SELINUS UNIVERSITY
OF SCIENCES AND LITERATURE

EXPLORING EFFECTIVE LEADERSHIP STRATEGIES FOR SUSTAINABLE DEVELOPMENT IN ETHIOPIAN CONSTRUCTION SECTOR

By GIRMA HABTEMARIAM GOSHU

FINAL DISSERTATION

Presented to the Department of Construction Management Program
at Selinus University
Faculty of Engineering and Technology,
in fulfillment of the requirements for the degree of
Doctor of Philosophy in Construction Management
2025

Thanks

I would like to express my sincere gratitude to my supervisor, **Prof. Salvatore Fava**, for his invaluable guidance, constructive feedback, and unwavering support throughout the course of this research. His generous sharing of knowledge and his passion for discovering new insights that contribute meaningfully to the construction industry has been a great source of inspiration.

My heartfelt appreciation also goes to my family, friends, and colleagues at **Demera Engineering and Construction** for their continuous encouragement, moral support, and valuable input, all of which have been instrumental to the completion of this study.

Lastly, I wish to extend my sincere thanks to all the **construction company managers and project managers** who took part in this research by completing the questionnaires. Their cooperation and contribution were essential to the successful completion of this project.

Abstract

This study seeks to identify effective leading practices that will help the development of sustainable improvement in the construction sector in Ethiopia. It aspires to determine the prevailing leadership practice, assess its impact on project performance, and put forward practical recommendations that narrow the gap towards best global practice. The present study applies an extensive literature review, surveys, and case studies to assess leading dynamics in the Ethiopian construction industry with emphasis on sustainability principles integration. The findings will provide and propose ideas for the progress of Ethiopian construction sector among many types of leaderships, like the modern global experience of transformational, servant, adaptive authentic and from up-to-date digital/technology leadership styles which can also contribute a great deal to the sustainability approach based on environmental stewardship, social inclusiveness, and economic resilience.

KEY WORDS: Engineer, Leader, Leadership, Management, Sustainability, Construction Project, Project Manager, Stakeholder, construction sector, construction industry

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CHAPTER ONE-INTRODUCTION

1.0 Overview

The Ethiopian construction industry has experienced significant growth over the past few decades, primarily driven by government-led infrastructure projects aimed at bolstering the national economy. Despite this progress, the sector faces with challenges related to effective leadership, sustainability, and project delivery. Effective leadership is crucial for addressing these challenges and fostering sustainability, especially within the context of a developing country.

Over the past few decades' sustainability has become a central concern in construction, which has led to a rethinking of leadership perspectives. "Modern construction directors are required not only to make work economically, but also to show an environmental, social, economic sustainability commitment. This phenomenon has led to greater visibility of transformational leadership (vision, innovation and team motivation to achieve long term objectives), as defined by Bass (1990)." Additionally, "participatory and servant style leadership has been highlighted because it encourages collective intensive dialogue and stakeholder diplomacy to meet the increasing demand of sustainability (Northouse, 2019; Zuo Zhao, 2014)."

Effective leadership is at the core of research and practice in this field to greater sustainable solutions. Successful leadership is not limited to ensuring completion of construction work but also encompasses the structure of organization, working procedures on a daily basis and decision-making process, so as to support sustainability.

Leadership practices within construction firms significantly influence strategic decision-making, resource allocation, and the integration of sustainability principles. This study aims to explore the relationship between leadership styles and sustainability performance in the Ethiopian construction sector, providing insights into how appropriate leadership can enhance sustainability and improve various aspects of construction projects.

Throughout the 20th century, the adoption of project management concepts and techniques redefined leadership roles within construction methodologies. Tools such as the Critical Path Method (CPM) and Gantt charts enabled managers to employ more systematic approaches to project management. Recently, the implementation of Building Information Modeling (BIM), Artificial Intelligence (AI), and other innovative leadership approaches has diversified the field, placing greater emphasis on teamwork, problem-solving, and adaptability. As highlighted by Bennett (2003) and Müller and Turner (2010), "contemporary leaders are increasingly required to foster collaboration, motivate their teams, and navigate challenges related to industrial relations, regulatory compliance, and environmental considerations."

The following subsection examines how different leadership styles can integrate social and economic dimensions into sustainability efforts within the industry. This research holds substantial significance from both academic and practical perspectives. It contributes to the existing body of knowledge on leadership and sustainability in construction, particularly within the Ethiopian context. The findings are expected to aid and propose progressive ideas for construction professionals, policymakers, and organizations in understanding the critical role of effective leadership in promoting sustainable practices. The goals of this chapter are as follows:

- Review the concept of leadership from various perspectives within the construction sector.
- Discuss the research issues alongside the background of the study and provide a summary of the research problem.
- Specify the research questions and objectives of the study.
- Highlight the distinct areas covered within the research, along with justifications for its scope and significance.
- Provide a brief overview of the research design and analysis.
- Discuss contributions to the body of knowledge and practice.
- Outline the limitations of the study.
- Present an outline of this research paper.

1.1 Background of the Study

The construction industry plays a significant role in economic growth and development across the globe by providing essential infrastructure, housing, and job opportunities. In recent years, Ethiopia's construction sector has emerged as one of the fastest-growing industries in the national economy. This growth is largely attributable to rapid urbanization, steady population expansion, and the government's strategic focus on policy-driven infrastructure development programs. The sector has become a cornerstone of Ethiopia's broader economic transformation agenda, with large-scale investments directed toward housing, transportation networks, energy facilities, and public service infrastructure. Such initiatives are not only reshaping the physical landscape of Ethiopian cities and rural areas but are also generating significant employment opportunities, fostering private sector participation, and attracting foreign investment. Despite these advancements, the sector continues to face persistent challenges related to project management, leadership effectiveness, and sustainable development practices, which highlight the need for deeper academic inquiry and practical reforms.

As a major contributor to the national economy, construction represents a substantial share of the country's gross domestic product (GDP). However, this rapid development has concurrently led to environmental degradation, resource shortages, and socioeconomic challenges, raising concerns about the sustainability of the sector. Effective leadership is vital for advancing sustainable solutions in construction. Successful leadership encompasses not only the completion of construction projects but also the organizational structure, daily operational procedures, and decision-making processes that support sustainability.

In Ethiopia, a confluence of socio-cultural and economic factors, along with policy considerations, presents both challenges and opportunities for leadership within the construction industry. Issues such as poorly designed hierarchies, limited resources, and ineffective regulatory frameworks often hinder the diffusion and sustainability of innovative practices. Leadership practices within the construction sector directly influence sustainability outcomes. Transformational leadership, which emphasizes self-organization toward distant goals, knowledge creation, and a commitment to social and environmental responsibilities, has emerged

as particularly relevant. While transactional leadership focuses on efficiency and adherence to rules, it may conflict with sustainability objectives in the medium term.

Understanding the current state of effective leadership in the Ethiopian construction industry and its implications for sustainability is critical. Despite the growing interest in the role of leadership in promoting sustainability, construction leaders in Ethiopia encounter numerous obstacles, including financial constraints, insufficient training on sustainable practices, corruption, cultural barriers, and institutional inertia. Furthermore, the absence of constructive frameworks complicates the integration of sustainability into project management and organizational practices. Addressing these challenges necessitates a strategic approach to leadership development, capacity building, and the creation of supportive environments.

The primary goal of this research is to investigate the relationship between effective leadership and sustainability within the Ethiopian construction sector. This involves examining existing leadership practices, their impacts on sustainability outcomes, the challenges leaders confronted, and potential strategies to overcome those obstacles. By contributing to the academic body of knowledge, this study aims to provide practical insights for the advancement of sustainable construction practices in Ethiopia.

1.2 Research Problem

The construction industry in Ethiopia is experiencing significant growth; however, there is a notable lack of adequate research concerning the leadership potential for fostering sustainability within this sector. Present leadership practices often prioritize short-term project delivery, which inadvertently overlooks enduring development principles. This oversight not only leads to inefficiencies and environmental degradation but also fails to capitalize on the long-term economic benefits that sustainable practices can provide. The aim of this research is to address this gap by examining how leadership—based on established theoretical frameworks—can enhance sustainability within the Ethiopian construction industry.

The construction industry worldwide is under considerable stress and developing countries such as Ethiopia are particularly weak when it comes to time and cost overruns, inadequate quality and lack of client satisfaction. Leadership in the construction sector in Ethiopia is lacking which further worsens the challenges. Leadership and management of construction is a complex, mutually reinforcing system that is growing increasingly so in the unpredictable world of construction. As Parkin (2010) has underlined, "Leadership is a key factor toward achieving sustainability. Without it, sustainability will never cross the subsidy line into policy, business, or anything else."

In the Ethiopian construction enterprises, the conventional leadership strategies, that are centripetal leadership patterns, usually focus on project closure at the expense of the sustainable development as a problem. These pyramidal leadership paradigms do not lead to the innovation and interdisciplinary collaboration that are required to implement environmental and social considerations into projects. Furthermore, leaders cope with serious barriers including restricted access to environmentally friendly materials, imperfect training in sustainability principles and lack of policy support, which prevent the implementation of sustainable practices.

Drawing upon the knowledge acquired from numerous seminars, meetings, conferences, and scholarly publications—together with the findings of extensive research undertaken by the Federal Ministry of Urban Development and Infrastructure—I propose, in my capacity as both an active participant and a seasoned engineer with many years of professional experience, to critically examine and address the key challenges currently confronting the construction industry.

- Lack of leadership awareness, projects is led by traditional and varied leadership approach, and there is no leadership department trend at construction sectors generally and at project sites specifically.

- Lack of operative leadership is seen primarily between stakeholders' firms and this creates total obstruction for construction industry.

- Lack of ethics and bad attitude of the employee exposed this sector for big challenge to implement suitable operational leadership styles.

- Projects are not generally completed on expected quality, time, and project budget, besides poor performance and client dissatisfaction.
- Nonexistence of Leadership within construction companies affects strategic decision making, resource allocation, and incorporation of sustainability principles.
- Lack of effective leadership experience exposed Construction Companies, project managers Engineers and technical staffs for bad ethics, corruptions, monotonous bureaucracy and for schedule frailer.
- Insufficient of leadership training, seminars, workshop, knowledge transfer and on upgrading managers and technical staff's skills on the subject of quality leadership, which redirects the recent global experiences of digital/ technological leadership.
- Lack of harmonized leadership system which should direct the overall construction industry, ministry and stakeholders.

This work tries to find out the effects of leadership presence and its outcomes on sustainability results in the Ethiopian construction sector. By mapping the issues that leaders tend to face out and devising ways to overcome these obstacles, the work will be able to make a contribution to the growing debate on leadership and sustainability in construction. The findings are aimed at serving academic and practical insights on how leadership can contribute to the development of sustainable construction in the Ethiopian construction sector.

Construction management requires basic skills in communication, problem solving and decision making, teamwork, conflict resolution and time and cost management. However, there are few findings on the perceived links between leadership and sustainability in the construction industry. Chan Cooper (2007) reported that, "Although construction leadership is acknowledged as critical, it is frequently underdeveloped in relation to mainstream leadership models." According to Doh (2002), "leadership is an executive position that involves influencing others to achieve the leader's objectives, a concept echoed by Fellows et al. (2003), who emphasize leadership's role in influencing behavior."

According to Almansour (2012), "the success of construction projects depends, to a great degree, on leadership. Ineffective leadership (bad skill, not teamwork, bad problem solving) at an 80% failure rate is the only culprit of bad management." Toor and Ogunlana (2008) also highlight, "additional issues including labor shortages, workforce aging, and teamwork, communication and training issues. In addition to these leadership issues, resolved paradoxically together with the inherently fragmented and low-quality legacy of the construction industry, the present lacking leadership practices stand under a spotlight, a spotlight demanding a reflection."

Perhaps most importantly, contemporary leadership is required to both ethically and responsibly direct the construction labor, both horizontally and vertically, by promoting self-awareness, motivation, and inter-organizational alignment in all management and employee levels. With this study, it will be possible to contribute to the advancement of the Ethiopian construction industry by way of filling a leadership gap, and by enabling sustainable industry development.

1.3 Research Questions and Objectives

The research questions have been developed and disseminated to a diverse group of stakeholders in the construction industry, including project owners/clients, regulatory bodies, consultants, and grade 1, 2, and 3 contractors specializing in building, road, general, and water works constructions. Additionally, interviews were conducted with professionals across various levels of experience, including company owners who possess significant expertise, as well as those unable to complete the questionnaires due to various constraints. This approach aims to gather comprehensive insights into the leadership practices and sustainability challenges within the Ethiopian construction industry.

1.3.1 General Objective

The aim of this study is to investigate the current practice of leadership styles in the construction industry in Ethiopia, i.e., to determine whether project managers and industry leaders are utilizing effective leadership-based and/or what type of leadership styles are they applying in the project work they do. Through the review of these practices, the study aims to interpret their impact on

the principal outcome metrics that affect the sector and project, such as timeliness, cost effectiveness, quality of deliverables as well as user satisfaction of stakeholders.

1.3.2 Specific Objectives

The paper considers the current state of the literature on successful leadership approaches and practices and particularly in the Ethiopian construction sector. It examines the prospects of contemporary leadership models, including transformational, situational and servant leadership, for promoting sustainable development of the sector.

Overview and descriptions of both frameworks and knowledge bases concerning the successful implementation of applicable leadership style approaches in the Ethiopian construction industry. Emphasize on how project managers can be equipped with strategies to adopt sustainability in practice and resolve industry specific issues.

Probe the effects of the actions of construction company managers (i.e., leadership) on project results such as timeliness, cost effectiveness, quality, and stakeholder satisfaction. Explore the possible relationship among leadership effectiveness, sustainability practice integration, at the project delivery level, and implementation.

The Ethiopian construction industry is described as facing a gap between currently applied leadership practices in the sector and the best practices enjoyed globally. Diagnostic testing ability with antigens has been proposed to address at least some of these voids, in order to allow for ongoing refinement and a culture of quality.

Discuss influence of leadership on interactions between stakeholders (i.e., primes, contractors, clients, regulators, policymakers, and host communities). Suggest leadership approaches that promote inclusive decision making and build alliances to realize sustainability goals.

Specific, actionable insight for improved leadership (and thus leadership development) for future generations is to foster innovation, adaptability, and a commitment to sustainable practices.

1.4 Scope of the study

This study explores the intricate relationship between effective leadership practices and sustainability outcomes in the Ethiopian construction sector. It examines the predominant leadership styles employed by professionals in the industry and evaluates their effectiveness in promoting sustainable practices. The scope of this research is delineated across the following dimensions:

1. **Effective Leadership Styles in the Construction Sector**

   The study investigates the leadership styles prevalent in the Ethiopian construction industry, such as transformational, transactional, and servant leadership, among others. It seeks to understand how these styles are applied in managing construction projects, fostering innovation, and addressing the complexities unique to the sector.

2. **Impact on Sustainability Outcomes**

   A core focus of the research is on analyzing how different leadership styles influence sustainability in construction projects. Sustainability is considered across its three dimensions—environmental, social, and economic. The study evaluates effective leadership's role in promoting sustainable design, and its relation to outcome satisfaction.

3. **Challenges in Promoting Sustainability**

   This study identifies and examines the barriers leaders face in integrating and promoting sustainability within their organizations and projects. These challenges may include limited financial resources, lack of stakeholder buy-in, insufficient policy support, inadequate training, and cultural or organizational resistance.

4. **Strategies for Enhancing Effective Leadership for Sustainability**

   The research aims to propose actionable strategies to enhance leadership effectiveness in promoting sustainability. This includes recommending best practices for capacity

building, leadership development programs, policy interventions, and organizational change strategies tailored to the Ethiopian context.

5. **Geographical and Sectorial Focus**

   The research is confined to the Ethiopian construction industry, with a particular focus on key stakeholders such as contractors, project managers, consultants, policymakers, and clients. Case studies from both urban and rural construction projects will provide a comprehensive understanding of leadership dynamics and sustainability practices.

6. **Temporal Context**

   The study considers recent developments in Ethiopia's construction sector, including the increasing demand for sustainable infrastructure, policy initiatives supporting green construction, and evolving leadership paradigms. This temporal focus ensures the research's relevance to current challenges and opportunities.

7. **Methodological Approach**

   The study adopts a mixed-methods approach, incorporating both qualitative and quantitative methods. Surveys, interviews, and case studies will be conducted to gather data from industry professionals and stakeholders, ensuring a holistic understanding of the leadership-sustainability nexus.

1.5 Significance of the study

This study holds critical significance at multiple levels—practical, theoretical, and societal—particularly in the context of the Ethiopian construction sector, which plays a pivotal role in the country's economic growth and infrastructure development. By investigating the relationship between leadership and sustainability, this research contributes to addressing pressing global and local challenges in sustainable development. By defining the scope in this manner, the study aims to provide valuable insights for academics, policymakers, and practitioners. It aspires to contribute to the broader discourse on sustainable development and leadership while offering

specific recommendations to enhance the Ethiopian construction sector's contribution to national and global sustainability goals.

1.5.1 Contribution to Effective Leadership Development

Leadership is a cornerstone of organizational success, and in the construction sector, it directly influences project outcomes, team performance, and long-term sustainability. This study provides insights into the prevalent leadership styles in the Ethiopian construction industry, highlighting their strengths and limitations. By identifying the leadership traits and practices that most effectively foster sustainable outcomes, the research offers practical recommendations for developing leadership capacities among industry professionals. These insights are essential for enhancing decision-making, fostering innovation, and driving positive change across the sector.

1.5.2 Advancing Sustainability in Construction

Sustainability is increasingly recognized as a critical goal in construction due to its environmental, economic, and social implications. This study examines how leadership impacts the integration of sustainability principles in construction projects. The findings will help organizations understand how to balance competing demands—such as cost efficiency, environmental preservation, and social responsibility—while maintaining project viability. In doing so, the study supports the alignment of the Ethiopian construction sector with global sustainability agendas, such as the United Nations' Sustainable Development Goals (SDGs).

1.5.3 Identifying Barriers and Solutions

Leaders in the construction sector often face unique challenges, including resource constraints, resistance to change, and lack of awareness about sustainable practices. This research identifies these barriers and proposes actionable strategies to overcome them. By addressing these obstacles, the study empowers leaders to promote sustainability within their organizations more effectively, fostering a culture of accountability, innovation, and resilience.

1.5.4 Theoretical Contributions

From an academic perspective, this study bridges a critical gap in the literature by exploring the intersection of leadership and sustainability in the Ethiopian context. While considerable research has been conducted on leadership and sustainability in global construction industries, there is limited focus on developing countries, particularly Ethiopia. By providing a contextualized understanding of these dynamics, this research contributes to the broader theoretical discourse on leadership and sustainability, offering a framework that can be adapted to similar contexts.

1.6 Research Method and Analysis

The research methodology for this PhD study employs a mixed-methods approach, integrating a comprehensive literature review, survey design, and both qualitative and quantitative data collection and analysis. This methodology aims to investigate effective leadership strategies within the construction sector, with a particular emphasis on the Ethiopian context. The following sections outline each phase of the research process in detail.

Based on the literature review, a structured questionnaire will be developed to capture both qualitative and quantitative aspects of leadership approaches within the construction industry. The survey will address key leadership traits such as adaptability, transformational impact, and inclusivity, and it will include questions tailored to capture the perspectives of stakeholders across various groups, including government agencies, private construction firms, consultancy firms, and project clients. This design ensures comprehensive insights into the leadership dynamics within the Ethiopian construction industry. The following key components will guide the development of the survey:

- **Leadership Traits and Styles**: - The questionnaire will explore key leadership traits, including adaptability, transformational leadership, inclusivity, and sustainability-oriented decision-making. Questions will assess how these leadership styles are applied in practice and their perceived effectiveness in achieving project success.

- **Sustainability Practices**: - Questions will also focus on the integration of sustainability principles within construction projects. This includes leadership's role in adopting green technologies, minimizing waste, and fostering social responsibility.

- **Stakeholder Perspectives**: - The survey will be tailored to capture perspectives from a diverse range of stakeholders, including government agencies, private construction firms, consultancy firms, and project clients. Specific questions will be designed to understand how leadership approaches are viewed by different groups and how these approaches affect project outcomes such as timeliness, cost, quality, and sustainability.

- **Project Outcomes and Challenges**: - The survey will examine how leadership styles influence project outcomes, including the successful completion of projects within budget, on time, and in alignment with sustainability goals. It will also capture the challenges leaders face in implementing sustainable practices within the Ethiopian context.

- **Demographic Information**: - To ensure a comprehensive analysis, the survey will collect demographic information about the respondents, such as their professional role, years of experience, type of Construction Company, and location of the project. This will allow for a detailed analysis of how different groups perceive leadership in construction.

1.6.1 Data Collection through Surveys and Case Studies

Surveys will be conducted in five major cities in Ethiopia, including Addis Ababa, Adama, Bahir Dar, Dire Dawa, and Hawassa. These cities were selected due to their strategic importance in the Ethiopian construction sector, representing a diverse range of geographical, economic, and infrastructural contexts. In each city, 50 professionals will be surveyed, totaling 250 respondents across the five locations. This diverse sample will ensure comprehensive insights into the leadership strategies employed across different regions and types of construction projects. Respondents will include leaders, managers, consultants, and project clients from both government and private sectors, providing a balanced perspective on leadership dynamics in the Ethiopian construction industry.

Surveys will be distributed to a diverse range of professionals within the Ethiopian construction industry, including leaders, managers, consultants, and project clients from both government and private sectors. In addition, selected case studies will provide in-depth insights into specific leadership practices, challenges, and successes within the industry. Combining survey data with case study analyses will allow for a nuanced understanding of leadership approaches across different types of construction projects.

1.6.2 Survey Design and Questionnaire Development

Based on the literature review, a structured questionnaire will be developed to capture both qualitative and quantitative aspects of leadership approaches within the construction industry. The survey will address key leadership traits such as adaptability, transformational impact, and inclusivity, and it will include questions tailored to capture the perspectives of stakeholders across various groups, including government agencies, private construction firms, consultancy firms, and project clients. This design ensures comprehensive insights into the leadership dynamics within the Ethiopian construction industry. The following key components will guide the development of the survey.

1.6.3 Qualitative and Quantitative Analysis

Both qualitative and quantitative data will be analyzed to examine prevailing leadership practices in the Ethiopian construction sector. Quantitative survey data will undergo statistical analysis to identify trends and relationships between leadership traits and project outcomes. Qualitative data from open-ended survey responses and case studies will be analyzed thematically to explore in-depth insights into leadership practices, challenges, and effective strategies in various contexts. This two-pronged approach will yield both broad and specific insights into leadership effectiveness.

1.6.4 Data Compilation and Synthesis

All collected data will be systematically compiled, cross-referenced, and synthesized to create a comprehensive understanding of leadership effectiveness within Ethiopia’s construction sector.

This phase will involve triangulating survey results, case study findings, and insights from the literature to ensure robust conclusions that reflect both breadth and depth of understanding.

1.6.5 Conclusion Development and Interpretation of Findings

Based on the data analysis, key findings will be interpreted to answer the research questions. Conclusions will highlight the most effective leadership strategies in the Ethiopian construction industry, discussing the implications of these findings for project success and sustainable development. The conclusions will also identify gaps in current leadership practices and suggest areas for improvement, providing valuable insights for industry stakeholders.

1.6.6 Recommendation for Further Research

The study will conclude with recommendations for further research on leadership in the Ethiopian construction sector. These recommendations will focus on addressing identified gaps, offering practical insights for policymakers, industry professionals, and scholars interested in enhancing leadership effectiveness for sustainable development within construction.

In summary, this methodology will provide a comprehensive framework for understanding and improving leadership within Ethiopia's construction industry. By promoting strategies that align with local needs and sustainable development goals, this study aims to contribute meaningfully to the growth and sustainability of the sector.

1.7 Major Areas of Contribution

One of the primary contributions of this study is to provide a deeper understanding of the leadership styles and traits prevalent in the Ethiopian construction sector. By identifying the leadership approaches most effective for driving sustainability, the research offers actionable insights for:

- Enhancing leadership training programs tailored to the unique challenges of the sector.
- Equipping leaders with the skills needed to inspire and guide teams toward achieving sustainability goals.

