or failures (e.g., system crashes, data breaches, etc.) in the past that impacted your trust in digital tools & systems?_____

_____

_____

39. In your opinion, what measures can be taken to build and maintain trust in technology within the Woreda administration office environment?_____

_____

_____

40. How would you describe the prevailing organizational culture within the institution? (you can choose more than one)

    a. Innovative and adaptable
    b. Hierarchical and traditional
    c. Collaborative and team-oriented
    d. Risk-averse and cautious

41. What are the key organizational challenges or barriers that need to be addressed to promote the successful adoption of digital transformation in your Woreda office? (Please specify)_____

_____

_____

42. In terms of your preferred work methods, considering efficiency and effectiveness, please indicate your preference.

    a. Traditional/manual methods, involving physical paperwork, face-to-face interactions, and manual processes.
    b. Digital methods, utilizing technology, software, and digital tools for tasks, communication, and data management.
    c. A combined approach, combining traditional/manual methods with digital tools and technologies to leverage the strengths of both.
    d. I have no specific preference.

Thank you for your participation!

Interview Questions

1. What is Digital Transformation for you?
2. What kind of digital system is in place and operational in your institution?
3. What were the main steps taken in this transformation process?
4. How would you define the successes in the digital transformation of your institution?
5. What elements were a priority in your institution's digital transformation process?
6. What benefits have been obtained so far in your institution as a result of the implementation of digital transformation?
7. What are the challenges encountered in the transformation process?