- Establishing a leadership framework that aligns with the socio-economic and cultural context of Ethiopia.

1.7.1 Promoting Sustainable Construction Practices

The study examines the interplay between leadership and sustainability, shedding light on how leadership influences the adoption of sustainable practices in construction projects. It contributes to the body of knowledge by:

Demonstrating the role of leadership in integrating environmental, economic, and social sustainability into construction projects.

- Providing a roadmap for construction firms to align their operations with global sustainability standards, such as the Sustainable Development Goals (SDGs).
- Offering strategies for overcoming resistance to sustainable practices and fostering an organizational culture that prioritizes long-term environmental stewardship.

1.7.2 Addressing Barriers to Sustainability

Leaders in the Ethiopian construction sector often face significant challenges in promoting sustainability, including financial constraints, limited awareness, and resistance to change. This research contributes to addressing these challenges by:

- Identifying the specific barriers hindering the adoption of sustainable practices.
- Proposing practical solutions and leadership strategies to overcome these obstacles.
- Highlighting the importance of collaboration among stakeholders to foster an enabling environment for sustainability.

1.7.3 Theoretical Contributions to Leadership and Sustainability

From an academic perspective, the study advances theoretical discourse by exploring the nexus of leadership and sustainability in a developing country context. Specific contributions include:

- Bridging the gap in literature on leadership's impact on sustainability outcomes in the construction sector of Ethiopia.
- Expanding leadership theories to incorporate sustainability as a central element in construction project management.
- Providing a contextualized framework that can inform future research in similar industries or regions.

1.8 Limitation of the Study

While this study aims to provide comprehensive insights into the interplay between leadership and sustainability in the Ethiopian construction sector, it is essential to acknowledge the inherent limitations that may influence its scope, and finding. Recognizing these limitations enhances the credibility of the research and provides a basis for future studies to address unresolved or constrained aspects.

1.8.1 Contextual Scope

This study focuses specifically on the Ethiopian construction sector, which has unique socio-economic, cultural, and regulatory characteristics. While the findings provide valuable insights within this context, they may have limited applicability to construction sectors in other countries or regions with differing economic structures, leadership norms, and sustainability challenges. The localized scope emphasizes the need for further comparative studies in different contexts.

1.8.2 Methodological Constraints

The study relies on a combination of qualitative and quantitative research methods, including interviews, surveys, and case studies. While these methods allow for a rich exploration of leadership and sustainability, they are subject to certain limitations:

- **Survey Bias**: Respondents may provide socially desirable answers rather than their genuine opinions, particularly when discussing sensitive topics such as leadership effectiveness or sustainability challenges.
- **Sample Representation**: The ability to generalize findings may be constrained if the sample does not fully represent the diversity of the Ethiopian construction sector, including small-scale contractors, international firms, and public projects.
- **Case Study Limitations**: The in-depth analysis of specific projects or organizations may not capture the full range of practices across the entire sector.

1.8.3 Data Availability and Reliability

Access to accurate and up-to-date data poses a significant challenge in the Ethiopian construction sector. Limited documentation of leadership practices, project sustainability metrics, and organizational performance may restrict the depth of analysis. In some cases, reliance on self-reported data or retrospective accounts could introduce inaccuracies or biases.

1.8.4 Dynamic Nature of the Sector

The Ethiopian construction sector is evolving rapidly, driven by urbanization, economic growth, and government initiatives. Changes in policies, market dynamics, or technological advancements during or after the study period may affect the relevance or applicability of the findings. This dynamic environment underscores the importance of revisiting the study's conclusions periodically to ensure their continued validity.

1.8.5 Focus on Leadership Styles

While the study examines leadership styles and their impact on sustainability, it may not fully capture other critical factors influencing sustainability outcomes, such as technological innovations, policy frameworks, or broader economic conditions. The emphasis on leadership may unintentionally downplay these interconnected influences.

1.8.6 Sustainability as a Multidimensional Concept

Sustainability encompasses environmental, social, and economic dimensions, each with distinct metrics and goals. The study may face challenges in comprehensively addressing all three dimensions, particularly in balancing competing priorities or measuring intangible outcomes such as social equity or cultural preservation.

1.8.7 Time and Resource Constraints

Conducting research within a defined timeframe and with limited resources inevitably impacts the depth and breadth of the study. Constraints may limit the number of participants, the geographic coverage of the research, or the ability to conduct longitudinal analyses that could provide more robust insights into leadership and sustainability over time.

1.8.8 Subjectivity in Qualitative Analysis

The interpretation of qualitative data, such as interview responses or case study findings, involves a degree of subjectivity. While efforts are made to ensure rigor and objectivity through triangulation and validation, some biases may persist in analyzing and interpreting the data.

1.8.9 Resistance to Change

Some stakeholders in the construction sector may be hesitant to participate in the study due to concerns about sharing sensitive information or skepticism toward the focus on sustainability and leadership. This resistance could limit the richness of the data collected.

Despite these limitations, the study is designed to provide meaningful contributions to understanding leadership and sustainability in the Ethiopian construction sector. Acknowledging these constraints highlights the need for cautious interpretation of the findings and underscores the importance of future research to build upon this foundation, address unresolved challenges, and expand the scope of inquiry.

1.9 Summary

This chapter introduces the background, purpose, and scope of the study, emphasizing the critical role of effective leadership in promoting sustainability within Ethiopia's construction sector. It outlined how rapid growth in the industry has been accompanied by persistent challenges in leadership, project performance, and sustainable development. The discussion highlighted that transformational, participatory, and servant leadership models are essential for integrating environmental, social, and economic sustainability in construction practices.

Furthermore, the chapter presented the research problem, objectives, scope, and significance, providing a foundation for investigating how leadership styles influence sustainability outcomes and long-term success in the Ethiopian construction industry.

CHAPTER TWO- LITERATURE REVIEW

2.0 Overview

This literature review aims to examine the theoretical foundations that underpin effective leadership styles within the construction sector. It explores key leadership theories, such as Servant leadership. Transformational, Transactional, Charismatic, Authentic, and their relevance to the unique challenges and dynamics of the construction industry. By analyzing existing research, the review seeks to identify the traits, practices, and impacts of various leadership styles, providing a framework for understanding how they influence organizational performance, team cohesion, and project outcomes in construction.

The aim of this chapter is

- Review relevant theories and their rational arguments
- Review of the supportive streams that provide more insights for this study
- Review the relevant literature related to effective leadership in Ethiopian context
- Synthesize the review

2.1 Review of Fundamental Research Streams

The study of effective leadership and sustainability in the construction sector draws from several interconnected research streams. Leadership theories such as transformational, transactional, and servant leadership highlight how different styles influence team performance, innovation, and sustainability integration. Sustainability research in construction focuses on environmental, economic, and social dimensions, emphasizing the critical role of leadership in achieving these outcomes. The nexus between leadership and sustainability explores how leaders embed sustainable practices into organizational culture while addressing barriers like resource constraints and resistance to change. Additionally, research on organizational behavior and the Ethiopian construction sector highlights the unique challenges and opportunities in balancing

rapid growth with sustainable practices. This study addresses the gap by examining leadership styles, their impact on sustainability, and strategies tailored to Ethiopia's construction sector.

2.1.1 Theoretical foundations of the study

The Ethiopian construction sector plays a critical role in the country's socio-economic development, contributing significantly to infrastructure, employment, and urbanization. However, the sector faces numerous challenges, including resource inefficiency, environmental degradation, and project delays, which hinder its sustainable growth. Leadership as a key determinant of organizational success has the potential to address these challenges by fostering innovation, enhancing team performance, and promoting sustainable practices. Despite its importance, there is limited research examining how leadership strategies can be tailored to align with the principles of sustainable development within the Ethiopian construction industry. This gap underscores the need to explore effective leadership approaches that integrate economic, environmental, and social sustainability dimensions.

This literature review focuses on the intersection of leadership and sustainability within the construction sector, with a specific emphasis on Ethiopia. The review examines scholarly works published over the last two decades to capture both historical trends and contemporary developments. Key areas of focus include leadership theories, sustainable development principles, and their application in the construction context. The geographical scope is limited to Ethiopia, with occasional references to other Global and developing countries to draw parallels and highlight of best practices. The review excludes non-academic sources and focuses on peer-reviewed journals, books, and credible reports relevant to leadership and sustainability in construction.

The literature review aims to address the following questions:

1. What is the dominant leadership strategies used in the Ethiopian construction sector?
2. How do these leadership strategies influence sustainable development outcomes?

3. What challenges and opportunities exist for integrating sustainability into leadership practices within this sector?

4. How can leadership approaches be adapted to address the unique socio-economic and environmental context of Ethiopia?

By addressing these questions, the review seeks to provide a theoretical and practical foundation for identifying and recommending effective leadership strategies that promote sustainable development in the Ethiopian construction industry.

Leadership is a multifaceted concept that has evolved through extensive research and practice, shaped by socio-economic, cultural, and historical contexts. Conceptual definitions of leadership have progressed through the years from our traditional understanding to modern and scientific conceptual frameworks but commonly emphasize influence, vision, and the ability to inspire and mobilize others toward shared goals. In the 1900s to 1940s the school of thought of leadership is centered in the term "leaders are born not made" signify the inherent qualities of a leader. The theory emphasized nature rather than nurture.

Leadership is a complex and evolving concept that has been shaped by extensive research, practice, and the influence of socio-economic, cultural, and historical contexts. Over time, definitions of leadership have shifted from traditional understandings to modern scientific frameworks, but they consistently emphasize influence, vision, and the capacity to inspire and mobilize others toward shared goals. Between the early 1900s and 1940s, leadership thought was largely dominated by the belief that "leaders are born, not made," highlighting the idea that leadership qualities are inherent rather than developed.

In the 1940s, the trait theory of leadership gained prominence, particularly through the work of Ralph Stogdill. After reviewing over 100 leadership studies, Stogdill found recurring traits across the research, but noted that the list was too broad to serve as a practical framework. Building on this, Stogdill and McCall refined the theory by identifying critical traits associated with effective leaders, including intelligence, self-confidence, determination, integrity, sociability, and charisma. While trait theory dominated much of the first half of the 20th century, it faced

criticism for its heavy focus on individual personality traits while overlooking the influence of situational and contextual factors.

The evolution of leadership theories from classical approaches, such as trait and contingency theories, to modern concepts like transformational and authentic leadership, reflects a growing understanding of the complexities of leadership and its changing demands in contemporary environments. Below are the key reasons for this shift:

By the late 20th century, as the globalized economy and technological innovations reshaped the construction industry, leadership took on a more collaborative and transformational approach. “Leaders were no longer seen solely as authoritative figures but as facilitators of teamwork and innovation. The "collaborative leader" emerged, someone who could unite diverse teams, foster open communication, and inspire creativity across various project stakeholders. This era saw the rise of leadership models emphasizing empowerment, collaboration, and the ability to lead through influence rather than mere authority (Bass & Avolio, 1994).” The transformative leader was also tasked with navigating the complexities of large-scale, multi-disciplinary projects, often requiring cross-cultural and cross-functional communication.

In the 21st century, leadership in construction increasingly reflects the growing importance of sustainability and ethical considerations. “The "sustainable leader" today must integrate environmental, social, and economic concerns into their leadership approach, guiding projects that minimize harm to the environment and promote social equity. These leaders are expected to not only oversee successful construction projects but to do so with a focus on long-term sustainability, ensuring the ethical treatment of workers and the responsible use of resources (Avolio & Bass, 2004).” This modern definition of leadership emphasizes accountability and the ability to adapt to the evolving demands of global construction challenges, including the push toward green building practices and sustainable urban development.

The Ethiopian construction sector presents both a challenges and opportunities. While the sector is growing rapidly, it remains constrained by skill shortages, informal labor practices, weak regulatory enforcement, and minimal integration of sustainability practices. Against this back

drop, understanding and promoting effective leadership becomes not just a theoretical exercise but a practical necessity.

This literature review builds on the definitions and frameworks presented here to examine how leadership specifically, when practiced effectively and ethically can promote sustainable development in Ethiopian construction. The next sections will explore the global evolution of leadership strategies, their relevance to sustainability, and the unique dynamics shaping leadership in Africa and explicitly in Ethiopia.

2.2 Understanding the Leader and the Nature of Leadership

A leader is traditionally conceptualized as an individual entrusted with authority and responsibility to guide others and make decisions that influence group or organizational outcomes. However, contemporary understandings of leadership extend well beyond positional authority. "A leader may be defined as any person or collective of individuals who exercises influence by selecting and applying leadership styles that are appropriate for inspiring, directing, and sustaining high levels of performance and engagement among followers. Such individuals create environments where vibrant, predictable organizational performance can flourish through the alignment of goals, actions, and shared values." (Science Direct 2024).

Ferdig (2007) describes "leaders as individuals, who inspire a shared vision, build consensus, provide strategic direction, and foster transformational changes in beliefs and behaviors among followers, thereby enabling organizations to achieve their goals". This characterization highlights leadership as both a relational and visionary process, emphasizing its dynamic and context-driven nature.

Further elaborating on this concept, scholars have identified a range of competencies and responsibilities inherent to effective leadership. Leaders are individuals who recognize the necessity for change and proactively initiate it; they establish clear direction, align and coordinate people toward shared objectives, motivate and inspire followers, and communicate a compelling vision of the organization's future. Moreover, effective leaders cultivate teamwork, encourage participative decision-making, mentor and coach subordinates, and consistently demonstrate

integrity in their professional conduct (Bass, 1990; Kouzes & Posner, 2002; Tichy & Devanna, 1990; Zenger & Folkman, 2002, as cited in Skipper & Bell, 2006b, p. 68, Northouse 2018)

Gharehbaghi & McManus (2003) also emphasis that "leaders must possess a deep understanding of themselves and actively pursue self-improvement. Such self-development requires the continuous strengthening of personal attributes and competencies through activities such as reading, self-directed study, and structured educational programs." Effective leaders undergo a continuous process of self-analysis that incorporates education, training, and experiential learning strategies to enhance their leadership effectiveness beyond their cumulative lesson or experiences from day-to-day construction activities. The most remarkable leaders are characterized by their commitment to refining their leadership capabilities through intentional and sustained efforts. This influence can manifest in various forms, such as vision and assessment, determination, and decision-making. In the specific context of the Ethiopian construction industry, the impact of leadership can vary significantly based on the individual's role and scope of work, whether as a construction foreman, site manager, a project policy head, or a project engineer. Each of these positions plays a critical role in shaping project outcomes and fostering a culture of effective leadership within the sector.

Regarding historical Evolution and Contemporary Perspectives, although researchers define leadership in diverse ways, it is widely recognized as a cumulative human endeavor evolving across centuries. Leadership traces its roots back to ancient societies, where individuals took on roles to coordinate collective efforts for survival and social cohesion. Historians have noted that "formal leadership structures originally emerged within religious institutions, monarchies, and military systems, laying foundational principles that shaped leadership thought and practice over time (Bass, 1990; Bolden et al., 2011)".

"In this modern era, leadership has become increasingly dynamic, relational, and context-sensitive. Leadership is defined as the process of influencing an organization's mission, vision, and strategic direction by building purposeful relationships between leaders and followers (Ngayo Fotso, 2022)". It is described as "any behavior that has the effect of helping groups of people achieve something significant that the majority are pleased with and which they would not

have otherwise accomplished. (Chow and Salleh, 2022, p. xx)". "Effective leadership transcends individual short-term goals, focusing on sustainable, long-term benefits for the broader collective (Voogt and Roblin, 2012)."

A consistent theme across contemporary literature is that no single, universal leadership style ensures success. "Effective leadership is contingent on situational factors, cultural contexts, and the specific attributes of leaders and followers (Ahmed and Philbin, 2020; Van Laar et al., 2020)."

Definition of Leadership Excellence: - Leadership excellence refers to the ability to effectively guide, inspire, and influence individuals or teams towards the achievement of common goals while fostering an environment that promotes growth, collaboration, and innovation. It encompasses a range of skills, qualities, and practices that enable leaders to navigate change, build trust, and create a positive impact within their organizations and communities.

Key Components of Leadership Excellence

1. **Vision**: Effective leaders have a clear and compelling vision that outlines the organization's direction. This allows them to inspire others and align their efforts toward shared goals.

2. **Emotional Intelligence**: Understanding one's emotions, as well as those of others, is crucial for creating strong interpersonal relationships. Leaders with high emotional intelligence can communicate effectively, resolve conflicts, and motivate their teams.

3. **Integrity**: Trustworthiness and ethical behavior are foundational to leadership excellence. Leaders who demonstrate integrity build credibility and foster an atmosphere of honesty and respect.

4. **Decision-Making Skills**: The ability to analyze situations effectively and make informed decisions is vital. Excellent leaders weigh the pros and cons of various options and consider the implications of their choices.

5. **Adaptability**: In a rapidly changing environment, leaders must be flexible and open to new ideas. Adaptability allows leaders to navigate challenges and capitalize on opportunities.

6. **Empowerment**: Leaders who empower their teams promote autonomy, encourage creativity, and facilitate professional development. This leads to higher engagement and increased productivity.

7. **Communication**: Strong communicators can articulate their vision, provide feedback, and listen actively. Effective communication fosters collaboration and ensures that all team members are on the same page.

8. **Inclusivity**: An excellent leader values diversity and inclusion, recognizing that varied perspectives enhance creativity and problem-solving.

9. **Resilience**: The capacity to recover from setbacks while maintaining focus on long-term goals is essential. Resilient leaders inspire those around them to persevere in the face of challenges.

10. **Contribution to Others**: Leadership excellence involves prioritizing the development and well-being of others, often referred to as servant leadership, where the leader's primary goal is to serve their team and community**.**

Figure 1 Leadership excellence (National Magazine of Ethiopia)

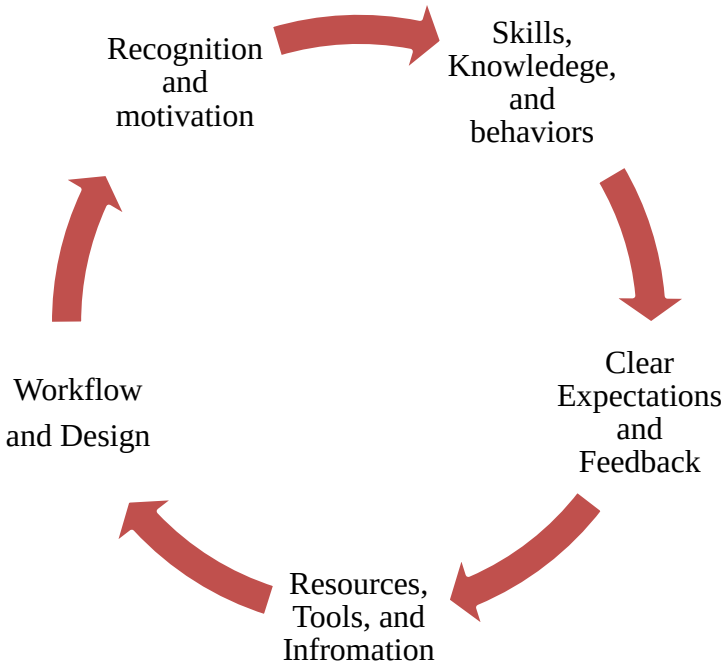

Figure 2 Productive wheel of leadership (National Magazine of Ethiopia)

Recent research has identified multiple effective leadership styles, which are relevant for navigating modern challenges in contrary to classical and theoretical concepts like servant leadership.

Servant Leadership

"Servant leadership emphasizes the leader's role as a supportive figure, prioritizing team members' needs and empowering them to achieve their best (Greenleaf, 1977)." In the Ethiopian construction sector, where worker welfare and community involvement are vital, servant leadership can contribute to sustainability by promoting inclusive decision-making and a culture of mutual respect. Empirical studies reveal that "servant leadership positively influences employee satisfaction, retention, and engagement, which are critical in an industry facing workforce shortages and high turnover (Liden et al., 2008)." Moreover, servant leaders encourage sustainable practices by fostering environment of accountability and collective responsibility.

Aspect	Critical points
Principles	Listening, Empathy, Healing, Awareness, Persuasion, Conceptualization, Foresight, Stewardship, Growth of people, Building community.
Style	Collaborative, people-centered, empowering.
Values	Service, humility, ethics, trust.
Impact	Higher trust, growth, satisfaction, ethical and sustainable culture.

Table 1 Components of servant leadership

Figure 3 Servant Leadership Application (National Magazine of Ethiopia)

Servant leadership in construction industry: -This style is particularly relevant in dynamic and uncertain environments, such as construction, where projects are often subject to fluctuating budgets, regulatory changes, and environmental constraints. In Ethiopia, adaptive leadership can enable construction leaders to navigate the complexities of sustainable development by promoting resilience and flexibility within teams. For example, adaptive leaders can quickly

respond to environmental regulations or resource scarcity by developing innovative approaches to resource management and waste reduction.

Transactional Leadership

In contrast with other approaches, a focus on operations, structure and rigid systems of rewards and punishments are the elements forming the foundation of transactional leadership. "Transactional leaders employ rewards and punishment systems to operate day to day activities of organizations and to ensure targets are met (Bass, 1985)." "In situations where tasks are simple and straightforward, transactional leadership tends to work better (Avolio et al., 1999)." "In the construction industry, the focus of transactional leaders seems to be delivering projects on time and within budget alongside the emphasis placed on control, order, and rigid rule-following (Jha and Iyer, 2006)." Researchers also point out "the lack of motivational skills to motivate a team to work together on unanticipated problems, or projects with unpredictable conditions, as one of the consequences of the day-to-day leadership described by Northouse (2018)." "Alemayehu and Berhanu's studies show transactional leadership is not as impactful as transformational leadership, but does contribute to construction project performance at the projects with objectives and rigid structures."

Element	Description
Focus	Task completion, structure, and performance
Style	Reward and punishment-based leadership
Key Traits	Clear roles, supervision, compliance
Best For	Routine tasks, short-term goals, crisis response
Strengths	Efficient, disciplined, goal-oriented
Limitations	Limits creativity, low long-term motivation

Table 2 Elements of transactional leadership

Transformational Leadership

"Bass and Riggio, 2006; Eisenbeiss et al., 2008 Focuses on inspiring and motivating followers to achieve extraordinary outcomes, fostering innovation and personal development. This style is strongly linked with organizational performance, employee engagement, and adaptability in times of change." Recent studies highlight, "(Cortellazzo et al., 2019; van Wart et al., 2020). Transformational leadership as crucial in digital transformation and innovation contexts"

Concept of transformational leadership proposes that, "transformational leaders are visionaries see themselves as change agents, display courage in the face of resistance and risk, emphasize the need for motivation, empowerment and trust, are driven by strong values, see mistakes, errors and failures as learning opportunities, and cope with complexity, uncertainty and ambiguity." (Tichy and Devanna, 1986b). (Roger Gill, 2008): p.53.)

Component	Description
Idealized Influence	Leaders act as role models, earning the trust and respect of their teams.
Inspirational Motivation	Leaders articulate a clear and compelling vision, inspiring teams to achieve common goals.
Intellectual Stimulation	Encourages creativity and problem-solving, challenging the status quo.
Individualized Consideration	Provides personalized support and mentorship to team members.

Table 3 Key components of transformational leadership

The above table shows the relevance of transformational leadership studies in developing countries like Ethiopia, have shown that, "transformational leadership can enhance productivity and promote sustainable practices by encouraging employees to adopt environmentally conscious behaviors basic idea quoted from (Aga, Noorderhaven, & Vallejo, 2016)." By prioritizing ethical decision-making, transformational leaders create a culture of sustainability that aligns with Ethiopia's developmental objectives.

As presented below in the Table 4 shows that, these two modern leadership styles are practically implemented independently and sometimes together by different construction companies and on projects or in different business entities. These trends are fundamentally accomplished or performed widely in developed countries and less in developing countries due to lack of practical knowledge, complexity and states of the project they activate, lack of construction technology and qualified employment opportunity.

Characteristics of Transactional Leadership and Transformational Leadership

Item	Transactional Leadership	Transformational Leadership
1	Builds on man's need to get a job done and make a living.	Builds on a man's need for meaning
2	Is preoccupied with power and position, politics and perks.	Is preoccupied with purposes and values, morals and ethics.
3	Is mired in daily affairs.	Transcends daily affairs.
4	Is short-term and hard data orientated?	Is orientated toward long-term goals without compromising human values and principles.
5	Focuses on tactical issues.	Focuses more on missions and strategies.
6	Relies on human relations to lubricate human interactions.	Releases human potential – identifying and developing new talent.
7	Follows and fulfills role expectations by striving to work effectively within current systems.	Designs and redesigns jobs to make them meaningful and challenging.
8	Supports structures and systems that reinforce the bottom line, maximize efficiency, and guarantee short-term profits.	Aligns internal structures and systems to reinforce overarching values and goals.

Table 4 Transformational & Transactional leadership Bass and Avolio's (2004), MLQ manual

Comparison of Transactional and Transformational Leadership

Aspect	Transactional Leadership	Transformational Leadership
Theoretical Basis	Rooted in classical management theories emphasizing exchanges between leader and follower (Bass, 1985; Northouse, 2022).	Emerged from charismatic leadership theories, emphasizing vision, inspiration, and follower development (Bass &Avolio, 1994; Yukl, 2023).
Leadership Focus	Maintains stability and efficiency through clear structures, rules, and contingent rewards or punishments (Bass, 1985).	Promotes change, innovation, and organizational transformation through vision and emotional engagement (Bass &Avolio, 1994).
Motivation Approach	Primarily extrinsic, using rewards and penalties to influence behavior (Northouse, 2022).	Primarily intrinsic, appealing to values, purpose, and personal growth (Bass &Riggio, 2006).
Follower Relationship	Transactional and contractual; relationships are instrumental and task-oriented (Bass, 1985).	Emotional, inspirational, and developmental; leaders seek to elevate followers' values and aspirations (Bass &Avolio, 1994; Yukl, 2023).
Communication Style	Directive, task-focused, often formal (Northouse, 2022).	Visionary, inspirational, and participative (Bass &Riggio, 2006).

Table 5 Bass, B. M. 1985, 1994, 2006. Northouse, P. G. 2022. Yukl, G. A. (2023)

Examples of Transformational Leaders

As noted in Leadership: Theory, Application, & Skill Development (Lussier & Achua), Martin Luther King Jr. serves as a strong example of transformational leadership. He inspired confidence among his followers, questioned traditional assumptions, nurtured the development of others, and consistently upheld strong moral principles. Similarly, Oprah Winfrey is identified by the authors as a transformational leader because of her visionary outlook and her ability to bring about meaningful change in every endeavor she pursues.

Although transformational leadership is often celebrated for its positive impact, it is not without limitations. It can be less effective during certain phases of organizational growth, particularly when a company is still establishing its structure. Moreover, within bureaucratic or rigid environments, transformational leadership may struggle to take hold, as it relies heavily on adaptability, vision, and follower engagement rather than strict systems and rules.

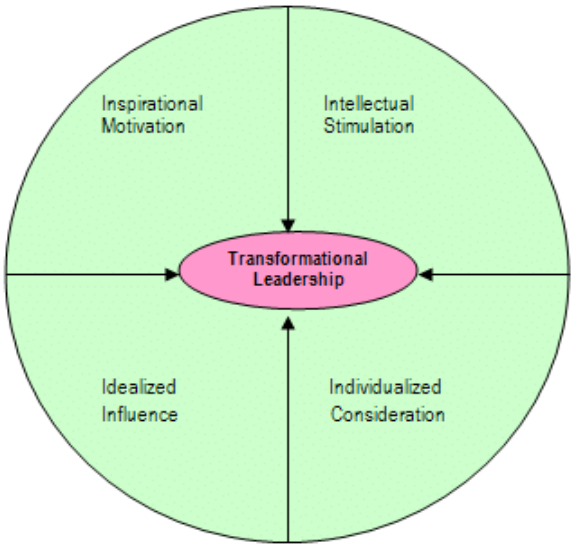

Figure 4 Characteristics of transformational leadership, (Bass, 1999)

The figure above shows the transformational leadership incorporates inspiration motivation, intellectual simulation and capability, idealized influence and individualized consideration to motivate workers in organization.

Characteristics of Transformational Leadership: According to "Bass (1999), transformational leadership is characterized by four key elements: inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence. Together, these qualities enable leaders to inspire and motivate their teams, encourage creative problem-solving, provide personal support, and serve as role models within the organization."

The succeeding table shows the relevance of transformational leadership studies in developing countries, including Ethiopia, have shown that transformational leadership can enhance productivity and promote sustainable practices by encouraging employees to adopt

environmentally conscious behaviors (Aga, Noorderhaven, & Vallejo, 2016). By prioritizing ethical decision-making, transformational leaders create a culture of sustainability that aligns with Ethiopia's developmental objectives.

Component	Description	Relevance to Ethiopian Construction
Idealized Influence	Leaders act as role models, earning the trust and respect of their teams.	Establishes credibility and ethical standards, crucial for reducing corruption and inefficiency.
Inspirational Motivation	Leaders articulate a clear and compelling vision, inspiring teams to achieve common goals.	Helps align stakeholders toward sustainability objectives and enhances morale.
Intellectual Stimulation	Encourages creativity and problem-solving, challenging the status quo.	Promotes innovative approaches to address sustainability challenges and resource constraints.
Individualized Consideration	Provides personalized support and mentorship to team members.	Enhances workforce development and addresses skill gaps in the construction sector

Table 6 Transformational leadership relevance in Ethiopian context

Are Transactional and Transformational Leadership Mutually Exclusive?

It is tempting to debate which style of leadership is better, but that misses the point. Both styles are valid and what matters is context. Some organizations need rigidity and clear chain of command. Others work best in a fluid environment where leadership sets an example and

establishes goals. Leadership styles that work for Google won't work for the military and vice versa. In fact, both types of leadership styles might be needed in the same organization to counter balance each other and help achieve growth and development goals. Transactional leaders make sure the team is running smoothly and producing results today while transformational leaders spur innovation and look towards tomorrow. In either case education and training can be effective tools in advancing one's abilities as leaders.

Authentic Leadership: "Authentic leaders are influential in enhancing others' ability to perform better by providing support and creating conditions that stimulate the individuals to work hard even extraordinarily hard to perform at one's very best (Gardner, 2004 cited in Toor & Ofori, 2008a)."

"Authentic leaders can be transactional, transformational, directive, or participative and still be defined as authentic. It also goes beyond transformational and charismatic leadership as leaders and be highly authentic but not charismatic at all". Luthans F, Avolio (2003).

"Authentic leaders are confident, hopeful, optimistic, resilient, transparent, and ethical and future oriented (Garden et al., 2005 & May et al., 2003 cited in Toor & Ofori, 2008a)."

According to Toor and Ofori (2008a), "authentic project leaders are not only good managers of projects, but they are also leaders of people and visionaries of the future by demonstrating commitment, devotion and dedication they become the role models. The nurture of their supporters as authentic followers. Extracted from positive psychology, ethical leadership and positive organizational behavior." "The authentic leadership construct stresses character authenticity, self-awareness, self-regulation, faithfulness to individuality, genuine beliefs, truth of convictions, idea practicality, veracity of vision, sincere actions and openness to feedback (George and Sims, 2007; Walumbwa et al., 2008)."

These characteristics may portray certain features from other leadership constructs, such as transformational, charismatic, servant, spiritual and ethical leadership, but authentic leadership proponents contend that it is distinct from other forms of leadership "(Avolio and Gardner, George Ofori and Shamas-ur-RehmanToor 6/PENERBIT UNIVERSITY SAINS MALAYSIA

2005). These characteristics suggest that authentic leadership is necessary for organizations today, given the challenges they face."

"Emphasizes self-awareness, transparency, ethics, and consistency between values and actions. Authentic leaders build trust and psychological safety, which are essential for organizational resilience and creativity, particularly in volatile environments (Avolio and Gardner, 2005; Rego et al., 2021)."

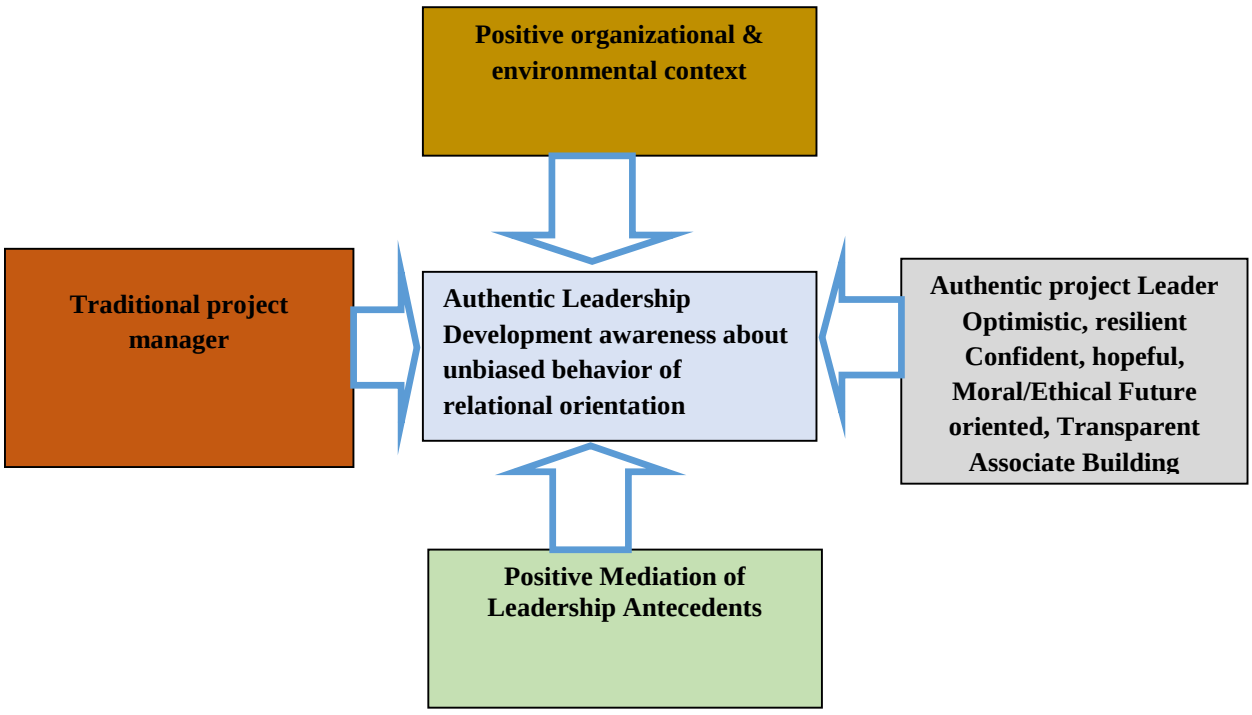

Figure 5 Authentic leadership development in the construction industry. (Toor, G.0fferi.2008)

Walumbwa et al., 2008 describes that "Authentic leadership focuses on transparency, ethical standards, and trust. It is especially effective in places where stakeholder trust matters. Authentic leaders gain credibility with employees, stakeholders, and local communities by matching their actions with their stated values." This is particularly important for sustainable development in Ethiopia's construction sector. Authentic leadership encourages ethical practices in project management. These practices are vital for creating long-lasting, sustainable relationships with

clients, suppliers, and the community. Furthermore, authentic leaders can play a key role in promoting a sustainable vision that connects with everyone in the organization.

Charismatic Leadership

"Charismatic leadership centers on the leader's personality, vision and charm to influence its followers to become passionately committed to unusual levels of performance. For instance, a charismatic leader makes employees feel part of something larger than them which is a mission of the organization and its ideological values, inspiring them to willingly give extra effort (Brown et al, study on extra effort & satisfaction). Furthermore, when a leader strategically and behaviorally aligns to organizational values, socialized charismatic leadership results in high values congruence with followers (Brown & Treviño, 2009)."

Charismatic leadership	Description
Inspires extra effort	Leaders energize followers to perform beyond expectations.
Most effective in crises	Charisma is especially powerful in stressful or uncertain environments.
Creates values congruence	Aligns followers' values with organizational culture.

Table 7 Charismatic leadership

Hybrid Leadership Approaches

"Despite the positive attributes of transformational leadership, scholars argue that effective leadership in construction often requires a hybrid approach blending transactional and transformational behaviors (Ofori & Toor, 2012)."

"While transformational leaders inspire sustainable behavior and green creativity, studies of green leadership in practice argue for hybrid or adaptive leadership combining transformational

motivation with transactional controls or formal compliance mechanisms to reliably meet green construction standards (Saif, 2023; Gu et al., 2023)."

"Leaders must balance enforcement of standards with the flexibility to inspire innovation and adapt to emerging challenges. Transformational leadership is often associated with fostering sustainable practices, but empirical and review studies recommend complementing inspirational approaches with transactional or governance mechanisms to ensure compliance with green construction standards and effective implementation on projects (Gu et al., 2023; Saif, 2023)."

Thus, hybrid leadership models offer a pragmatic solution, enabling leaders to deploy context specific behaviors depending on the nature of the project phase, team composition, and external pressures.

Hybrid leadership is particularly relevant in the construction sector due to its dynamic, multidisciplinary, and project-based nature. Construction projects frequently operate under strict timelines, safety protocols, and budgetary constraints, all of which necessitate transactional clarity in terms of roles, accountability, and performance monitoring. At the same time, projects also demand creativity, collaboration, and problem-solving in order to address unforeseen design challenges, environmental issues, or stakeholder conflicts areas where transformational leadership proves invaluable.

Thus, hybrid leadership models offer a pragmatic solution, enabling leaders to deploy context-specific behaviors depending on the nature of the project phase, team composition, and external pressures. During planning and initiation phases, a transformational emphasis may be more effective in motivating teams and generating innovative design solutions. Conversely, in execution and delivery phases, transactional elements such as close supervision, adherence to safety standards, and compliance monitoring become more critical. By fluidly shifting between these approaches, leaders can ensure both operational discipline and strategic vision, making hybrid leadership a robust framework for achieving project success and sustainability in the Ethiopian construction sector.

Digital Leadership

Digital leadership in the construction industry revolves around how leaders can effectively guide digital transformation by integrating advanced technologies such as Building Information Modeling (BIM), artificial intelligence, drones, the Internet of Things (IoT), and digital twins into construction processes. Unlike traditional leadership, which primarily focuses on managing personnel and resources, digital leadership emphasizes the importance of formulating a clear digital vision, fostering an innovative culture, and ensuring that digital tools align with key business objectives, including cost efficiency, sustainability, and safety.

Effective digital leaders confront organizational change proactively by addressing resistance, up skilling their teams, and promoting collaboration among all stakeholders. By leveraging real-time project data and predictive analytics, these leaders can make informed decisions that enhance productivity and improve client satisfaction.

Despite challenges such as high implementation costs, resistance to change and skill gaps in the workforce, digital leadership enables construction companies to enhance efficiency, safety, and competitiveness in an increasingly technology-driven landscape. In this rapidly evolving environment, the role of digital leadership is crucial for navigating the complexities of modern construction projects.

"Emerged with the rise of digital transformation, focusing on leading virtual teams, leveraging digital technologies, and managing digital innovation. Digital leaders combine technological competence with strong people skills to guide organizations through rapid technological change (El Sawy et al., 2016; Cortellazzo et al., 2019; van Wart et al., 2020)."

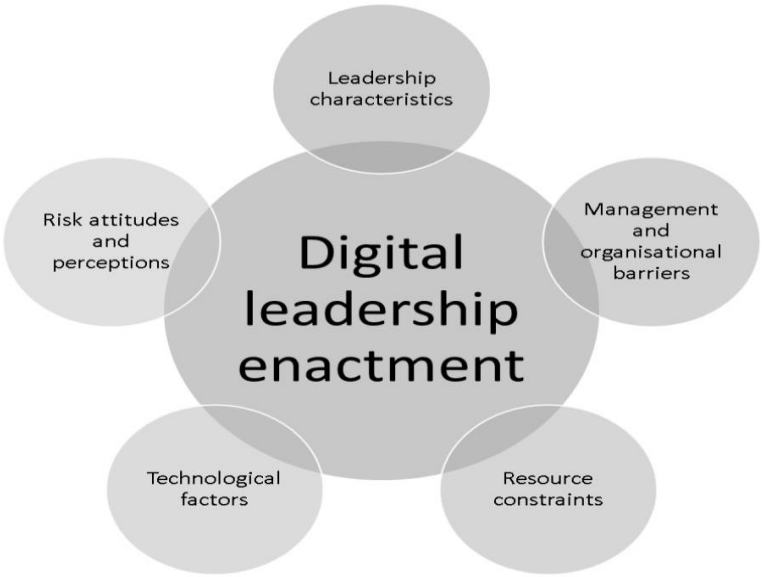

Figure 6 Barriers to digital leadership enactment (Central Lancashire Online Knowledge)

Ethical Leadership

"Involves leading through ethical principles, fairness, and social responsibility. Ethical leadership has been linked to increased employee satisfaction, reduced misconduct, and stronger organizational reputation (Brown and Treviño, 2006; Bedi et al., 2016). Recent research underscores ethical leadership as essential for stakeholder trust in the context of sustainability and ESG commitments (Stahl et al., 2020)."

Adaptive Leadership

"Focuses on guiding organizations through complex, ambiguous situations by mobilizing people to tackle tough challenges, learn collectively, and adjust strategies as circumstances evolve (Heifetz et al., 2009)."As example taking adaptive leadership is crucial for responding to crises like COVID-19 and navigating digital and sustainability transitions (Boin et al., 2021).

Adaptive leadership, as defined by Heifetz and Linsky (2002), is an approach where leaders are skilled at diagnosing challenges and making flexible adjustments to strategies.

Principle	Application in construction
Emotional Intelligence	Understanding and managing team dynamics
Flexibility	Adjusting to project changes and uncertainties
Empowerment	Encouraging workers to take initiative
Stakeholder engagement	Collaborating with diverse team and clients
Problem solving	Addressing unexpected challenges

Table 8 Adaptive leadership

Complexity Leadership

Highlights leadership in dynamic, interconnected systems where traditional hierarchical models are inadequate. Complexity leadership enables emergence, innovation, and adaptability in complex environments (Uhl-Bien et al., 2007). Recent studies point out to its relevance in digital ecosystems and networked organizations (Arena and Uhl-Bien, 2016; Collinson and Tourish, 2021).

"Complex leadership in the construction sector refers to the multifaceted and dynamic nature of leadership within an industry characterized by intricate projects, diverse teams, high-stakes environments, and fluctuating economic and regulatory conditions. Some of several key aspects of complex leadership in this sector are Multi-stakeholder Engagement, Project Management Proficiency, Adaptability and Problem-Solving, Cultural and Technological Integration, Safety and Risk Management, Sustainability and Innovation, Vision and Strategic Direction, Team Development and Communication, Turner, J. R., & Muller, R. (2005), Zuo, J., & Zillante, G. (2012), Aghapour, S., & Ardakani, S.K. (2020)."

Sustainable Leadership

"Focuses on balancing economic, social, and environmental goals to ensure long-term organizational sustainability. Sustainable leaders integrate Environmental Social and Governance (ESG) considerations into strategy and decision-making, prioritizing stakeholder value over short-term profit (Avery & Bergsteiner, 2011; Stahl et al., 2020)."

Emerging leadership

Literature also explores the competencies needed for these diverse styles. "Ahmed and Philbin (2020) categories "project managers' competencies into emotional, intellectual, managerial, administrative, and interpersonal domains." Van Laar et al. (2020), highlight "digital-era competencies such as communication, critical thinking, problem-solving, creativity, and collaboration." Voogt and Roblin (2012), similarly propose "leadership skills including problem-solving, social and cultural competence, Information and communication Technology (ICT) skills, and communication." Ngayo Fotso (2022) synthesizes "a broad set of competencies critical for modern leaders are adaptability, values-driven leadership, cognitive and analytical skills, transformational capacity, self-awareness, social skills, organizational acumen, crisis management, sustainability competence, and digital literacy."

As a conclusion, effective leadership in today's complex and rapidly evolving background is characterized not only by adaptability and strong ethical foundations but also by an acute ability to navigate organizations through the profound technological and societal transformations shaping our era. Faced with challenges such as digital intervention, climate change, and ever-changing stakeholder expectations, modern-day leaders are called to continuously expand their repertoire of skills, perspectives, and leadership styles. This dynamic and holistic approach is essential for fostering organizational resilience, sustaining competitive advantage, and driving long-term value creation in an increasingly interconnected and unpredictable world. Ultimately, as Northouse (2022) and the European Commission (2021) underscore, "it is those leaders who can integrate ethical stewardship with innovative and flexible strategies who will best navigate the uncertainties ahead and contribute meaningfully to sustainable success."

2.3 Defining Effective Leadership

The concept of effective leadership brings a crucial aspect to leadership theory, not every form of leadership is successful, constructive, or even appropriate. When we talk about effectiveness in leadership, we mean that a leader's actions lead to the outcomes we want, and their influence not only boosts performance but also fosters ethical practices and long-term benefits. According to Yukl (2013), "effective leadership is all about the ability to sway others in a way that improves both team and organizational performance, especially in uncertain or ever-changing situations. Also he says that, Leadership is the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives"

In the construction sector, effective leadership serves as a critical mechanism for integrating diverse stakeholders, mitigating conflicts, reducing delays, ensuring the safety and well-being of workers, and embedding sustainability within project delivery. Within the Ethiopian context, where the industry is over and over again humiliated by bureaucratic inefficiencies, corruption, environmental pressures, and shortages of skilled labor, effective leadership become indispensable. Such leadership not only addresses these systemic challenges but also provides a pathway toward sustainable project outcomes and long-term sectoral development.

"Effective leadership in up-to-date scholars is increasingly defined as a relational, adaptive, and values-driven process whereby individuals or groups influence and enable others to achieve shared goals, create meaningful change, and build sustainable organizational performance, particularly in complex and rapidly evolving environments. Effective leaders integrate emotional intelligence, ethical integrity, digital competence, and systems thinking to align diverse stakeholder interests, foster innovation, and ensure resilience and sustainability (Northouse, 2022; Cortellazzo et al., 2019; Uhl-Bien & Arena, 2020; Stahl et al., 2020)." Effective leadership today isn't just about giving orders nor having authority. It's about building relationships, inspiring others, and navigating change. It demands adaptability, ethical behavior, digital knowledge, and systems thinking. It focuses on creating sustainable success, not just quick wins.

Definition of Leadership in the Context of the Construction Sector

"Leadership in the construction sector refers to the ability to influence, guide, motivate, and coordinate individuals or groups toward achieving the objectives of construction projects, while navigating complex technical, operational, and human challenges. (Toor & Ofori, 2008; Dainty et al., 2003)." Müller & Turner, 2010.also mentioned that (It encompasses a blend of technical competence, interpersonal skills, and strategic vision, tailored to the dynamic and often high-pressure environment of construction.)

Unlike many industries, leadership in construction is unique because it operates: "In a Project-Based Environment, leaders frequently manage temporary teams assembled for specific projects, often disbanding after completion. This demands quick relationship building, trust development, and adaptability (Turner, 1999; Müller & Turner, 2010)."

"Across Multidisciplinary Teams, construction involves diverse stakeholders, clients, architects, engineers, contractors, subcontractors, suppliers, regulatory authorities and communities. A leader must bridge communication and align these groups despite sometimes conflicting interests (Giritli et al., 2013)." also Chan et al, 2004. Suggests that, "During under tight constraints, Projects typically run under strict timeframes, budgets, quality standards, and regulatory requirements. Leaders must make timely decisions to keep projects on track." In addition to the factors previously mentioned, the construction industry requires a stable environment characterized by peace and security. Factors such as regional, ethnical, religious, and linguistic differences can contribute to instability, which poses significant challenges to construction projects. In the current context of our country, these issues can lead to project stoppages, delays, suspensions, and terminations, ultimately resulting in substantial financial losses for clients. Therefore, fostering a harmonious and inclusive atmosphere is critical for the successful execution of construction initiatives.

Lingard & Rowlinson, 2005; Boin et al., 2021 shows that "With High Risks and Uncertainty, Unpredictable site conditions, weather, supply chain issues and safety hazards demand leaders who remain calm under pressure and can problem solve rapidly."

Core Elements of Leadership in Construction

Northouse, 2022; Bass & Riggio, 2006 intends that "On vision and Strategic Direction, leaders articulate clear goals for the project and ensure everyone understands the desired outcomes. They align daily activities with broader project objectives." Dainty et al., 2006 also recommends that, "On the topic of Communication, Effective leaders communicate clearly and frequently, ensuring that technical instructions, safety protocols, progress updates, and problem-solving discussions are understood at all levels." Bass & Riggio, 2006.Mentions that, "As regard of Motivation and team building, leaders inspire teams to perform at their best, fostering a collaborative environment, resolving conflicts, and ensuring high morale despite stressful conditions."

Likewise, Boin et al., 2021; Müller & Turner, 2010.describes that, "On the basis of decision making and Problem Solving, rapid decisions are often required in construction, especially when unforeseen challenges arise. Leaders must weigh risks, consult stakeholders, and choose the best path forward as technical and managerial Competence, Construction leaders need a solid grasp of technical details methods, materials, regulations and managerial skills such as planning, scheduling, cost control, and resource allocation (PMI, 2021)." Concerning safety of leadership, as a critical aspect in construction, "leaders must create a culture where safety is non-negotiable, promoting practices that protect workers' health and lives (Lingard & Rowlinson, 2005)." Whereas on adaptability and Innovation, "the construction leaders must adjust plans to changing conditions and grasp innovative solutions that improve efficiency, sustainability, and quality (Uhl-Bien & Arena, 2020; Cortellazzo et al., 2019)." Ultimately Stahl et al., 2020 says that, "on ethical and Professional Conduct, integrity, fairness, and professionalism are essential, as leaders often face ethical dilemmas involving contracts, resource allocation, and stakeholder interests."

Why Leadership is Vital in Construction Project Success?

Strong leadership directly impacts project outcomes delivering projects on time, within budget, and to quality standards. On workforce Management issue leaders keep diverse, often multicultural teams aligned and productive. Concerning stakeholder Relations, leaders must maintain trust and cooperation among clients, consultants, contractors, communities and all stockholders. Were as on safety and risk management, effective leadership helps prevent

accidents and manage crises when they occur. After all this regarding change management, Leaders guide teams through industry changes, such as sustainability practices, digitalization (e.g., BIM), and regulatory updates.

In summary, leadership in the construction sector means more than just managing tasks it's about inspiring people, coordinating complex technical and human systems, and driving projects to successful completion in a challenging environment. Leaders must possess a unique blend of technical expertise, human skills, and strategic thinking to flourish in this high-stakes industry.

Digital leadership in construction industry

Digital leadership in the construction industry is all about how leaders can steer digital transformation by weaving in cutting-edge technologies like Building Information Modeling (BIM), artificial intelligence, drones, the Internet of Things (IoT), and digital twins into the construction workflow. Unlike traditional leadership, which mainly zeroes in on managing people and resources, digital leadership is more about crafting a clear digital vision, nurturing a culture of innovation, and making sure that digital tools are in synchronization with business objectives like cost efficiency, sustainability, and safety. Great digital leaders tackle organizational change head on by breaking down resistance, up skilling their teams, and promoting collaboration among all stakeholders. By tapping into real time project data and predictive analytics, they can make smarter decisions, boost productivity, and enhance client satisfaction. While there are still difficulties like high costs, pushback against change, and gaps in digital skills, digital leadership empowers construction companies to attain better efficiency, safety, and competitiveness in a world that's increasingly driven by technology. Ideas taken from Pavan, S., & Tiwari, P. (2020). And Wang, C., & Chan, A. P. C. (2017)

Management vs. Leadership

There has been a long-standing debate in the literature as to why and how leadership is similar to, or different from, management. Although several scholars have contributed to the debate, there seems to be an absence of rational evidence. Hardly any study that attempts to differentiate

leadership from management provides empirical findings. The purpose of the current research is to begin to cover this research gap.

Findings of different researches show that there are clear differences between leadership and management on the basis of how leaders and managers define and conceptualize these terms. Leadership and management are different phenomena and processes in which leaders and managers perform varied functions and play different roles in organizations. The study shows that leaders and managers, at least in the construction industry, apply a mix of both leadership and management to perform their daily jobs and fulfill their organizational responsibilities. The findings also repeat many striking overlaps between the roles of leadership and management.

Toor, S. (2011) points out that, "Differentiating Leadership from Management: An Empirical Investigation of Leaders and Managers. Management and leadership are two very different concepts. Many studies draw a fine line between the two. Research has shown that the terms 'leaders' and 'managers' are often used interchangeably, although there are fundamental differences between the two. Managers can be characterized as people who imitate, establish clear targets, make short term decisions, solve short term problems, enact visions and do things right. They employ the so-called "hard" skills such as planning, directing, organizing and keeping score.

On the other hand, leaders employ many of the "softer" skills. They direct and guide people; influence thoughts and behaviors; motivate; encourage work towards goals; take risks; innovate; have a long-range perspective; have their eye on the horizon; create visions and do the right thing. In most cases, managers are appointed whereas leadership has to be earned and sometimes they break laws."

Leadership and management are qualitatively different and mutually exclusive. The most extreme distinction involves the assumption that management and leadership cannot occur in the same person. In other words, some people are managers and other people are leaders. The definition of managers and leaders assume they have incompatible values and different personalities. Covey (1992) views management and leadership in his book titled. "It might be said that leadership is the highest component of management. And leadership itself can be broken into two parts. One

having to do with vision and direction, values and purposes, and the other with inspiring and motivating people to work together with a common vision and purpose."

While leadership and management are often treated interchangeably in organizational discourse, many scholars stress the importance of distinguishing between the two. Management refers more specifically to the processes of planning, organizing, and controlling resources to meet defined objectives. Managers are generally expected to implement policy, maintain order, and ensure the efficient allocation of time, labor, and materials. In the construction sector, this might involve scheduling contractors, handling procurement, or enforcing safety protocols.

However, effective project execution often requires going beyond these mechanical duties. Leadership, in contrast, entails dealing with ambiguity, making strategic decisions, building relationships, and fostering innovation. As Bennis and Nanus (1985) put it "Managers do things right; leaders do the right things." In reality, effective project leaders must often integrate both roles planning operations like managers while inspiring and adapting like leaders. This hybridization becomes especially vital when addressing the evolving demands of sustainable development."

Dimension	Leadership in Construction	Management in Construction
Primary Focus	Vision, influence, motivation, team culture (Bass &Riggio, 2006; Northouse, 2022).	Planning, organizing, controlling, resource allocation (Kerzner, 2022; PMI, 2021).
Time Horizon	Long-term transformation and strategic goals (Yukl, 2023).	Short- to medium-term operational targets and deliverables (Kerzner, 2022).
Approach	Relational, inspiring, adaptive (Toor & Ofori, 2008)	Procedural, structured, systematic (PMI, 2021).
People vs. Process	Focuses on developing people, relationships, and innovation (Edmondson, 2019).	Focuses on systems, efficiency, and process optimization (Ghosh et al., 2020).
Change Orientation	Proactive in initiating and managing change (Bass & Riggio, 2006).	Maintains stability and order; reacts to deviations (Mintzberg, 2009).
Effectiveness Context	Effective in ambiguous, complex environments (Yukl, 2023).	Effective in structured, predictable environments (Kerzner, 2022).
Tools and Methods	Communication, storytelling, mentoring, transformational influence (Bass &Riggio, 2006).	Scheduling tools, BIM, cost control systems, EVM (Ghosh et al., 2020).

Table 9 Comparison of Leadership and Management in the Construction Sector

The table below summarizes the key differences and intersections between leadership and management practices in the construction sector, reflecting current research.

Trait	Leaders	Managers
Personality	Leadership is a more individual effort.	A manager's role is to organize people and tasks, using hard work, persistence and goodwill.
Attitudes toward goals:	Leaders are seen to be proactive rather than reactive generating new ideas and changing how people think.	Managers "adopt impersonal attitudes towards goals", were reacting to situations within the rules and alongside company policy.
Conceptions of work:	Leaders do not limit choices but open ideas up to create exciting new forms of progress. Leaders "sometimes react to mundane work as to an affliction".	Managers forge compromises between the ideas and people that are coming together to try and achieve common goals. Managers are more risk averse
Relations with others	Leaders ask a different set of questions – instead of how to make the decisions, what are the decisions to be made? Leaders generate a more unpredictable, emotional atmosphere.	Managers prefer working with others but have low emotional involvement with their work. They see situations as either win-win or win-lose (which they are continually trying to change into win-win situations).

Table 10 leadership and management practices in the construction sector Zalezik (1998)

Leadership and Management Challenges in Construction

The construction industry faces significant leadership and management challenges stemming from its complex socio-technical environment. These include:

- **Safety and Risk Management:** Construction remains one of the most hazardous industries globally. Effective leadership is critical in promoting a safety culture and ensuring regulatory compliance (Lingard et al., 2017).

- **Workforce Diversity:** Multicultural and multi-generational workforces necessitate leaders with cultural intelligence and adaptive communication skills (Ofori & Toor, 2012).

- **Technological Integration:** The adoption of digital tools like BIM, AI, and IoT presents new opportunities but also requires leaders to navigate resistance to change and bridge digital literacy gaps among workers. "The adoption of digital tools such as BIM and AI in the construction sector offers significant opportunities, but also brings challenges; leaders must manage resistance to change and address gaps in workers' digital literacy (e.g. in training, cultural acceptance, organizational support), (Alsofiani, 2024)"

- **Sustainability Pressures:** The global drive toward sustainable construction places additional demands on leaders to integrate Environmental, Social, and Governance (ESG) considerations into project planning and execution (World Green Building Council, 2023).

- **Economic Volatility:** Fluctuating material costs and geopolitical uncertainties challenge traditional project planning models, requiring leaders to exhibit resilience and flexible problem-solving capabilities (McKinsey & Company, 2022).

Role of a Leader in Effective Leadership in Construction Sector

1. **Visionary and Strategic Planning**

A leader in construction must have a clear vision for the project and an understanding of the long-term goals of the organization. This involves not just focusing on completing a project but ensuring it aligns with broader objectives, such as sustainability, economic development, or community impact. Leaders must translate these high-level goals into actionable plans for their teams.

2. **Team Management and Motivation**

Construction projects rely on diverse teams, from engineers and architects to laborers and subcontractors. A leader's role is to foster a collaborative and productive environment, aligning the different skill sets and departments towards a common goal. Motivating teams, managing performance, and addressing conflicts are key aspects of leadership in this sector.

3. **Decision-Making and Problem Solving**

Leaders must make critical decisions, often under pressure. The ability to solve problems effectively is crucial. Whether it's a technical issue, a scheduling delay, or a conflict between stakeholders, a strong leader will remain calm, assess all options, and make decisions that minimize risks while keeping the project on track.

4. **Communication and Stakeholder Engagement**

Effective leaders in construction are exceptional communicators. They need to relay information between the project team, clients, suppliers, and regulatory bodies. Clear communication ensures that expectations are managed, and risks are mitigated. Moreover, a leader must be able to communicate effectively with diverse stakeholders, including workers on the ground, project Managers, and clients.

5. Risk Management

The construction industry is fraught with risks, from cost overruns and safety hazards to delays caused by external factors. A construction leader's role includes identifying potential risks early and putting mitigation strategies in place. They need to be proactive and prepared for unforeseen challenges, ensuring that the project progresses smoothly despite these risks.

1	**Communication skills**	**2.**	**Leadership skills**
	Listening		sets example
	Persuading		energetic
3.	**Organizational skills**		vision (sees the big picture)
	Planning		Delegates
	Goal setting		positive Attitude
	Analyzing	**5**.	**Coping skills**
4.	**Team-building skills**		Flexibility
	Empathy		Creativity
	Motivation		Patience
	Esprit de corps		Persistence
	Creativity	**6.**	**Technological skills**
			Experience
			Project knowledge

Table 11 Skills needed to be a successful project manager. (Tayler, 2006)

6. **Ethical Leadership and Integrity**

Integrity is a cornerstone of effective leadership. In construction, a leader must maintain ethical standards, ensure compliance with regulations, and foster a culture of safety and responsibility. Leaders set the tone for the rest of the team, and their behavior will influence how the workforce conducts itself.

7. **Quality Control and Continuous Improvement**

A leader must focus on maintaining high standards of quality throughout the construction process. They must ensure that quality control measures are in place and that work is being carried out to the required specifications. Leaders also foster a culture of continuous improvement, where learning and feedback are prioritized.

8. **Resource Management**

Construction projects require a wide range of resources: labor, materials, equipment, and finances. Leaders must efficiently allocate resources to ensure that everything needed for the project is available and used optimally. This includes managing budgets and ensuring that resources are used wisely to avoid waste.

The following table is prepared based on different researchers**,** Gonzalez, V. A., & De la Torre, C. P. (2018), Cao, D., & Wang, H. (2018), Ibrahim, S. & Ghandour, R. A. (2021). & others.

Leadership Role	Challenges	Mitigation Strategies
Visionary & Strategic Planning	• Time constraints may shift focus to short-term completion. • Budget overruns hinder achieving strategic goals.	• Break long-term vision into short-term milestones. • Use scenario planning to anticipate risks. • Embed sustainability & community objectives early in project design.
Team Management & Motivation	• Cultural & social differences cause communication gaps. • Tight deadlines create stress and lower morale.	• Promote inclusivity and cultural awareness. • Recognize achievements to sustain motivation. • Use collaborative platforms and frequent team check-ins.
Decision-Making & Problem Solving	• Time pressure can force rushed decisions. • Budget limitations restrict possible solutions.	• Apply structured frameworks (SWOT, risk matrices). • Seek expert input before critical decisions. • Build contingency plans for cost/schedule changes.
Communication & Stakeholder Engagement	• Cultural and social differences can cause misunderstandings. • Conflicting stakeholder demands with time/budget realities.	• Establish clear channels (dashboards, reports, briefings). • Tailor communication style to audience. • Maintain transparency when delays or overruns occur.
Risk Management	• Safety hazards and compliance issues. • External delays or unforeseen events.	• Conduct continuous risk assessments. • Train staff in safety/risk protocols. • Allocate buffer budgets and contingency timelines.
Ethical Leadership & Integrity	• Budget pressures may tempt unethical shortcuts. • Safety concerns require strict adherence to standards.	• Enforce compliance with laws and safety codes. • Lead by example in accountability. • Provide safe mechanisms for reporting misconduct.

Leadership Role	Challenges	Mitigation Strategies
Quality Control & Continuous Improvement	• Tight deadlines may compromise quality. • Budget overruns limit resources for quality work.	• Implement ISO/lean quality systems. • Conduct regular inspections & third-party audits. • Hold post-project lessons-learned reviews.
Resource Management	• Budget overruns strain resources. • Time constraints lead to poor allocation or waste.	• Use BIM/ERP tools for efficient tracking. • Apply just-in-time procurement to minimize waste. • Balance cost with quality, prioritizing critical items.

Table 12 Leadership Role → Challenges → Mitigation Strategies

2.4 Framing Leadership for Sustainable Development in the Ethiopian Construction Sector.

The rapid growth of Ethiopia's construction sector over the past few decades has turned it into a vital part of the country's development and modernization efforts. With new infrastructure projects popping up all over from roads and housing to industrial parks and public buildings, the sector is playing a role that goes far beyond just the economy. It's increasingly influencing the urban landscape, job dynamics, and the environmental impact for generations to come. In this changing landscape, effective leadership is not just a managerial issue; it's a crucial part of development.

How well leaders can steer construction projects in a way that embraces sustainability economically, socially, and environmentally, will significantly shape Ethiopia's overall development path. To lay a solid theoretical foundation for this study, this literature review starts by defining key concepts that are central to the research, such as leader, leadership, management, effective leadership, sustainable development, and sustainable construction. Grasping how these ideas have been defined, discussed, and applied, especially in the context of the construction industry is essential for anchoring the analysis in both global discussions and the realities of Ethiopia.

2.5 Sustainability and Sustainable Development

Sustainable development is a powerful global idea that shapes policies and practices all around us today. It was famously described in the 1987, Brundtland report as (*World Commission on Environment and Development (WCED), 1987, p. 43-46.)* "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This concept is multidimensional, weaving together economic viability, environmental protection, and social equity a framework often called the Triple Bottom Line."

In the construction industry, sustainable development means more than just building structures efficiently. It's about reducing ecological harm, conserving resources, enhancing the quality of life for workers and communities, and fostering long-term resilience. It also requires strategic leadership that can embrace these values, align organizational priorities, and make decisions that balance various competing interests.

2.6 Defining Sustainable in Construction

Creating a healthy built environment while keeping ecological principles and resource efficiency at the forefront is really what sustainable construction is all about. It builds on the idea of sustainability by focusing on reducing waste, selecting eco-friendly materials, boosting energy efficiency, and considering the entire life cycle of infrastructure. Importantly, it also addresses social issues like fair labor practices, inclusive participation from stakeholders, and benefits for the community. Strong leadership plays a fundamental role in reaching sustainable construction goals. Leaders who grasp the long-term advantages of sustainability are more inclined to invest in training, implement green procurement policies, and navigate regulatory frameworks effectively. Since sustainable construction is still in its early stages in Ethiopia, it's vital for leadership to actively engage in shifting mindsets and improving practices.

Advantage of effective Leadership for Sustainable Development in construction sector, Sustainability leadership in construction highlights long-term value, stakeholder collaboration, and the assimilation of social, environmental, and economic goals. Effective leaders cultivate key competencies such as strategic planning, communication, and problem solving while embedding sustainability into organizational practices. By promoting innovation, performance, and a collective vision, they align business strategy with ethical and sustainable outcomes, ensuring lasting impact for both organizations and society.

The following table is prepared to shows short briefing and references for further reading on the subject of detail advantages of sustainability development in construction sector.

Aspect	Details	References
Growing Interest	Sustainability leadership has gained significant attention in recent years.	Heizmann & Liu (2018)
Definition	Leadership for sustainability transcends traditional leadership; it aims to create a sustainable impact on multiple levels.	
Mindset	Leaders with a sustainability mindset focus on decisions that promote social, environmental, and economic sustainability.	Ferdig (2007)
Focus Area	Sustainable leaders prioritize long-term sustainability within organizations.	Avery & Bergsteiner (2011)
Objective	Aim to create long-term value for all stakeholders beyond just social and environmental outcomes.	Suriyankietkaew & Avery (2016)
Collaboration	Sustainable leaders work collaboratively with stakeholders to integrate sustainability into business strategies.	Knight & Paterson (2018)
Broader Focus	Leaders consider profitability along with economic, social, and environmental dimensions (triple bottom line).	Fry & Egel (2021)

Aspect	Details	References
Competencies	Key competencies include communication, motivation, strategic planning, problem-solving, project management, and sustainability knowledge.	Willard &Wiedmeyer (2010)
Importance in Construction	Leadership is critical in the construction industry for driving sustainability and success; it ensures a unified vision and direction.	Ofori & Toor (2008)
Strategic Integration	Leaders need to embed sustainability into organizational activities and overall business strategies.	
Performance & Innovation	Increasing attention on leadership roles in enhancing performance and innovation within the construction industry.	Bonssink (2007)

Table 13Aspects, details and references of advantages of sustainability development.

2.7 Stakeholders, Innovation, and Ethical Leadership

In the context of construction leadership, several other concepts are relevant. Stakeholder engagement is crucial construction projects often involve clients, engineers, government agencies, local communities, and workers. Effective leaders must manage these relationships diplomatically and transparently.

Innovation is another central idea. Leadership that fosters a culture of learning, openness, and experimentation is more likely to find creative solutions to challenges, including those related to sustainability.

Lastly, on ethical leadership the practice of leading with integrity, fairness, and accountability is increasingly vital in regions like Ethiopia where governance structures are still evolving. Leaders who model ethical behavior set the tone for project culture, compliance, and transparency.

Literature related to Ethiopian Construction

Construction has always been a fundamental aspect of human development, tracing back to the earliest days of civilization. Since the Industrial Revolution, leadership within the construction sector has grown in importance, becoming a focal point for research and practice. In Ethiopia, the construction industry holds significant potential for economic development but faces notable challenges.

To advance the sector, Ethiopia's Construction Industry Development Plan (2020/21–2029/30) sets ambitious goals:

1. **Improving Stakeholder Satisfaction**: Elevating satisfaction levels among construction industry participants to 75%, fostering safer, healthier, and environmentally sustainable practices, while improving the sector's public image.

2. **Conflict Resolution Efficiency**: Resolving 75% of construction disputes without resorting to court litigation.

3. **Reducing Accidents**: Decreasing accidents caused by negligence or poor quality by 80%.

4. **Curbing Corruption**: Enhancing Ethiopia's global corruption perception index ranking from 114th (37 points) to 35th (60 points).

5. **Boosting Local Market Participation**: Increasing local construction companies' market share to 75% domestically and 25% regionally.

6. **Minimizing Project Delays**: Reducing time wastage in project execution by 50%.

7. **Job Creation**: Expanding direct job opportunities from 710,000 to 3.3 million annually, and indirect jobs from 1.78 million to 8.3 million, achieving a 16.6% annual growth in employment.

8. **Domestic Input Sourcing**: Meeting 80% of basic construction material needs from local sources.

Addressing these challenges requires implementing effective leadership grounded in global best practices. Strong leadership can tackle systemic issues like poor cost estimation, time management, and quality control, ultimately fostering a sustainable and thriving construction industry.

Similar challenges influence construction sectors across developing nations, including inadequate laws and standards, weak professional and trade associations, political interference, and corruption. By learning from other countries' experiences, Ethiopia can create a blueprint for overcoming these issues and unlocking the sector's full potential.

Based on the discussion of theoretical foundations and a comprehensive review of the academic literature, our Ethiopian construction sector faces several leadership challenges, particularly in the areas of knowledge and experience, effective leadership, sustainability and with the overall system.

Regarding Lack of Effective Leadership: - Effective leadership is pivotal for the success of construction projects, especially in Ethiopia's rapidly developing infrastructure sector. The lack of a balanced leadership approach combining both transactional and transformational elements impedes effective project management. In the Ethiopian context, where projects often face issues such as delays, cost overruns, and safety concerns, a balanced leadership style could help address both the immediate needs for project control (through transactional leadership) and the long-term need for strategic innovation, team morale, and vision (through transformational leadership).

Endale Negash (2023 Addis Ababa university) emphasizes that "the insufficient focus on effective leadership development at the institutional level affects not only the immediate performance of individual leaders but also the overall organizational capacity to handle complex and high-stakes construction projects. Leaders who lack the necessary leadership competencies might struggle to motivate their teams, resolve conflicts, and maintain stakeholder engagement, all of which are crucial for achieving successful project outcomes."

"Lack of structured leadership training as a fundamental barrier to effective leadership in Ethiopian construction projects. This finding is consistent with other studies suggesting that

leadership skills in developing countries' construction sectors are often underdeveloped. Leadership training programs in Ethiopia tend to be informal, inconsistent, and lack a strategic framework, undermining the ability of leaders to respond to the evolving demands of the construction industry (Akinci & Kizilbash, 2015)." Additionally, "Successful leadership in construction requires both technical expertise and soft skills, such as communication and conflict resolution, which are often neglected in current training programs. The literature also emphasizes the importance of formal training that incorporates both leadership theory and practice, aligning with calls from researchers like Dainty et al. (2005)," who argue that effective leadership must blend technical knowledge with leadership capabilities.

Cultural factors also play a significant role in shaping leadership effectiveness. Traditional hierarchies and respect for authority can hinder open communication and collaboration, essential components of modern leadership practices. It shows these barriers, highlighting that entrenched hierarchical cultures and top-down decision-making impede the adoption of collaborative leadership approaches. Bureaucratic inefficiencies, such as slow decision-making processes and complex regulations, further aggravate these challenges. To overcome these obstacles, policy-level interventions and educational reforms are essential, aiming to streamline organizational practices and foster a culture that encourages teamwork and innovation.

On knowledge and experience: - The role of knowledge and experience in the construction industry cannot be overstated. Effective stakeholder management is crucial for project success, as highlighted by researched papers, which emphasizes the importance of stakeholder identification, engagement, and communication in achieving project objectives. Well-managed stakeholder relationships correlate positively with project success, particularly in adhering to timelines and budgets. To enhance these practices, capacity-building programs are recommended, aiming to improve stakeholder engagement and align these practices with broader organizational goals.

Leadership training and development are also critical components. Identifying the lack of structured leadership training as a fundamental barrier to effective leadership in Ethiopian construction projects. Current programs are often informal, inconsistent, and lack a strategic framework, undermining leaders' ability to respond to the evolving demands of the construction

industry. Successful leadership requires both technical expertise and soft skills, such as communication and conflict resolution, which are often neglected in current training programs. Formal training that incorporates both leadership theory and practice is essential, aligning with calls from researchers who argue that effective leadership must blend technical knowledge with leadership capabilities.

Mentorship opportunities for emerging leaders are also lacking. Young professionals often lack the guidance of experienced leaders to navigate the complexities of construction projects. The absence of mentorship programs further hampers the development of future leaders in the sector. Establishing structured mentorship programs can provide young professionals with the necessary support and guidance to develop their leadership skills effectively.

Continuous learning and professional development are vital for fostering innovation and addressing the evolving demands of sustainable construction. Leaders who encourage ongoing learning ensure their teams remain equipped to tackle emerging trends and challenges. This approach promotes a culture of knowledge sharing and collaboration, which is crucial in interdisciplinary construction projects that require input from various stakeholders, such as regulatory bodies, clients, architects, engineers, and contractors.

On sustainability Practice: - sustainability practices are becoming increasingly central to the success of construction projects worldwide, including Ethiopia. Sustainable development in Ethiopia's construction sector requires a balanced approach that incorporates economic, social, and environmental dimensions. Leadership plays an integral role in harmonizing these elements by fostering a culture of sustainability across all project stages. Leaders in this context must address key challenges such as resource scarcity, skill gaps, and socio-economic constraints, making leadership strategies like transformational and adaptive leadership particularly relevant.

Research conducted by the Ethiopian Institute of Architecture, Building Construction, and City Development highlights, "the importance of leadership that can adapt to regulatory changes and adopt innovative solutions for sustainability (Alemayehu & Berhanu, 2020)." Attributed with in (Gebremariam & Tsegaye, 2019. Addis Ababa University)" Furthermore, studies indicate that

"leaders who prioritize transparent communication and ethical practices contribute significantly to organizational stability and community trust."

Leadership plays a pivotal role in guiding teams toward environmentally and socially responsible outcomes. Md. Ashiqul Alam et al.'s systematic literature review identifies transformational and adaptive leadership as essential for fostering sustainability in construction projects. Transformational leaders inspire and motivate teams to adopt green technologies, renewable materials, and energy-efficient designs, prioritizing long-term sustainability goals. Adaptive leaders provide the flexibility needed to navigate the dynamic challenges of sustainable construction, such as regulatory changes, resource constraints, and unforeseen setbacks. The combination of these leadership styles is identified as the most effective approach for fostering sustainability in construction projects.

In Ethiopia, the pursuit of climate-resilient sustainable infrastructure is evident in major projects like the Grand Ethiopian Renaissance Dam, aimed at enhancing access to essential social services across the country. Conferences focusing on Ethiopia's infrastructure development emphasize the need for climate-resilient and sustainable infrastructure, aligning with global standards to ensure sustainability and effective delivery.

On Cultural Factors and Leadership Styles: - "Cultural factors play a significant role in shaping leadership effectiveness in Ethiopian construction projects. The study highlights the role of traditional hierarchies and respect for authority, which can hinder open communication and collaboration essential components of modern leadership practices. In many African nations, including Ethiopia, paternalistic leadership cultures prevail, where decision-making is centralized, and subordinates may be reluctant to voice dissent or contribute innovative ideas (Okumbe, 1998)." These cultural dynamics can stifle creativity and problem-solving, both of which are critical for overcoming challenges in construction projects. "This issue is further explored through Hofstede's cultural dimensions (1980) framework on cultural dimensions, which suggests that high power distance cultures struggle with delegation and employee empowerment. The identified literature insights align with global research, highlighting the need for cultural shifts in leadership to promote teamwork and innovation in Ethiopian construction."

On Bureaucratic Inefficiencies: - bureaucratic inefficiencies, such as slow decision-making processes, complex regulations, and poor inter-departmental coordination, are significant barriers to effective leadership in Ethiopian construction sector. The study underscores the negative impact of these inefficiencies, particularly in public sector projects, where excessive regulations and political interference create obstacles for leaders. It also results that bureaucratic systems hinder agility in the construction industry, leading to delays and cost overruns." Tesfaye calls for reforms to streamline organizational practices and enhance leadership effectiveness, a suggestion supported by research advocating for changes in governance structures to improve project delivery.

Regarding Policy-Level Interventions and Educational Reforms: -different local researcher, magazines, conferences, papers and other literatures recommend policy-level interventions and educational reforms are very essential for improving leadership in Ethiopian construction projects. This aligns with the findings of other scholars, such as Kumar et al. (2018), who argue that "policy reforms that prioritize leadership development are critical for fostering an environment conducive to effective leadership. Educational reforms, particularly in engineering and construction management programs, are also necessary to ensure that future leaders are equipped with both technical skills and leadership capabilities." Hwang and Ng (2013) emphasize that "the importance of incorporating leadership development into university curricula to prepare leaders who can navigate the complexities of the construction industry." and "Ahn, Y. H., Annie S. J., & Lee, S. H. (2012). Exploring the development of leadership skills for construction professionals in Korea: Lessons for the global construction industry. International Journal of Project Management, 30(8), 1152–1164. Discusses integrating leadership training into engineering/construction education."

On the topic of identified Gaps: - despite the valuable contribution's local researchers, several gaps remain in the literature on leadership in Ethiopian construction projects. First, while cultural factors are addressed, the specific impact of local customs and traditions on leadership effectiveness in different Ethiopian regions is not fully explored. Further research is needed to understand the regional variations in leadership styles and their influence on project outcomes. Second, most studies primarily uses qualitative methods, which provide in-depth insights but may

not capture broader trends across the Ethiopian construction sector. Future studies could benefit from incorporating quantitative or mixed-methods approaches to provide a more comprehensive analysis of leadership challenges. Finally, while the findings advocate for educational reforms, there is limited research on the current state of effective leadership education in Ethiopian universities. Investigating how leadership is taught and perceived within Ethiopia's higher education institutions could provide valuable insights for policymakers seeking to reform educational programs.

The Ethiopian construction industry employs an incredibly diverse workforce consisting of individuals from different ethnic backgrounds, speaking multiple languages, and having various cultural perspectives on working in the same environment. However, scant research explores the role that these socio-cultural factors may play in the instance of leadership implementation. Under-researched areas have resulted in neglect towards appreciating how cultural diversity influences leadership styles, communication effectiveness, and, by extension, the success of the projects.

Concerning Challenges in Implementing Effective Leadership in Ethiopia: - Implementing effective leadership reforms in Ethiopia's construction sector faces several challenges. In most Ethiopian construction sectors the current exposure shows, the resource constraints are a major issue, as many construction firms, particularly in small and medium-sized enterprises (SMEs), lack the funds to invest in leadership development programs. Without sufficient resources, leadership training cannot be effectively developed or sustained. Additionally, resistance to change is prevalent in the Ethiopian construction industry. The entrenched hierarchical culture and top-down decision-making can impede the adoption of modern leadership approaches that emphasize collaboration and shared decision-making. Lastly, the lack of mentorship opportunities for emerging leaders is another challenge highlighted by the studies. Young professionals often lack the guidance of experienced leaders to navigate the complexities of construction projects. The absence of mentorship programs further hampers the development of future leaders in the sector.

2.8 Global Leadership Trends in the Construction Sector

In the last two decades, leadership in the global construction sector has undergone a significant transformation. Influenced by rapid technological change, increased project complexity, sustainability imperatives, and globalization, the construction industry now demands leadership approaches that are more dynamic, adaptive, and inclusive than ever before. Traditional models that relied heavily on hierarchical and authoritative leadership are increasingly giving way to more participatory, collaborative, and ethically grounded styles. This section explores the most prominent global leadership trends shaping contemporary construction practices and their relevance to sustainable development.

One of the most widely adopted global leadership models is transformational leadership, which emphasizes the ability of leaders to inspire, motivate, and foster innovation among their teams. Transformational leaders are visionary, forward-looking, and capable of challenging established norms in pursuit of long-term goals. Bass and Riggio (2006) note that, "such leaders create an environment where creativity thrives, thereby increasing the capacity of teams to deliver complex construction projects in a sustainable manner." In the construction industry, this is particularly relevant when navigating green certifications, environmental regulations, or community-driven projects.

Closely related to this is the growing adoption of adaptive and responsive leadership models. These approaches are grounded in flexibility, learning, and responsiveness to change. The construction sector, which frequently faces shifting site conditions, regulatory updates, and design alterations, benefits greatly from leaders who can pivot quickly, reallocate resources efficiently, and engage teams in problem-solving. Adaptive leadership, in particular, is essential in aligning project execution with evolving sustainability standards and stakeholder expectations.

In addition to being alert, today's leaders are increasingly expected to be ethically grounded and purpose-driven. Stakeholders are holding organizations accountable not only for financial performance but also for social and environmental impact. Ethical leadership promotes transparency, integrity, and inclusivity principles that align closely with the goals of sustainable construction. Purpose driven leaders are more likely to champion green building initiatives,

advocate for fair labor practices, and engage meaningfully with local communities affected by construction projects.

Another global trend is the rise of collaborative and distributed leadership. As construction projects grow in scale and complexity, they often require the coordinated effort of diverse stakeholders including architects, engineers, government regulators, sustainability consultants, and local communities. Distributed leadership, which spreads leadership responsibilities across individuals and teams, enhances flexibility, improves decision-making, and increases project ownership. This trend supports interdisciplinary integration and is particularly beneficial in managing multi-phased or multi-site sustainable development projects.

The digital revolution has also given rise to a demand for tech-savvy and digitally literate leadership. With the growing use of Building Information Modeling (BIM), drones, AI-powered scheduling tools, and real-time project tracking systems, construction leaders must now be capable of navigating and leveraging digital technologies. Tech-literate leaders are better positioned to increase project efficiency, reduce waste, ensure compliance with green regulations, and deliver projects on time and within budget.

Moreover, globalization has highlighted the importance of culturally intelligent and inclusive leadership. Construction projects often involve multicultural teams and cross-border partnerships, especially in international contracting and consulting. Leaders who demonstrate cultural intelligence (CQ) can manage diverse teams more effectively, avoid misunderstandings, and create inclusive work environments that respect local norms and traditions. Such leadership is critical in promoting stakeholder harmony and sustainability in socially diverse project settings.

Another defining feature of current global leadership is a strong emphasis on emotional intelligence (EQ). Emotional intelligence, which encompasses self-awareness, empathy, and interpersonal communication skills, is now recognized as a crucial factor in leadership success. Leaders with high EQ are better at resolving conflicts, motivating teams, and creating psychologically safe environments—a necessary condition for high performance and innovation in construction.

Finally, resilient leadership has become an essential attribute in the wake of global crises such as the COVID-19 pandemic, economic shocks, and climate-related disasters. Resilient leaders are capable of guiding organizations through uncertainty while maintaining morale, ensuring continuity, and adapting strategies as needed. In the construction industry, which is often vulnerable to disruptions in supply chains, labor availability, and environmental conditions, resilience is a cornerstone of sustainable project management.

As a general observation, global leadership in the construction sector is moving towards models that are more visionary, inclusive, adaptive, ethical, and technologically grounded. These leadership trends are not just abstract ideals but practical necessities for delivering successful, sustainable construction projects in an increasingly complex world. As Ethiopia's construction sector grows, learning from and integrating these global trends could significantly enhance the leadership capacity needed for sustainable development.

2.9 Leadership in the African Construction Context

In African countries, the construction sector operates in a significantly different context, shaped by infrastructural deficits, limited institutional support, political instability, and constrained access to technology and skilled labor. Leadership in this environment must often compensate for systemic weaknesses by being resourceful, community-oriented, and highly adaptive.

Studies across African nations highlight several recurring leadership challenges in the construction industry. These include:

- Weak stakeholder coordination
- Corruption and lack of transparency
- Skill and capacity gaps
- Poor regulatory enforcement
- Cultural barriers to participatory leadership

Despite these challenges, examples of effective leadership practices are emerging in several African contexts. In South Africa, for instance, leadership development programs that focus on ethical leadership and inclusive decision-making have improved project delivery and stakeholder trust in public infrastructure projects. Kenya and Nigeria have begun integrating sustainability goals into national construction strategies, driven in part by leaders advocating for green building codes and environmental accountability.

Moreover, many African construction leaders operate in informal or semi-formal environments where relationship-based leadership grounded in trust, respect, and local customs can be more effective than formal authority. This suggests that culturally contextualized leadership models are often better suited than imported theories. Research by Ofori (2015) stresses that "leadership development in Africa should prioritize ethical grounding, communication skills, and social responsibility alongside technical competence".

It is also important to highlight the role of women in construction leadership in Africa, which remains limited but gradually increasing through targeted policies and advocacy. Gender-inclusive leadership is increasingly recognized as crucial for long-term sector sustainability, as it brings diverse perspectives and improves social impact outcomes, this gender issue is currently incorporated in Ethiopian government policy.

Case Studies and International Comparisons in Construction Leadership

Across Africa, similar leadership dynamics are evident. In Nigeria, the Abuja–Kaduna Road Expansion Project (2018–2021) illustrates the positive impact of transformational leadership on large infrastructure projects. Project managers emphasized clear communication, team mentoring, and proactive risk management while coordinating a workforce of over 1,500 personnel and multiple stakeholder organizations, including federal agencies and private contractors. These leadership practices contributed to timely completion of the project, improved safety outcomes, and heightened stakeholder satisfaction. The Nigerian example provides a practical model for Ethiopian construction leaders, emphasizing the value of team engagement, transparent communication, and structured risk mitigation in achieving both project efficiency and sustainable outcomes.

In Kenya, the Nairobi Water Supply Expansion Project (2017–2020) highlights the effectiveness of combining transformational and adaptive leadership. Leaders inspired teams through a clear sustainability vision while demonstrating flexibility in responding to procurement delays, technical uncertainties, and community concerns. This adaptive approach allowed project managers to implement innovative solutions, maintain team motivation, and ensure timely project completion. Although cost performance was moderately impacted due to fixed-price contracts, the project demonstrates that leadership that balances inspiration with contextual adaptability is critical for managing complex construction environments in developing countries. Lessons from Kenya are particularly relevant for Ethiopia, where resource constraints, regulatory challenges, and rapid urbanization demand leaders who can adjust strategies in response to local conditions.

In Ghana, road and housing projects in the Accra Metropolitan Area (2015–2019) offer additional insight into participative and transformational leadership. Leaders actively involved project teams and local communities in decision-making processes, fostering collaboration, ownership, and social responsibility. Such approaches not only improved project efficiency but also strengthened community acceptance and sustainability awareness. For Ethiopia, incorporating participative practices alongside transformational strategies could enhance both project performance and alignment with local development goals, particularly in urban infrastructure initiatives.

Comparing African experiences with international examples further highlights leadership's role in sustainable construction. "In Europe, sustainable building projects in Germany and the UK (2016–2018) demonstrated that transformational leadership significantly increased employee engagement in eco-friendly practices, resulting in measurable reductions in energy consumption and waste (Davis & Sinha, 2018)." Similarly, "East Asian projects in Japan and South Korea (2017–2019) emphasized adaptive leadership, where project managers successfully implemented green building technologies by adjusting strategies to fit regulatory and cultural contexts (Chen et al., 2019)." These international cases underscore the importance of aligning leadership practices with local environmental, social, and regulatory conditions to maximize sustainability outcomes.

By synthesizing these lessons, a clear pattern emerges: the most effective leadership in construction on combines transformational, adaptive, and participative approaches, tailored to

project context, resources, and stakeholder needs. For Ethiopia, this implies that leaders should focus on clear communication, mentoring, risk management, and participative decision-making while embedding sustainability into all stages of project planning and execution. Hybrid leadership models, informed by both African and international experiences, can help Ethiopian construction leaders navigate complex challenges, enhance workforce engagement, and deliver projects that are both socially responsible and environmentally sustainable.

Ultimately, these case studies demonstrate that leadership is not merely about technical oversight or hierarchical control. Instead, it is about inspiring teams, adapting to challenges, engaging stakeholders, and integrating sustainability principles into everyday project practice. Ethiopian construction projects can draw directly from these comparative insights to develop leadership strategies that foster innovation, efficiency, and long-term impact, thereby aligning with national development goals and international sustainability standards.

2.10 Implications for the Ethiopian Context

The global and African trends discussed above have direct implications for Ethiopia's construction sector. First, they suggest that effective leadership is not a fixed model but a flexible practice that must adapt to local realities while embracing global insights. Ethiopian construction leaders face similar challenges to their African counterparts, including fragmented regulatory systems, capacity constraints, and sustainability gaps. However, they also operate within a unique political, cultural, and economic context that shapes leadership dynamics on the ground.

Thus, it becomes essential to explore how Ethiopian construction leaders navigate these challenges, which leadership styles they tend to employ, and how their strategies align or fail to align with sustainable development goals. The following section will turn more directly to Ethiopian literature and data, identifying the current leadership practices in the sector and the critical gaps that must be addressed.

Leadership plays a pivotal role in determining the success and sustainability of construction projects across the globe. In Ethiopia, the Ethiopian Construction Design and Supervision Works Corporation (ECDSWC) offers an insightful example of current leadership practices within the

industry. Recognized as the largest and most experienced engineering consulting firm in the country, ECDSWC manages projects valued at over one hundred million Ethiopian birr, making it representative of national construction practices. Assessment of Leadership Practice in Construction Projects (Case study of Ethiopian Construction Design and Supervision Works) Researched and conducted by Atara and Negash (2021) revealed that leaders within the corporation employ a combination of transactional and transformational leadership attributes. While certain behaviors such as task management, goal setting, and performance monitoring were frequently observed, crucial elements like mentoring, participative decision-making, and fostering innovation were underutilized. This suggests that while Ethiopian construction leaders have established competencies in guiding teams and ensuring project execution, there is significant room for enhancing leadership practices to strengthen sustainability outcomes, stakeholder engagement, and long-term project impact.

A more recent Ethiopian example, the Chaka Urban Development Project in Addis Ababa, demonstrates transformational leadership applied at a large scale. Initiated in 2022, the project encompasses over 503 hectares of urban development, including the construction of a new National Palace, commercial and residential zones, recreational facilities, and approximately 29 kilometers of new roads. Project leadership prioritized visionary planning, strategic risk management, and stakeholder engagement, ensuring that modern infrastructure was integrated with environmental considerations and local community needs. Leaders maintained regular communication with teams and coordinated closely with government authorities and private sector partners, exemplifying how transformational leadership can successfully guide large-scale, sustainable construction initiatives. The Chaka Project underscores the potential of Ethiopian leaders to adopt forward-looking, inclusive, and sustainability-focused approaches when managing complex urban developments.

The projects include:

- National Palace Complex: The centerpiece of the Chaka Project is the construction of a new National Palace, envisioned to serve as the administrative and ceremonial heart of the

nation. This modern facility is designed to accommodate the evolving needs of Ethiopia's governance and to symbolize the country's progress and modernization.

- Residential and Commercial Developments: The project includes the development of upscale residential areas and commercial zones, providing housing and business opportunities that align with contemporary urban standards. These developments aim to attract both local and international investors, fostering economic growth and urbanization.

- Leisure and Recreational Facilities: Incorporating leisure amenities such as resorts and an artificial lake, the Chaka Project seeks to enhance the quality of life for its residents and visitors. These facilities are designed to promote tourism and provide recreational spaces that contribute to the well-being of the community.

- Infrastructure Enhancements: The project involves the construction of approximately 29 kilometers of roads, improving connectivity within the city and facilitating efficient transportation. This infrastructure development is crucial for supporting the increased mobility demands of a growing urban population.

Leadership and Project Execution:

Leadership Style: The Chaka Project is characterized by a transformational leadership approach, with a strong emphasis on visionary planning, innovation, and sustainable development. The leadership has focused on integrating modern urban planning principles with Ethiopia's cultural heritage, ensuring that the project reflects national identity while embracing progress.

- Project Management**:** The project is managed by the Addis Ababa City Administration, with E-tollo, a prominent construction firm, serving as the main contractor. The collaboration between government entities and private sector partners exemplifies a public-private partnership model aimed at leveraging resources and expertise for large-scale urban development.

Challenges and Strategies:

- Resource Mobilization: Securing the necessary financial resources for such a large-scale project posed significant challenges. The leadership addressed this by engaging in strategic partnerships and securing investments from both domestic and international sources.

- Community Engagement: Ensuring that the development met the needs of the local population required extensive community engagement. The project team conducted consultations and incorporated feedback to align the development with the aspirations of the residents.

- Environmental Considerations: The integration of an artificial lake and the renovation of forested areas required careful environmental planning. Sustainable practices were employed to minimize ecological impact and promote biodiversity within the urban setting.

Outcomes and Impacts:

- Urban Transformation: The Chaka Project is set to significantly alter the urban landscape of Addis Ababa, introducing modern infrastructure and amenities that enhance the city's appeal as a regional hub for commerce, governance, and tourism.

- Economic Growth: By attracting investments and creating business opportunities, the project contributes to Ethiopia's economic development goals, fostering job creation and stimulating local economies.

- Cultural Integration: The careful blending of modern design with traditional elements ensures that the Chaka Project respects and preserves Ethiopia's rich cultural heritage, providing a model for future developments that balance progress with tradition.

The Chaka Project stands as a testament to Ethiopia's commitment to modernizing its capital through visionary leadership and strategic planning. By addressing urban challenges and seizing

opportunities for growth, the project not only aims to enhance the physical infrastructure of Addis Ababa but also seeks to foster a sense of national pride and identity. The leadership's focus on sustainable development, community engagement, and cultural preservation provides valuable insights into effective leadership practices in large-scale construction projects. This case study underscores the importance of aligning development initiatives with national aspirations and the needs of the populace, ensuring that progress is both inclusive and reflective of the country's values.

Project & Country	**Key Leadership Aspects**	**Key Sustainability Aspects**	**Why It's a Strong Case Study**
New Administrative Capital (NAC), Egypt	Visionary national leadership; multi-level stakeholder coordination	Smart city design, solar power, green building codes	Showcases large-scale sustainable urban leadership and policy integration
Konza Techno police, Kenya	Government-led vision; public-private partnerships (PPP)	Smart city systems, eco-friendly infrastructure	Demonstrates leadership in sustainable urban innovation and PPP execution
Gautrain Rapid Rail Link, South Africa	Strong PPP leadership; stakeholder management	Reduced emissions, environmental planning	Example of sustainable transport infrastructure with complex leadership dynamics
Green Star Buildings, South Africa	Private sector leadership; commitment to green certifications	Energy efficiency, sustainable materials	Illustrates transformational leadership driving sustainability in private construction
Grand Ethiopian Renaissance Dam (GERD), Ethiopia	National vision; leadership amid geopolitical tensions	Renewable energy; environmental and social challenges	Case of leadership navigating sustainability, national interests, and international relations
Accra Affordable Housing, Ghana	Government leadership; partnerships with private sector	Sustainable design in affordable housing	Shows leadership balancing sustainability and cost in social housing
Lekki Deep Sea Port, Nigeria	PPP leadership; fast-tracking approvals	Marine ecosystem protection; climate resilience	Reflects leadership balancing economic growth with sustainability in mega infrastructure

Table 14 List of case study in Africa

The following table of case studies information are collected and summarized from different construction projects in Ethiopia.

These case studies, emphasizing both leadership and sustainability aspects across different construction projects in Ethiopia.

Case Study	Project Overview	Leadership Excellence	Sustainability Highlights	References
Tulu Moye Geothermal Power Project	First privately developed geothermal power plant in Ethiopia.	-Visionary government advocacy for energy transition. - Strong public-private collaboration.	-Significant contribution to renewable energy goals. - Economic growth by securing stable energy supply.	- Wikipedia (2024). Tulu Moye Geothermal Power Station. -Hydropower.org (2023). - MDPI (Teklemariam & Fikreyesus, 2022). - KenGen contract (2019).
Woliso–Ambo Road Project	- Key road upgrade connecting Woliso and Ambo; focus on urban infrastructure.	- Proactive planning to mitigate issues. - Integrated stakeholder governance for project coordination.	- Improved access to services and economic opportunities. - Resilient project management to handle price volatility.	- Gemechu, T. A. (2025). - Mulu, T. &Tesfaye, M. (2023). - Alemu, S. & Getachew, H. (2024).
Commercial Bank of Ethiopia HQ	- Africa's tallest building; completed in 2023.	- Strong government oversight and stakeholder coordination.	- Sustainable architectural features (HVAC, seismic design). - Addresses urban skyline and financial sector needs.	- Addis Fortune (2023). - Hailu, M., et al. (2023).

Case Study	Project Overview	Leadership Excellence	Sustainability Highlights	References
Wegagen Bank HQ Green Building	- Mid-rise office building aiming for green features in Addis Ababa.	-Developer-led initiative with expert guidance. - Addressed leadership challenges in green building.	- Early adoption of sustainable design; energy, water, materials efficiency targeted.	- Teklemariam, A. (2022).
Addis Ababa Housing Development	- Thousands of residential units built under IHDP, targeting low- and middle-income housing.	- Strong project management across government agencies needed for scale.	- Focus on efficient land use and integration of basic services. - Challenges in quality and environmental focus.	- Taffesse, S. & Abebe, T. (2022). - UN.Habitat (2020).
Bole International Airport Expansion	- New terminal designed for high passenger capacity, opened in 2020.	- Joint leadership between Ethiopian Airports enterprise and contractors. - Capacity-building challenges noted.	- Energy-efficient and sustainable design features implemented.	- Ethiopian Airports Enterprise (2021). - Mengesha, T. (2022).

Case Study	Project Overview	Leadership Excellence	Sustainability Highlights	References
Unity Park Restoration Project	- Restoration of palace grounds into a public park and museum.	- Oversight by the Prime Minister's office for heritage preservation.	- Focus on sustainable tourism infrastructure and heritage preservation. - Balancing modern needs with authenticity.	- Ministry of Culture and Tourism Ethiopia (2020). - Alemu, B. (2021).
Real Estate Projects (e.g., Ayat)	- Residential and commercial developments by private firms focusing on sustainability.	- Leadership often comes from family-owned businesses. - Cost-driven sustainability efforts.	- Recent projects include elements for water saving and solar heating.	- Tefera, Y. (2023).

2.11 Summary

This chapter synthesizes the major leadership theories—servant, transformational, transactional, charismatic, authentic, ethical, adaptive, digital, complexity, and sustainable—and assesses their fit for the construction context. Evidence favors context-contingent, hybrid leadership that blends transformational motivation with transactional controls to ensure compliance, safety, and delivery. The review links leadership to sustainability across environmental, social, and economic dimensions; identifies critical competencies (vision, emotional intelligence, ethics, digital literacy, systems thinking); and surfaces Ethiopia-specific barriers (resource constraints, weak enforcement, skill gaps) alongside opportunities (rapid growth, digitalization). It also highlights gaps in Ethiopia-focused empirical work, motivating this study's core claim: leadership styles and capabilities materially shape team performance, stakeholder alignment, and sustainability outcomes.

Effective leadership in the construction sector extends beyond authority or management—it embodies the ability to inspire, influence, and align diverse teams toward shared goals. It integrates technical expertise with emotional intelligence, ethical integrity, and adaptive capacity to navigate uncertainty and drive sustainable outcomes. Within Ethiopia's context, effective leadership is essential for overcoming systemic challenges such as bureaucratic inefficiencies, skill shortages, and weak stakeholder coordination. Leaders who combine strategic vision, communication, and ethical values can foster collaboration, enhance project performance, and embed sustainability across the construction process.

CHAPTER THREE- RESEARCH DESIGN

3.0 Overview

This chapter outlines the research design for examining the relationship between effective leadership and sustainability in the Ethiopian construction sector. Effective leadership is increasingly recognized as a critical factor influencing sustainable practices, yet empirical research in the Ethiopian context is limited. This study employs a mixed-methods design, combining surveys and case studies, to provide both quantitative and qualitative depth. The chapter discusses the research approach, population and sampling, data collection methods, data analysis procedures, and ethical considerations, emphasizing the rationale for integrating multiple methods to achieve comprehensive insights.

3.1 Research Approach

A mixed-methods research approach was selected to leverage the strengths of both quantitative and qualitative methodologies:

- Quantitative (Survey): The survey captures data from a broad sample of construction firms, providing measurable insights into leadership effectiveness, sustainability practices, and their interrelationships. It enables statistical analysis, trend identification, and generalization across the sector.

- Qualitative (Case Study): Case studies allow for in-depth exploration of leadership strategies, organizational culture, and the implementation of sustainable practices in real-world settings. They provide contextual explanations for patterns identified in the survey data.

This sequential combination—first quantitative, then qualitative—ensures that findings are not only statistically valid but also grounded in practical organizational contexts.

3.2 Research Design

The study adopts an explanatory sequential design, which begins with a survey to identify patterns, followed by case studies to explore the underlying reasons and mechanisms.

1. Phase 1 – Survey: A structured questionnaire is distributed to employees and managers across Ethiopian construction companies to measure leadership behaviors, sustainability practices, and perceived effectiveness.

2. Phase 2 – Case Study: Selected companies representing high, medium, and low sustainability performance are studied in-depth. This includes semi-structured interviews, document analysis, and observations to provide rich contextual understanding.

The sequential design allows quantitative results to guide the qualitative inquiry, ensuring targeted exploration of the most relevant issues.

3.3 Population and Sampling

3.3.1 Population

The target population includes:

- Registered construction companies in Ethiopia, covering large, medium, and small-scale enterprises.

- Managers, supervisors, engineers, and operational staff involved in leadership and sustainability initiatives.

- Stakeholders directly engaged in sustainability practices, including project leaders and sustainability officers.

3.3.2 Sampling Strategy

- Survey: A stratified random sampling approach ensures representation by company size, geographic location, and project type. Stratification improves reliability by capturing diversity across the sector.

- Case Study: A purposive sampling method selects 3–5 companies based on survey findings, representing varying levels of sustainability performance and leadership effectiveness. Selection criteria include demonstrated commitment to sustainability, presence of formal leadership structures, and willingness to participate.

3.4 Data Collection Methods

3.4.1 Survey Instrument

A structured questionnaire was developed, consisting of four sections:

1. Demographics: Information on company size, respondent role, and years of experience.

2. Leadership Practices: Measured using Likert-scale items based on transformational, transactional, and servant leadership models.

3. Sustainability Practices: Questions address environmental, social, and economic sustainability initiatives.

4. Perceived Leadership Effectiveness: Respondents evaluate the impact of leadership on project outcomes and sustainability performance.

The questionnaire was pretested with a sample of industry professionals to ensure clarity, relevance, and reliability.

3.4.2 Case Study Data

Case study data were collected through:

- ❖ Semi-structured interviews: Engaging managers, project leaders, and staff to explore leadership behaviors, decision-making, and sustainability implementation.
- ❖ Document analysis: Reviewing company reports, project plans, and sustainability-related documents.
- ❖ Observation: Monitoring leadership interactions and sustainability practices during site visits.

Data triangulation enhances validity by corroborating information from multiple sources.

3.5 Data Analysis Procedures

3.5.1 Quantitative Analysis

Survey data were analyzed using:

- ❖ Descriptive statistics: Means, frequencies, and percentages to summarize demographic characteristics and response patterns.
- ❖ Inferential statistics: Correlation and regression analyses to assess relationships between leadership practices and sustainability outcomes.

3.5.2 Qualitative Analysis

Case study data were analyzed through thematic analysis:

1. Transcribing interviews and organizing documents.
2. Coding data into categories related to leadership practices and sustainability measures.
3. Identifying themes and patterns to explain survey findings.
4. Integrating case study insights with survey results to provide a comprehensive understanding.

3.6 Ethical Considerations

The study adhered to rigorous ethical standards:

- Informed Consent: Participants were briefed on the study's objectives and provided written consent.
- Confidentiality: Personal and company information were anonymized.
- Voluntary Participation: Participants could withdraw at any stage without penalty.
- Data Security: All collected data were securely stored and used exclusively for research purposes.

3.7 Validity and Reliability

Survey Validity: Ensured through expert review, pretesting, and use of established leadership and sustainability scales.

- Reliability: Internal consistency of survey constructs was verified using Cronbach's alpha.
- Case Study Trustworthiness: Triangulation, member checking, and detailed documentation increased credibility, transferability, and confirm ability of findings.

3.8 Summary

This chapter presented the research design for examining effective leadership and sustainability in the Ethiopian construction sector. A mixed-methods approach, combining surveys and case studies, enables both generalizable and context-rich insights. The next chapter will present and analyze the findings, exploring how leadership effectiveness influences sustainable construction practices.

CHAPTER FOUR- DATA ANALYSIS AND INTERPRETATION

4.0 Overview

This report presents a comprehensive analysis of leadership dynamics, challenges, and opportunities within the Ethiopian construction sector, based on a targeted survey conducted in 2025. It assesses the relationship between leadership styles, sustainability practices, organizational challenges, and outcomes. The findings offer practical recommendations for improving leadership effectiveness and aligning initiatives with national sustainability goals.

The Ethiopian construction industry plays a pivotal role in national development and infrastructure expansion. However, it also faces persistent challenges including leadership gaps, project inefficiencies, and limited integration of sustainable practices. The objective of this study is to illuminate these challenges and identify effective leadership strategies that can drive long-term sustainability, project success, and strategic alignment with national development goals.

4.1 Demographic Characteristics of Respondents

4.1.1 Gender Distribution

The survey results show a significant gender imbalance, with approximately 92.5% of respondents identifying as male and only 7.5% as female. This suggests that leadership roles in the construction sector are predominantly occupied by men, reflecting broader gender disparity trends in the industry.

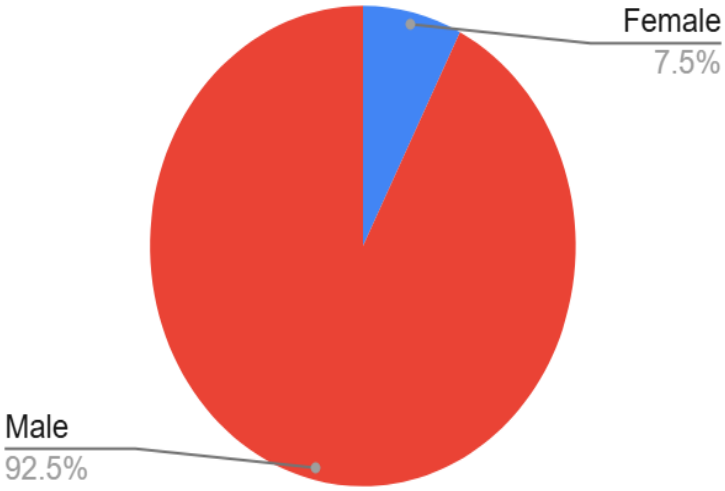

Figure 7 Gender distribution

This imbalance signals the need for inclusive leadership development programs aimed at increasing female participation in construction leadership. Gender diversity in leadership is known to enhance innovation, collaboration, and decision-making effectiveness.

4.1.2 Job Experience

The respondents were categorized according to their years of professional experience within the construction sector. Approximately 13% of participants had between 0 and 5 years of experience, representing the entry-level professionals and early-career staff who are beginning to develop their understanding of leadership and project management in the field. Around 3% of respondents reported having between 11 and 15 years of experience, indicating mid-level professionals who have accumulated substantial practical knowledge but may not yet occupy the most senior leadership positions.

The majority of participants — roughly 75% — possessed more than 16 years of experience, reflecting a highly seasoned and established respondent base with extensive exposure to the dynamics of construction management, leadership challenges, and organizational practices over time.

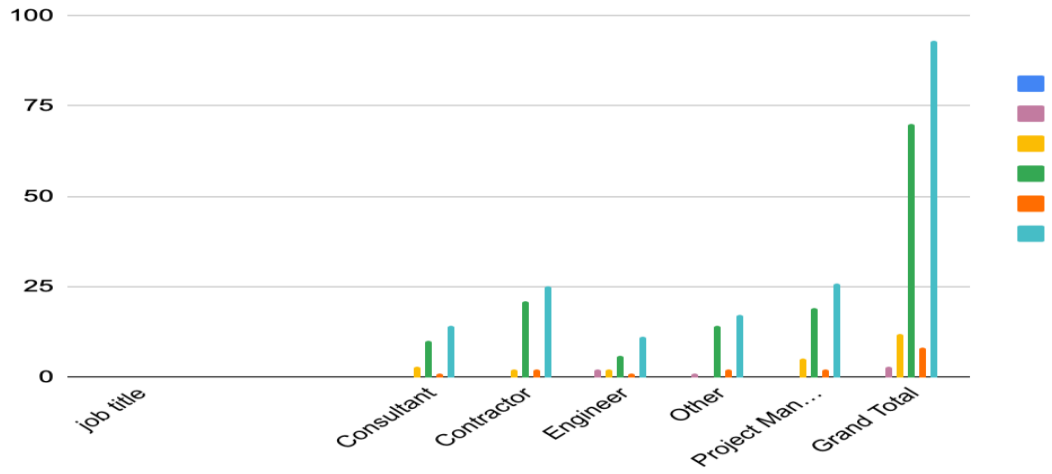

Figure 8Job experience

The participants represented diverse professional roles:

- ❖ Project Managers
- ❖ Engineers
- ❖ Contractors
- ❖ Consultants
- ❖ Others

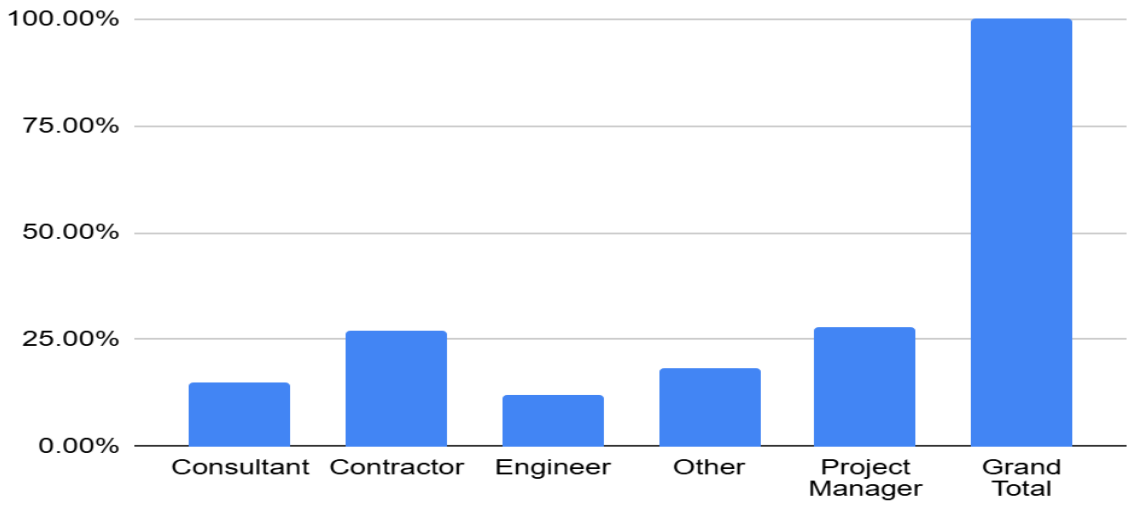

Figure 9Job title and education background

This distribution suggests that the survey captured insights from a mature cohort of professionals, whose long-term involvement in the sector provides valuable perspectives on both historical trends and contemporary leadership practices. The predominance of experienced respondents implies that the findings are grounded in deep industry knowledge, offering nuanced understanding of what constitutes effective leadership, common obstacles encountered in project execution, and strategies that have been successful in addressing complex issues. Furthermore, the presence of such a senior pool allows for an appreciation of how leadership approaches have evolved in response to shifts in regulatory frameworks, technological innovations, and sustainability expectations.

While the experience level of the majority enriches the depth and reliability of the insights, it also underscores the importance of incorporating younger professionals into leadership pathways. Engaging emerging leaders ensures that organizations can balance institutional knowledge with fresh perspectives, fostering innovation and continuity through effective succession planning. Without such integration, there is a risk that long-term leadership trends may become entrenched, potentially slowing the adoption of new methods or technologies. Therefore, this respondent profile not only highlights the maturity of the current leadership landscape but also points to strategic opportunities for mentoring programs, professional development initiatives, and succession planning efforts to cultivate the next generation of construction leaders.

4.2. Leadership Styles and Practices

4.2.1 Leadership Style Distribution

The survey explored transformational, transactional, servant, democratic and autocratic leadership styles. These approaches were reflected variably across organizations. Transformational and democratic styles were more commonly associated with high engagement and adaptability, while autocratic styles were noted in more rigid, traditional structures.

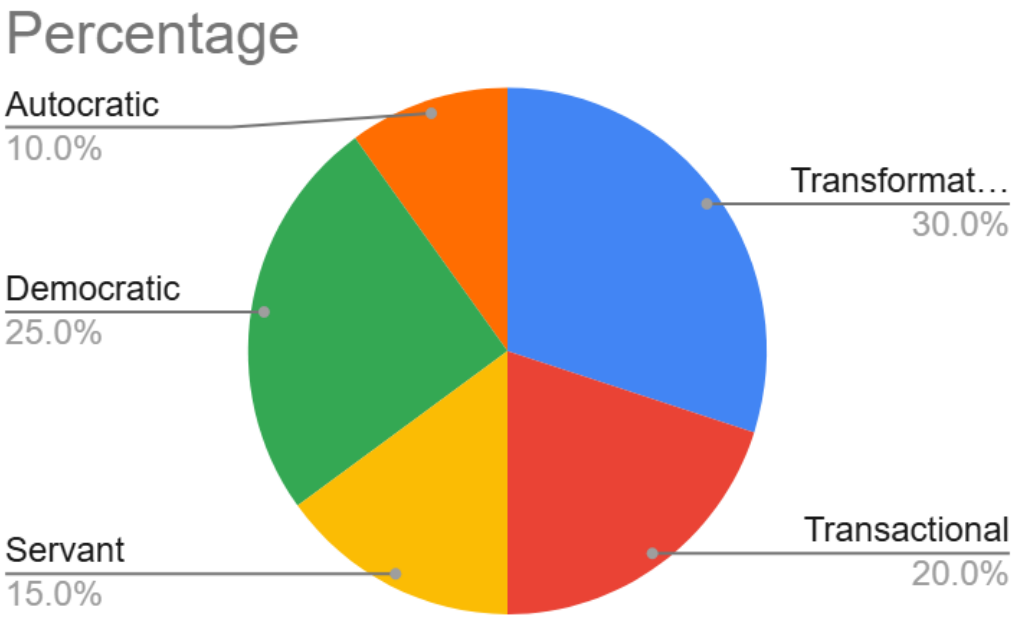

Figure 10 Leadership style distribution

4.2.2 Leadership Competency

The analysis reveals a robust capacity in soft leadership skills such as communication and mentoring. The organization appears well-prepared to handle risk and crisis scenarios, which is essential in the volatile construction sector. However, the extremely low analytics score exposes a substantial skills gap. Without improvement in this area, the organization may struggle with forecasting, budget control, and evaluating project performance metrics. Strategic training in analytical tools and critical thinking should be prioritized.

Competency	Score	Percentage
Communication	42	21.65%
Motivation & Mentoring	41	21.13%
Risk Management	40	20.62%
Crisis Handling	40	20.62%
Others (undefined)	39	20.10%
Analytics	1	0.52%

Figure 11 Leadership competency

The competency analysis clearly highlights communication as the most prominent strength among respondents. This suggests a healthy organizational culture that values clarity, feedback, and dialogue. It also plays a critical role in aligning teams toward shared goals.

Closely following are motivation and mentoring, risk management, and crisis handling—all of which score above 20%. These competencies show that leaders are capable of both strategic foresight and human-centered team management. They can steer teams effectively through both planned operations and unexpected disruptions.

However, the almost negligible score in analytics is deeply concerning. In an era where data-driven decisions define competitive advantage and operational efficiency, such a deficiency presents a critical vulnerability. The lack of analytical competence may result in poor resource forecasting, delayed project adaptation, and flawed performance assessment.

Strategic Implications:

- **Immediate Action:** Invest in leadership training programs focused on analytical thinking, business intelligence tools, and quantitative reasoning.
- **Structural Reform:** Integrate data analysts into leadership teams to complement soft skills with technical insights.
- **Mentorship Design:** Leverage strengths in mentoring to nurture younger, analytically inclined professionals into leadership pipelines.

4.3 Leadership Quality Demonstration

Leadership behaviors most observed:

Leadership Quality	Frequency	Percentage
Problem-Solving and Adaptability	34	43.59%
Clear and Effective Communication	19	24.36%
Risk Management and Crisis Handling	8	10.26%
Motivation and Mentoring	7	8.97%
Other Traits (Not Specified)	10	12.82%

Figure 12 Leadership Quality

Problem-solving and adaptability emerge as standout leadership qualities, reflecting the high-paced, challenge-intensive nature of construction work. Leaders are evidently skilled at navigating dynamic environments and providing rapid responses to unexpected challenges.

Despite strong general communication skills noted earlier, the relatively lower recognition of "clear communication" as a demonstrated leadership trait suggests a gap between capability and application. It indicates that while communication structures may be in place, their effectiveness may vary across teams or situations.

The most critical concern is the low demonstration of motivation and mentoring. This may lead to stagnation in team development, limited innovation, and high turnover. Without mentorship and inspiration, leadership becomes task-focused rather than transformational.

4.4 Sustainability Practices and Awareness

4.4.1 Familiarity with Sustainability

Respondents were asked about their familiarity with sustainability principles:

Familiarity Level	Percentage of Respondents
Very Familiar	21.50%
Somewhat Familiar	38.70%
Not Very Familiar	31.20%
Not Familiar at All	8.60%

Figure 13 Sustainability Practices and Awareness

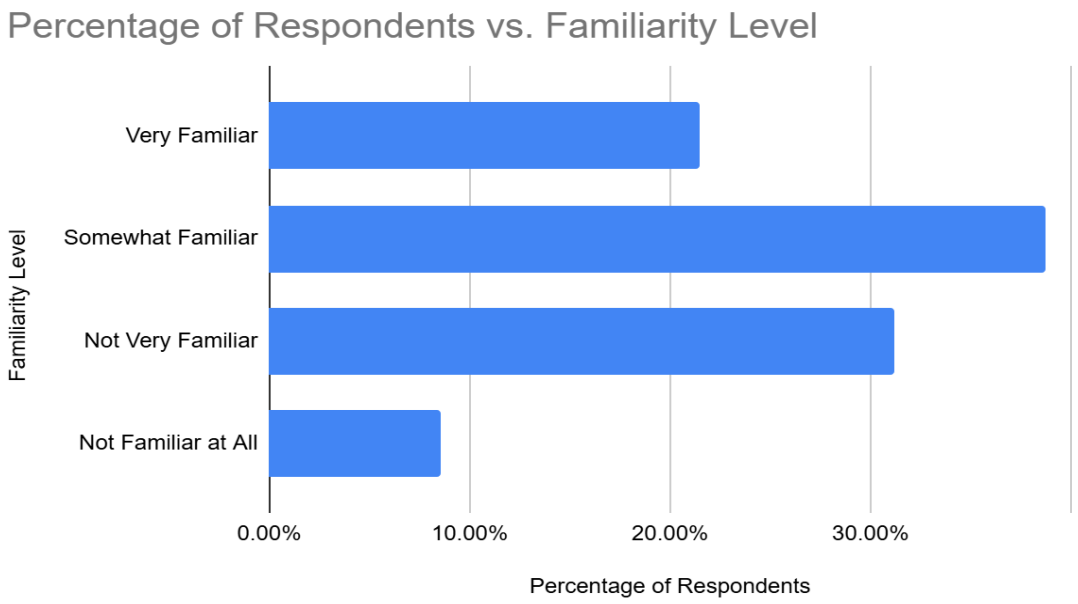

Figure 14 Respondents Vs Familiarity level

A combined 60.2% of respondents indicated they were either "Very Familiar" or "Somewhat Familiar" with sustainability, suggesting a foundational awareness exists. However, the 39.8% who report limited or no familiarity indicates a knowledge gap that may hinder adoption of sustainable practices. This emphasizes the need for broader training and integration of sustainability into leadership development frameworks.

4.4.2 Leadership Promotion of Sustainability

Promotion Frequency	Percentage of Respondents
Yes (Actively Promoted)	37.60%
Occasionally	45.20%
No	17.20%

Figure 15 Leadership Promotion of Sustainability

Only 37.6% of respondents confirm that sustainability is actively promoted by leadership. The "Occasionally" group (45.2%) suggests that sustainability efforts are often reactive rather than strategic. This lack of consistency can hinder long-term planning and cultural embedding of sustainability.

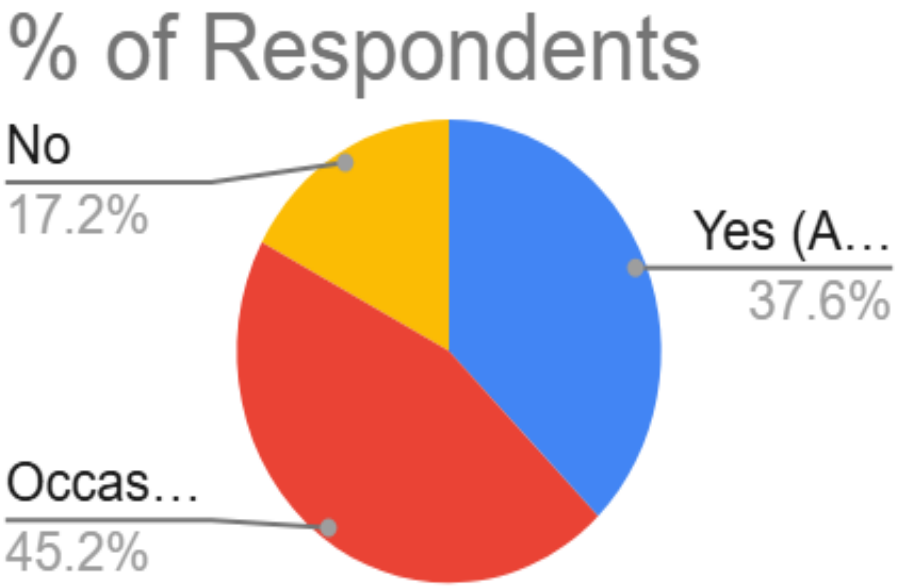

Figure 16 Leadership Promotion of Sustainability Percentage of respondent

4.5 Challenges to sustainability in construction industry sectors

One of the primary challenges to sustainability in the construction industry is the widespread reliance on traditional building practices that prioritize short-term cost savings over long-term environmental impact. This is compounded by limited access to green technologies, inadequate regulatory enforcement, and a general lack of awareness or training in sustainable design principles among construction professionals. Additionally, high material waste, inefficient energy use, and carbon-intensive supply chains continue to undermine sustainability goals.

Many developing contexts, including Ethiopia, these challenges are further exacerbated by budget constraints, weak institutional support, and the absence of strong policy incentives to adopt environmentally responsible construction methods.

- High Cost of Implementation
- Time Constraints
- Lack of Awareness
- Resistance to Change

Barrier	**Commonality**
Cost	Very High
Awareness	High
Resistance to Change	High
Time Constraints	Moderate

Figure 17 Challenges to sustainability in construction industry

These challenges are deeply interlinked. Lack of awareness leads to resistance, which justifies time constraints and cost avoidance. Cost is often cited as a reason not to invest in sustainable practices, but this overlooks long-term gains.

4.5.1 Perceived Importance of Sustainability in Leadership

Importance Level	Percentage of Respondents
Very Important	40.80%
Important	32.30%
Neutral or Less Important	26.90%

Table 15 Importance of sustainability in Leadership

A combined 73.1% of respondents consider sustainability important or very important, showing positive sentiment. However, over a quarter of respondents either remain indifferent or undervalue it—highlighting that cultural and strategic commitment is still uneven across the sector.

4.6 Integration of Leadership and Sustainability Practices (Composite Insight)

	Alignment with Sustainability	Observations
Strategic Planning	Moderate	Lacks consistent linkage to environmental or social outcomes.
Operational Decisions	Low to Moderate	Few sustainability KPIs in procurement, HR, or site planning.
Organizational Culture	Emerging	Some recognition, but not yet embedded in identity.

Table 16 Leadership and Sustainability Practices

Here's a pie chart showing the **Familiarity with Sustainability among Leaders**. It visually highlights that:

- **38.7%** of respondents are somewhat familiar
- **21.5%** are very familiar
- A notable **31.2%** are not very familiar
- And **8.6%** are not familiar at all

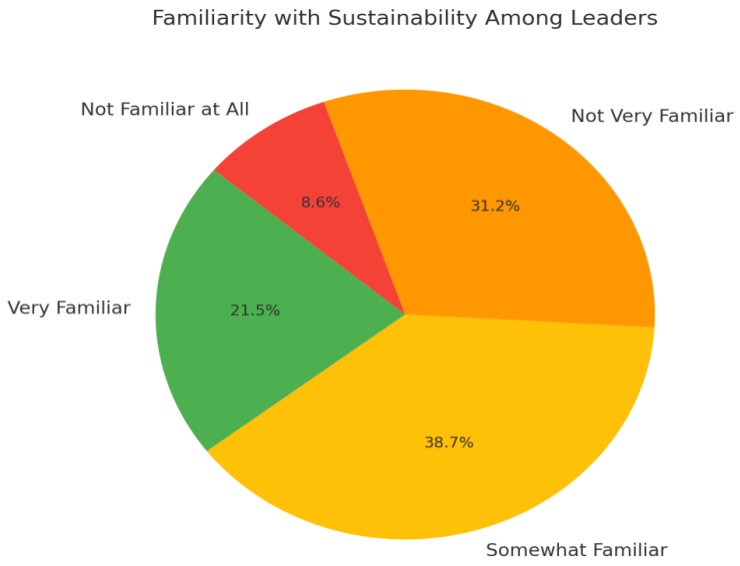

Figure 18 Sustainability among leaders

CHAPTER FIVE- LEADERSHIP CHALLENGES AND OPPORTUNITIES

5.0 Overview

This section presents an in-depth analysis of the leadership barriers and enabling conditions identified by respondents in the Ethiopian construction sector. It reflects both systemic weaknesses and areas of strategic opportunity for enhancing leadership effectiveness and organizational performance.

5.1 Key Leadership Challenges

Respondents were asked to identify the most significant leadership challenges in their organizations. The findings are summarized below:

Challenge Type	Frequency	Percentage
Lack of Training	25	26.88%
Resistance to Change	22	23.66%
Resource Constraints	28	30.11%
Other (e.g. poor systems)	18	19.35%

Table 17 Key leadership challenges

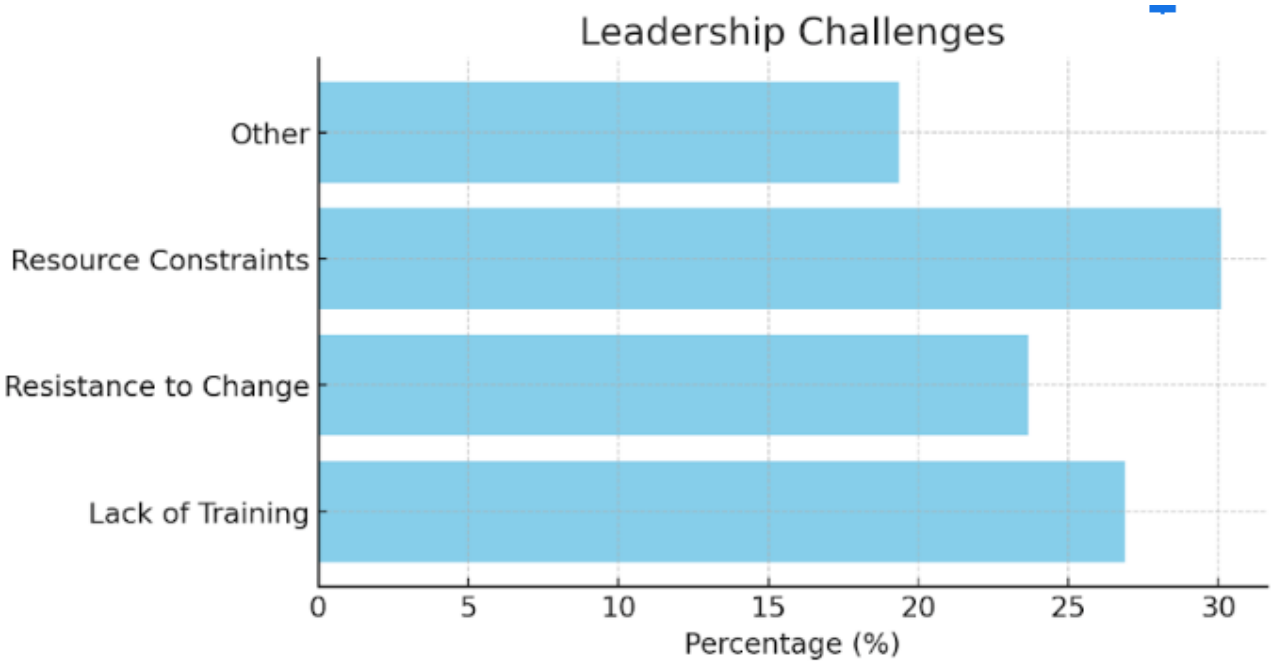

Figure 19 Challenges of leadership

- The most commonly cited challenge is **resource constraints (30.11%)**, suggesting widespread issues in securing the financial, human, or technical support needed for effective leadership execution.
- **Lack of training** (26.88%) also emerged as a major issue, indicating gaps in leadership development programs and professional growth opportunities.
- **Resistance to change** (23.66%) highlights cultural inertia and organizational rigidity that hinder innovation and reform.
- **"Other" challenges** (19.35%) point to potentially systemic inefficiencies such as poor organizational structure or unclear communication hierarchies.

5.2 Goal Alignment Challenges

This section presents the data collected from respondents the level of percentage and frequency of goal alignment challenges.

Response	Percentage
Always Aligned	13.98%
Often Aligned	29.03%
Sometimes Aligned	34.41%
Rarely Aligned	18.28%
Never Aligned	4.30%

Figure 20 Goal alignment challenges

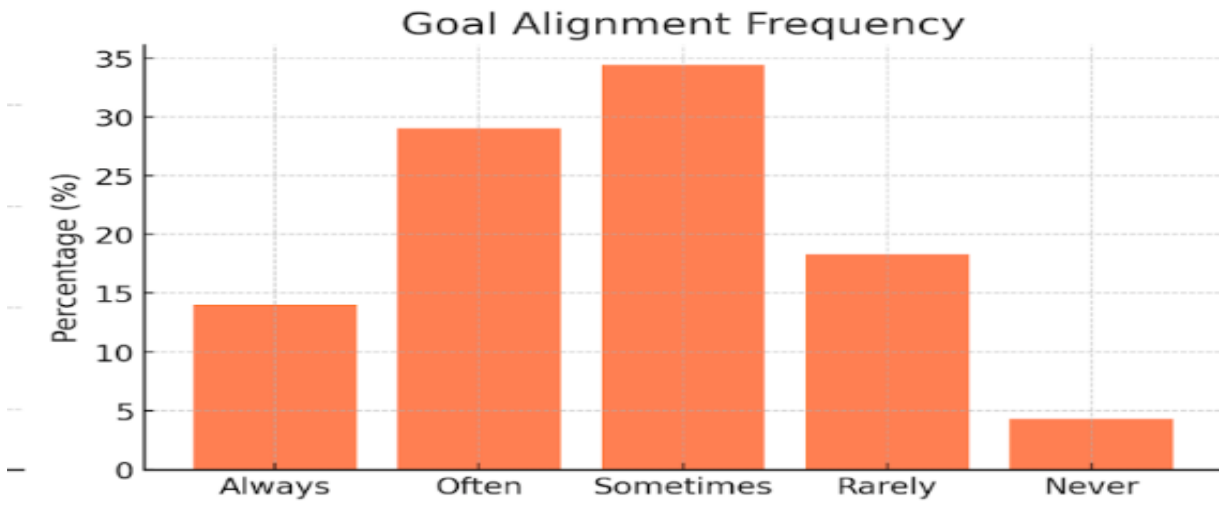

Figure 21 Frequency of goal alignment challenges

Only **43%** of respondents believe that leadership goals are "Always" or "Often" aligned with organizational goals, indicating that **over half experience inconsistency in leadership direction**. This misalignment can lead to inefficiency, low morale, and strategic disorientation.

5.3 Opportunities for Enhancing Leadership

Respondents were asked to identify what the opportunities for enhancing leadership in their organizations. The responses are summarized below:

Opportunity Type	Frequency	Percentage
Use of Technology	28	30.11%
Policy and Structural Reform	26	27.96%
Training and Capacity Building	24	25.80%
Other (e.g. new leadership models)	15	16.13%

Figure 22 Opportunities for enhancing leadership

Figure 23 Frequency of opportunity type

Technology emerges as the top leadership enabler, with 30.11% noting its potential to improve decision-making, monitoring, and communication.

Policy reform (27.96%) also plays a crucial role, especially in standardizing practices and promoting accountability.

Training (25.80%) continues to be vital, especially in light of earlier results showing lack of training as a key challenge.

The "Other" category (16.13%) may reflect innovations like distributed leadership models, collaborative governance, or international benchmarking.

5.4 Cultural and Political Influences

Additionally, political conditions are seen as a notable factor for the construction sector in Ethiopia, while they are rarely considered in literatures on Ethiopian construction. This may reflect differing levels of awareness or concern about political factors. The data also indicates that cultural and political factors play a substantial role in shaping leadership effectiveness and decision-making in the Ethiopian construction industry. A significant **49.46%** of respondents strongly agreed that such influences are highly impactful, suggesting that leaders often must navigate complex sociopolitical dynamics, including local customs, government policies, and administrative structures.

Influence Level	Percentage
Strongly Agree/Significant	49.46%
Moderately Agree	36.56%
Slight or No Impact	13.98%

Table 18 Cultural and political influences level

Over 86% of respondents believe that culture and politics significantly influence leadership practices

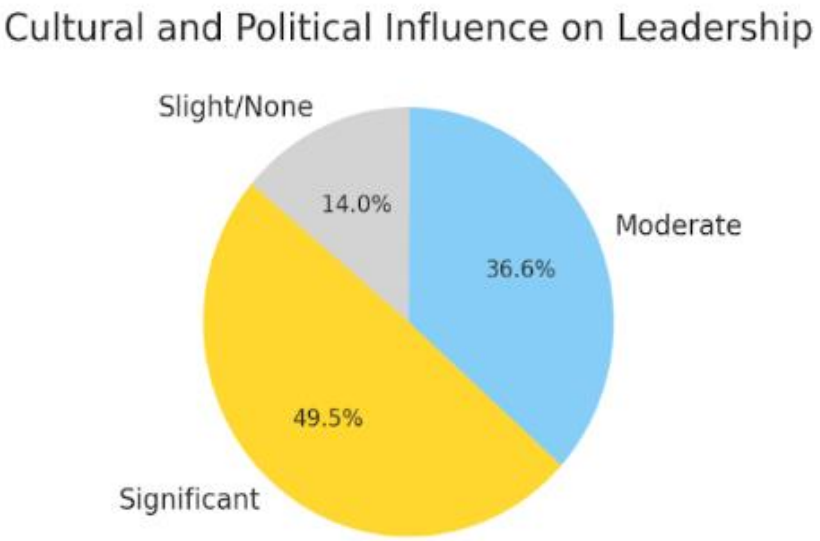

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Figure 24 Cultural and political influences on leadership

An additional **36.56%** moderately agreed, reinforcing the perception that cultural alignment and political navigation are essential leadership competencies. Only **13.98%** of respondents perceived these factors as having little or no impact, indicating that for the vast majority, cultural norms and political context are not peripheral, but central to how construction projects are led and implemented. This analysis highlights the importance of culturally intelligent and politically astute leadership in achieving sustainable and inclusive development within the sector.

This underscores the need for leaders to be politically savvy and culturally adaptive to maintain legitimacy and effectiveness in a context-sensitive environment.

The analysis of methods for handling leadership skill gaps in the Ethiopian construction sector reveals a strong preference for internal capacity-building approaches. **Training existing staff** emerged as the most favored strategy, cited by **41.9%**of respondents. This suggests recognition of the value in developing current personnel who are already familiar with organizational culture and project contexts. **Mentorship programs**, chosen by **28%**, also reflect a long-term,

knowledge-sharing approach that builds leadership from within, indicating that firms are investing in sustainable leadership pipelines. By contrast, only **19.4%** of respondents prefer **hiring external experts**, implying either cost constraints or a belief that external hires may lack contextual understanding. The remaining **10.8%**, who selected "other" methods like restructuring, suggest there is still experimentation or uncertainty around how best to address skill gaps. Overall, the data indicates a strategic leaning toward **developing in-house leadership** over outsourcing solutions.

Method	Percentage
Training Existing Staff	41.90%
Mentorship Programs	28.00%
Hiring External Experts	19.40%
Other (e.g. restructuring)	10.80%

Table 19 Methods to handle leadership skill gaps

Figure 25 Percentage to handle leadership skill gaps

Organizations tend to prioritize **internal development** (via training and mentorship) over **external hiring**. While this is cost-effective and builds institutional knowledge, it must be balanced with fresh external expertise to introduce innovation and global best practices.

Major challenges in the Ethiopian construction sector include training gaps, insufficient resources, and resistance to organizational change. Opportunities for effective leadership are closely linked to the adoption of new technologies, policy reforms, and strengthened capacity-building initiatives. However, there is often a misalignment between leadership objectives and broader organizational strategies. Furthermore, cultural and political dynamics play a significant role in shaping leadership behaviors and influencing strategic decision-making.

5.5 Challenges and Opportunities

The table below summarizes the main leadership challenges and opportunities identified in the Ethiopian construction sector. The challenges include training gaps, limited resources, resistance to change, partial awareness of sustainability practices, and weak collaboration among stakeholders. Each challenge corresponds to specific opportunities for leadership improvement, such as implementing mentorship programs, adopting new technologies, reforming policies,

embedding sustainability practices, and strengthening partnerships with government bodies, contractors, and communities. The table provides a clear snapshot of areas where leadership can be developed to improve project outcomes and support sustainable construction practices.

Category	Observed Challenges	Leadership Opportunities
Training & Capacity	Training gaps; limited skill-building	Mentorship programs; capacity-building initiatives
Resources	Inadequate tools and technology	Technology adoption; resource optimization
Change Management	Resistance to new processes	Policy reform; participative leadership
Sustainability	Partial awareness; limited green practices	Embed sustainability in leadership; climate resilience projects
Stakeholder Collaboration	Weak coordination with government and communities	Strengthen partnerships and consensus-building

Table 20 Summary of observed challenges Vs leadership opportunities

The analysis of Table above indicates that while leaders face significant challenges, there are concrete opportunities to enhance effectiveness. Addressing training gaps and resource limitations through targeted capacity-building programs can strengthen workforce capabilities. Promoting participative leadership and policy reform can reduce resistance to change and improve stakeholder collaboration. Moreover, embedding sustainability into leadership practices ensures that projects are environmentally responsible and socially inclusive. Overall, the table highlights that focused leadership interventions can transform challenges into opportunities, enabling more effective, resilient, and sustainable construction outcomes in Ethiopia

5.6 Summary

Chapter Five shows that leadership performance in Ethiopia's construction sector is constrained primarily by resource shortages **(30.11%)**, limited training **(26.88%)**, and resistance to change **(23.66%)**, with additional systemic issues **(19.35%).** Strategic direction is inconsistent—only **43%** report leadership goals are "always/often" aligned with organizational goals—undercutting efficiency and morale. At the same time, clear levers for improvement emerge: technology adoption **(30.11%)**, policy/structural reform **(27.96%)**, and capacity-building **(25.80%)**. Leadership effectiveness is also shaped by context; **over 86%** of respondents confirm that cultural and political factors significantly influence decisions and outcomes. To close skill gaps, organizations favor internal development—training **(41.9%)** and mentorship **(28%)**—over external hires. Overall, the evidence points to a practical leadership agenda: invest in people, digitize core processes, reform governance, and lead with cultural intelligence—converting today's constraints into more aligned, accountable, and sustainable project delivery.

CHAPTER SIX- SUMMARY OF FINDINGS AND RECOMMENDATION

6.0 Overview

This chapter presents a comprehensive summary of the findings derived from both the survey and case study analyses conducted on leadership practices in the Ethiopian construction sector. The purpose of this chapter is to provide detailed insight into the competencies, challenges, and opportunities for leaders operating within a sector that is characterized by rapid urbanization, extensive infrastructure expansion, regulatory complexity, and increasing demands for sustainable practices. By integrating quantitative survey data with qualitative observations from case studies, this chapter offers a nuanced understanding of leadership effectiveness and its broader impact on sustainable construction outcomes across the country.

Leadership in the construction sector is increasingly recognized as pivotal not only for ensuring project completion but also for fostering long term sustainability, workforce efficiency, and stakeholder trust. Ethiopia's construction sector presents a unique context for examining leadership due to a combination of infrastructural deficits, regulatory ambiguities, skill shortages, and environmental pressures. These contextual factors heavily shape how leadership is enacted, perceived, and evaluated within organizations. Leaders are not only required to ensure that projects are delivered on time and within budget but also to navigate complex social, cultural, and environmental challenges that influence the long-term viability and sustainability of construction projects.

The survey sample predominantly consisted of highly experienced professionals. Approximately 75% of respondents reported having more than 16 years of experience in the sector, while about 13% had between 0 and 5 years of experience, and around 3% reported 11 to 15 years of industry experience. This composition indicates a respondent base with considerable expertise and deep institutional knowledge, offering perspectives grounded in decades of practical exposure. The presence of such an experienced group provides the survey with a strong foundation for identifying embedded trends in leadership practices, recognizing recurring challenges, and highlighting areas of both success and improvement. At the same time, the relatively smaller proportion of mid and early career respondents emphasizes the need for succession planning and

mentorship to ensure that the next generation of leaders is adequately prepared to meet evolving sector demands.

6.1 Core Leadership Competencies

The analysis of survey data identified five primary leadership competencies that are particularly significant in the Ethiopian construction context. These competencies represent both the practical and strategic capacities that leaders must possess to ensure successful project delivery and sustainable development outcomes.

6.1.1 Communication (21.65%)

Communication emerged as the most frequently cited competency among respondents, highlighting its fundamental role in leadership effectiveness. Leaders who can clearly articulate vision, project objectives, operational expectations, and strategic priorities are highly valued in the Ethiopian construction sector. Construction projects often involve diverse teams, including engineers, contractors, consultants, laborers, and administrative staff with varying skill levels and professional backgrounds. Effective communication ensures proper coordination, reduces misunderstandings, and fosters collaboration across different functional and hierarchical levels.

Case studies illustrated that leaders who maintain transparent and consistent communication channels are more successful in achieving project milestones, resolving conflicts, and aligning team efforts with organizational goals. Importantly, communication is not limited to the mere transfer of information; it encompasses listening, providing feedback, and adapting messages to suit different audiences. In addition, strong communication skills underpin trust-building, which is crucial in a sector where informal relationships and personal networks often drive project success. Leaders who communicate effectively are better able to motivate their teams, negotiate with stakeholders, and maintain cohesion, particularly when projects face uncertainties or pressures from regulatory and environmental constraints.

6.1.2 Motivation and Mentoring (21.13%)

Closely aligned with communication, the ability to motivate and mentor staff emerged as another critical leadership competency. Workforce shortages, high turnover rates, and skill gaps are recurring challenges in the Ethiopian construction sector. Leaders who actively invest in mentoring programs, provide professional guidance, and recognize employee contributions can significantly enhance productivity, employee satisfaction, and organizational loyalty.

The survey demonstrated the tangible impact of transformational leadership practices, where mentorship and motivational strategies led to higher levels of engagement and improved team performance. Employees who felt supported and valued by their leaders exhibited greater commitment, efficiency, and resilience in the face of project challenges. These findings underscore the importance of integrating human capital development into leadership practice, emphasizing that effective leaders are those who balance operational oversight with active nurturing of team capabilities. By doing so, leaders ensure both immediate project success and the long-term sustainability of the workforce.

6.1.3 Risk Management and Crisis Handling (20.62%)

Risk management and crisis handling were cited as equally important competencies by survey respondents. Construction is inherently a high-risk industry, subject to uncertainties ranging from financial constraints and supply chain disruptions to labor disputes and technical setbacks. Leaders who are capable of anticipating risks, developing mitigation strategies, and responding promptly to crises are highly valued across organizations.

Survey and case study findings indicate that effective risk management extends beyond technical problem solving. It requires strategic decision-making, prudent resource allocation, and rapid adaptation to unforeseen events. Leaders who exhibit resilience, foresight, and adaptability contribute significantly to project stability and stakeholder confidence. Crisis handling, as an extension of risk management, highlights the need for leaders to perform decisively under pressure, maintaining composure while navigating challenges that could compromise project success. Ethiopian construction leaders who develop strong competencies in risk assessment and

crisis response are better positioned to safeguard both project outcomes and organizational reputation.

6.1.4 Other Competencies (20.10%)

Beyond the core competencies identified above, respondents emphasized the importance of emotional intelligence, ethical decision-making, adaptability, and visionary thinking. These competencies are especially relevant in the Ethiopian context, where projects frequently involve complex cultural, social, and environmental dynamics. Leaders with high emotional intelligence are able to navigate interpersonal relationships, manage conflicts, and foster team cohesion effectively. Ethical decision-making ensures compliance with regulatory standards, builds public trust, and reinforces professional credibility. Adaptability enables leaders to respond effectively to evolving project conditions, while visionary thinking allows them to align day-to-day operational activities with broader strategic and sustainability goals. Collectively, these competencies help leaders guide organizations through both immediate project challenges and long-term sectoral transformations.

6.1.5 Analytics (0.52%)

Interestingly, analytical competencies received the lowest score among respondents. This suggests that data-driven decision-making remains underutilized in the Ethiopian construction sector. Many leaders rely on experiential knowledge and intuition rather than formal metrics, analytics, or project management software. This finding points to a significant opportunity to integrate technological tools, performance dashboards, and predictive analytics to enhance project efficiency, accountability, and strategic planning. The low emphasis on analytics may reflect limitations in access to technology, insufficient training, or cultural reliance on traditional methods, highlighting an area for future leadership development initiatives.

6.2 Leadership Challenges and Observations

6.2.1 Regulatory and Infrastructure Deficits

Survey responses and case studies repeatedly highlighted regulatory and infrastructure limitations as key challenges for construction leadership. Leaders often face difficulties complying with government regulations due to inconsistent policies, bureaucratic hurdles, and limited infrastructural support. Some organizations have adapted internal policies to align with existing standards, but systemic inefficiencies remain a significant barrier to effective project delivery. Leaders who can strategically navigate these constraints while maintaining operational efficiency are particularly valuable, as they enable organizations to continue functioning despite structural and regulatory gaps.

6.2.2 Stakeholder Collaboration

Effective stakeholder collaboration emerged as another critical challenge. Construction projects require coordinated effort among contractors, consultants, government agencies, local communities, and investors. Leaders who can build trust, facilitate consensus, and engage multiple actors effectively are more likely to achieve project objectives. Case studies demonstrated that participative and inclusive leadership styles enhance stakeholder engagement, ensuring that diverse perspectives are considered and that social and environmental considerations are integrated into project planning and execution.

6.2.3 Sustainability Awareness

Although sustainability is widely recognized as essential, it remains insufficiently embedded in leadership practice. Survey responses revealed gaps in training, awareness, and enforcement of green building practices and climate resilience strategies. Leaders often prioritize project completion and financial performance over long-term environmental and social outcomes. However, organizations that incorporate sustainability objectives into leadership practices tend to achieve higher project quality, greater community acceptance, and improved environmental performance. Integrating sustainability into leadership decision-making is therefore a critical step

toward aligning Ethiopian construction practices with national development goals and international standards.

6.3 Overall Trends and Implications

The Ethiopian construction sector is at a strategic inflection point. Rapid urbanization and infrastructure growth offer significant opportunities but also impose complex demands on leadership. While the sector benefits from a predominance of highly experienced professionals, this reliance on long-standing expertise presents challenges for change management, innovation adoption, and modernization of practices. Leadership is evolving from traditional command and control models to approaches that emphasize communication, empowerment, resilience, and sustainability.

Survey findings point to several key areas for strengthening leadership effectiveness:

- Prioritizing communication and mentoring: Ensuring alignment, engagement, and development of human capital.
- Building capacity for risk and crisis management: Enabling leaders to navigate sector uncertainties and safeguard project outcomes.
- Encouraging sustainable practices and inclusive leadership: Aligning project objectives with environmental and social goals.
- Investing in data-driven decision-making and stakeholder collaboration: Improving efficiency, accountability, and innovation.

Implementing these strategies requires targeted interventions, such as leadership training programs, mentorship initiatives, policy reforms, and adoption of modern technological tools. Organizations that embrace these measures are better positioned to deliver projects that are both successful and socially responsible.

6.4 Sectorial Insights

A comparative analysis of case studies provides further insight into sectorial leadership trends. Mid-sized firms, exemplify transformational and participative leadership that promotes innovation, employee engagement, and integrated sustainability. Small entrepreneurial firms, such as Addis Urban Builders, show flexibility and rapid decision-making but struggle with scalability and consistency. Large hierarchical organizations, maintain compliance and formal sustainability initiatives but often lack employee participation and innovation. These patterns suggest that effective leadership requires balancing formal structures with participatory, adaptive practices to achieve optimal project and sustainability outcomes.

6.5 Recommendations

Based on the findings from this dissertation on effective leadership strategies for sustainable development in the Ethiopian construction sector, several actionable recommendations are made for industry stakeholders:

To Promote Transformational and Servant Leadership Styles, construction firms should cultivate transformational leadership by empowering leaders to inspire and motivate their teams by incorporating current digital and technological leadership styles. Training programs should integrate elements of servant leadership, focusing on the needs of team members and fostering an inclusive environment.

Regarding leadership Training and Development Programs, investing in targeted leadership development programs specifically designed for the construction sector is comprehensively essential. These programs should emphasize collaboration, communication, and adaptive leadership techniques, enabling leaders to effectively manage diverse teams and navigate the complexities of construction projects.

Fostering a Culture of Sustainability integrate sustainability principles into the core values of organizations. Leadership should actively promote sustainability initiatives and align project

goals with local and global sustainability standards, such as the United Nations Sustainable Development Goals (SDGs).

Encouraging Stakeholder Engagement build strong relationships with stakeholders, including clients, government agencies, construction associations, local community machinery suppliers and rentals, construction material manufactures and other industry participants. Foster transparent communication and collaborative decision-making processes that include diverse perspectives and expertise, ensuring that the broader community is involved in sustainability efforts.

Addressing Barriers to Effective Leadership identify and mitigate common challenges faced by leaders, such as limited resources, lack of training on sustainability practices, and resistance to change. Establish frameworks that provide support to leaders while encouraging innovative solutions to overcome these obstacles.

Leverage Technology and Innovation to encourage the adoption of digital technologies and innovative practices, such as Building Information Modeling (BIM) and green construction technologies. Training programs should include technology driven leadership strategies that can significantly enhance project efficiency and sustainability.

On Monitor and Evaluate Leadership Impact, establishing metrics to assess the effectiveness of leadership styles on project outcomes, particularly in relation to sustainability goals. Continuous evaluation and feedback mechanisms can help leaders refine their strategies and improve overall performance. In the context of creating policy support, it is essential to influence policymakers to develop regulations that foster effective leadership practices and sustainability within the construction sector. This involves advocating for legislation that promotes sustainable development in construction, thereby establishing a more conducive environment for leaders to operate effectively.

Drawing upon the researcher's extensive professional experience and active engagement within Ethiopia's construction industry—particularly through collaborations with the Federal Ministry of Urban and Infrastructure, the Ethiopian Construction Authority (ECA), the Ethiopian Construction Management Institute (ECMI), various stakeholders, and other relevant

governmental bodies, this study reflects a deep understanding of the sector's practical challenges. Insights were gathered through participation in numerous meetings, seminars, symposiums, and conferences addressing these challenges and their potential solutions. Accordingly, the following recommendations are presented to demonstrate not only an informed awareness of the prevailing issues but also a thorough understanding of the existing laws, regulations, codes, and standards governing the industry. These recommendations aim to establish a comprehensive framework for addressing systemic constraints and advancing sustainable improvement within Ethiopia's construction sector.

This dissertation also suggests the following consolidated recommendations aimed at enhancing the performance of leadership and sustainability of the Ethiopian construction sector by addressing identified strengths, weaknesses, opportunities, and threats:

On Human Resources Development, Implementing Continuous Professional Development (CPD) programs and link Competence Certification (CARS) with procurement eligibility. Engage the diaspora for knowledge transfer to retain skilled professionals and mitigate brain drain.

In the context of organizational improvement within the construction industry, it is essential to establish a Construction Industry Council that operates independently of governmental administrative influence. This council would aim to streamline industry operations, enhance inter-agency coordination, and improve performance metrics. By benchmarking against successful international models, the council could elevate the organizational maturity of the industry. Furthermore, it is crucial to adopt strategies that mitigate the impact of regional, ethnic, religious, and linguistic biases, ensuring a politically neutral environment in the construction sector. This approach will facilitate more effective collaboration and foster a more inclusive and equitable industry landscape.

On Systems and Process Reforms, pilot new procurement models to improve efficiency and reduce project approval timelines. Transition to digital project management systems to modernize outdated practices and implement one door services to all related activities.

On Cultural and Technological Advancement, launch pilot projects for digital tools such as Building Information Modeling (BIM) to drive technology adoption. Provide support for small and medium enterprises (SMEs) to enhance digital transformation and to elevate their leadership capacity and efforts as well. Applying Supply Chain Strengthening system to promote local input strategies to reduce import dependence and enhance self-sufficiency. Facilitate regional trade leveraging the African Continental Free Trade Area (AfCFTA).

Regarding Sustainability Initiatives, leverage green finance opportunities and engage in programs promoting sustainable construction practices. Raise awareness among SMEs regarding low-carbon materials and sustainable practices.

vis-à-vis Economic Strategy, mobilizing and organizing private sector investment through Public-Private Partnerships (PPP) to enhance funding. Establish development bank credit lines specifically for construction projects, avoiding hassles and bad autocratic approach of financial institutions, overstated bank interest and insurance bond payments and in parallel will help to avid financial scarcity, annoyances and challenges of productive leadership.

On regulatory framework enhancement, advancing the update of building codes and procurement laws to address outdated practices.

About Introducing Key Performance Indicators (KPIs), modernizing procurement processes to ensure accountability. This progressive idea will also promote insignificant leadership implementation in procurement development.

On Competitive Positioning strategy, based on strategic leadership encouraging joint ventures and subcontracting to improve local SME competitiveness against foreign firms is a progressive idea.

The implementation of programs designed to enhance the leadership and economical capacity of local contractors, local construction input manufacturers, suppliers of construction materials and construction machinery rental and suppliers is a crucial and proactive measure for Ethiopia's construction industry development.

This dissertation concludes that the construction industry necessitates fundamental reforms across legal frameworks, regulatory environments, operational standards, and management practices. The current legal landscape is fraught with outdated and inconsistent regulations that hinder innovation, impede project delivery, and foster disputes among stakeholders. To overcome these challenges, a comprehensive overhaul of the legal structure is imperative. This reform should include updating existing codes and standards to align with modern practices and sustainability goals, as well as developing new regulations that address emerging trends such as digital construction methodologies and green building practices.

Furthermore, the engagement of diverse stakeholders like, contractors, architects, engineers, and the public is fundamental to create inclusive frameworks that reflect the varied needs of the industry. To support these reforms, the establishment of construction industry council which is free from governmental interference and which should be directed by industry professionals from the ministry through all levels of stakeholder hierarchies is vibrant.

Effective governance will enhance accountability and ensure compliance with established practices. A clearly defined hierarchy with vigorous leadership awareness will facilitate improved decision-making, resource allocation, and collaboration between government and private sectors, ultimately leading to smoother implementation of projects and enhanced overall efficiency in the construction industry.

In summary, embracing radical changes and professional governance, along with a focus on digital transformation, is essential for the construction industry to thrive and adapt in an increasingly complex and competitive environment.

After all the above suggesting recommendation Global Trade Integration is very important to enhance regional sourcing, to transfer knowledge, technology, modern leadership and compliance with global trade norms to improve market integration. Also develop strategies to mitigate supply chain disruptions due to geopolitical factors.

These supportive recommendations are proposed to create a more vigorous, competitive, and sustainable construction sector in Ethiopia, ultimately contributing to national economic development and infrastructure improvement.

6.6 Conclusion

In conclusion, it is imperative that the traditional behaviors of construction project managers undergo significant transformation to address the numerous challenges currently confronting the construction industry. These behaviors, often shaped by long-standing practices and inherent factors specific to the sector, can hinder progress and adaptability in an evolving environment.

The findings of this chapter underscore that effective leadership in Ethiopian construction is multidimensional. Competencies such as communication, mentoring, risk management, ethical decision-making, and sustainability awareness are critical to project success**.** The construction sector in Ethiopia is poised for transformative change, largely propelled by effective leadership that emphasizes sustainable development. This dissertation has illuminated the critical role of various leadership styles especially transformational, servant, adaptive, digital and sustainable leadership strategies as integral to advancing sustainability in the Ethiopian construction industry. Despite the rapid growth and economic importance of the construction sector in Ethiopia, challenges persist in effectively integrating sustainability principles into practice. By examining the prevailing leadership dynamics, this study reveals that effective leadership is essential for addressing these challenges and aligning construction practices with environmental, social, and economic sustainability goals. The findings of this research point to several key conclusions:

1. Current Leadership Practices: The dissertation highlights that while there are varied leadership styles in use within Ethiopian construction sector, there is a notable deficiency in the adoption of leadership approaches that prioritize sustainability. Traditional, transactional leadership styles dominate, focusing on project delivery without sufficient regard for long-term sustainability outcomes.

2. Impact of Leadership on Sustainability: Effective leadership directly affects project performance and sustainability integration. Leadership styles characterized by

transformational and servant attributes contribute significantly to fostering an organizational culture that prioritizes collaborative efforts and innovative approaches to sustainability challenges.

3. Challenges and Barriers: The study identifies various barriers hindering effective leadership and the integration of sustainability practices in the construction sector. These include inadequate training, cultural reluctance, resource constraints, and limited policy frameworks. Acknowledging these challenges is crucial for developing effective strategies to overcome them.

4. Actionable Insights for Stakeholders: The contribution of this research lies not only in elucidating the leadership sustainability nexus but also in providing practical recommendations for industry professionals and policymakers. By focusing on leadership development, fostering a sustainability culture, and addressing systemic barriers, stakeholders can facilitate a transformative shift towards sustainable construction practices in Ethiopia.

5. This dissertation will argue that fundamental changes are necessary across various dimensions legal frameworks, regulatory environments, operational standards, and management practices particularly emphasizing the urgent need for professional governance and digital transformation. All the above comments will be implemented if and only if effective leadership radical operation is applied in the industry as whole.

   Stakeholders should prioritize the establishment of a dedicated leadership department that is progressive, developmental, and adaptive to emerging systems and technologies. Such a department would serve not only as an administrative unit but also as a center for cultivating effective leadership practices across the organization. By integrating structured leadership education and continuous training sessions, seminars, workshops and through capacity building programs, the department can exponentially empower workers to grow both professionally and personally, while also fostering a culture of collaboration and innovation.

In addition, leadership development must not remain confined within organizational boundaries. The skills and values nurtured internally should be aligned with broader environmental and societal needs, ensuring that leadership practices contribute to sustainable outcomes. In this way, the leadership department becomes a bridge, linking individual growth, organizational effectiveness, and environmental stewardship, while positioning leadership as a driver of long-term sustainability in the construction sector. Moreover, the construction regulatory body and stockholders shall take a paramount leadership experience from domestic and international projects practical case studies as knowledge transfer.

Furthermore, the future of the Ethiopian construction sector hinges on embracing effective leadership strategies that can harmonize project goals with the pillars of sustainability. As leaders adapt and evolve in response to the complexities of their environments, they must commit to fostering sustainable practices that align with global standards while addressing local challenges. This study serves as a foundation for ongoing discourse and future research aimed at enhancing leadership effectiveness and promoting sustainable development in Ethiopia's construction industry.

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APPENDICES

APPENDIX A: QUESTIONNAIRES

Survey Questionnaire

1. What is your gender?

- Male
- Female

2. What is your current job title?

- Project Manager
- Engineer
- Consultant
- Other

3. Years of experience in construction sector?

- 0-5
- 6-10
- 11-15
- 16+

Section A: Information on Leadership Styles throughout construction organizations in Ethiopia (select all that apply)

4. How would you define effective leadership in the construction industry?

- Strong decision-making
- Effective communication
- Problem-solving skills
- Adaptability to change
- All

5. Which of the following leadership qualities are actively demonstrated in your construction firm?

- Clear and effective communication
- Problem-solving and adaptability
- Ability to motivate and mentor teams
- Risk management and proactive crisis handling
- Other

6. Can you identify specific areas where effective leadership has positively impacted your firm or Ethiopian construction sector?

- Project efficiency and timely completion

- Improved team collaboration
- Increased client satisfaction and stakeholder trust
- Innovation and adoption of new technologies
- other

7. Does your organization have a dedicated leadership department?

- Yes
- No
- I'm not aware

8. How effectively do construction leaders in your organization communicate project goals, timelines, and responsibilities?

- Very effectively
- Somewhat effectively
- Neutral
- Ineffectively
- Very ineffectively

9. To what extent does leadership in your organization integrate strategic planning into construction project execution?

- Always integrates strategic planning
- Often
- Sometimes
- Rarely
- Never

10. How well do leaders in your organization ensure efficient resource allocation (labor, materials, and equipment) for project success?

- Very well
- Somewhat well
- Neutral
- Poorly
- Very poorly

11. Which of the following leadership qualities do you observe most in your construction firm? (Select all that apply)

- Embraces new strategies
- Fosters innovation
- Encourages collaboration
- Empowers employees

12. How would you describe the leadership approach in your organization regarding problem-solving?

- Responding to problems after they happen

- Taking action before problems arise
- Mixed
- Others

13. To what extent do you agree that effective leadership directly impacts project success?

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

14. What is the level of transparency in leadership within your organization?

- Very low
- Low
- Moderate
- High
- Very High

15. How important is leadership in improving employee engagement and retention?

- Very important
- Important
- Moderately Important
- Slightly Important
- Not Important

16. Do you think collaboration with stakeholders improves construction outcomes.

- Yes
- No
- Sometimes

17. How often are leadership decisions influenced by external factors such as regulations or market conditions?

- Never
- Rarely
- Sometimes
- Often
- Always

18. What role do stakeholders play in supporting leadership effectiveness in your organization or in Ethiopian construction sector?

- Not important
- Slightly important
- Moderately important

- Very important

19. How often are leadership decisions influenced by stakeholders?

- Never
- Occasionally
- Sometimes
- Often
- Always

20. How can leaders encourage learning and improvement in the construction sectors ?

- Offering training programs
- Encouraging teamwork and mentorship
- Using feedback to improve work
- Investing in new tools and technology
- Allowing employees to share ideas and solve problems

Section B: Information on Sustainable Practices in Ethiopian construction Firms (select all that apply)

21.What is sustainability in construction?

- Reducing costs
- Eco-friendly materials and waste reduction
- Best performance project completion
- Sustaining the construction company

22. What key leadership qualities are essential for sustaining construction firms?

- Communication
- Decision-making
- Cultural awareness
- Strategic planning

23. How effectively does leadership support sustainability in construction projects?

- Reduces environmental harm and ensures long-term benefits
- Decrease project complexity
- Reduce overall project expenses
- Reduce project completion time
- Improve quality and performance

24. How does leadership impact environmental sustainability in Ethiopian construction?

- Strongly drives sustainability
- Plays a moderate role.
- Has minimal impact
- No connection at all
- Not sure

25. What role does leadership play in ensuring social sustainability in the construction sector?

- Promotes safety and inclusivity
- Engages communities for long-term benefits
- Supports employee well-being and growth
- Other

26. To what extent do you agree that sustainable practices contribute to long-term project success?

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

27. What challenges do you face in implementing sustainable practices in your firm?

- financial and time constraints
- Lack of construction industry awareness
- internal and external challenges
- Instability of local and global market
- Other:

28. How would you rate the importance of sustainable leadership for the future of Ethiopia's construction sector?

- Not important
- lightly important
- Moderately important
- Very important

29. How would you rate the effectiveness of leadership training programs in your organization?

- Very poor
- Poor
- Average
- Good
- Excellent

30. What role do you think leadership plays in driving sustainability initiatives in your firm?

- Minor
- Moderate
- Major
- Critical

Section C: Questions on leadership Challenges and Opportunities (select all that apply)

31. What are the biggest leadership challenges in your organization?

- High rate of employee instability
- Lack of leadership knowledge and practices
- Resistance to change
- Limited resources

32. How often do leaders face challenges in aligning team goals with organizational objectives?

- Never
- Rarely
- Sometimes
- Often
- Always

33. How do leaders in Ethiopian construction firms tackle local challenges like regulations and infrastructure deficits?

- Adapt policies to meet regulations
- Strengthen stakeholder collaboration
- Invest in new technologies
- Improve infrastructure planning
- Struggle to address these challenges

34.Are there sufficient platforms for leaders to share knowledge and experiences?

- Yes
- No
- Occasionally

35. What role does cultural understanding and community engagement play in effective leadership?

- Very Significant
- Significant
- Moderate
- Not at All

36. How would you rate the level of innovation in your organization?

- Very low
- Low
- Moderate
- High
- Very High

37. How does political stability impact leadership strategies in your organization?

- Not at all
- Slightly
- Moderately

- Significantly

38. Does the current education system adequately prepare leaders for the construction sector?

- Yes
- No
- Partially

39. How does your organization address leadership skill gaps?

- Training
- Mentorship
- External hiring
- others

40. How do you measure leadership effectiveness in your organization?

- Project outcomes
- Team Satisfaction
- Client Feedback
- Others

41. How often does leadership failure lead to project delays or cost overruns in your organization?

- Never
- Rarely
- Sometimes
- Often
- Always

42. Do leaders in your organization regularly evaluate their strategies?

- Never
- Rarely
- Sometimes
- Often
- Always

43. Does leadership development have a direct impact on sustaining the construction firms?

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

44. How often are leadership initiatives aligned with national sustainability goals?

- Never
- Rarely
- Sometimes
- Often
- Always