ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF QUALITY AND PRODUCTIVITY MANAGEMENT

THE EFFECT OF ORGANIZATIONAL CULTURE ON THE QUALITY OF CONSTRUCTION PROJECTS: THE CASE OF ELMI OLINDO CONTRACTORS P.L.C., ADDIS ABABA.

BY

GIRUM TESFA HAILEMICHAEL

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Addis Ababa ,Ethiopia

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External Examiner	Signature	Date
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Internal Examiner	Signature	Date
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Principal Advisor	Signature	Date

Jun,2025

Addis Ababa ,Ethiopia

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of **(_____)** All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Name Girum Tesfa Hailemichael

Signature

ST. MARY'S UNIVERSITY, ADDIS ABABA JULY ,2025

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Abdu Abagibe (PhD)

Advisor Signature

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Contents

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ACRONYMS

Acronym	Full Form
EO	Elmi Olindo
OC	Organizational culture
QCP	Quality of construction projects
QC	Quality control
HRM	Human Resource Management
VIF	Variance Inflation Factor

LIST OF TABLES

LIST OF FIGURES

Abstract

This study investigates the effect of Organizational culture on the Quality of construction projects, focusing on four key dimensions: leadership, communication, training and human resource development, and shared organizational values and norms. The research centers on Elmi Olido contractors P.L.C., recognizing the vital role of construction quality in ensuring project success and client satisfaction. A quantitative research aproach was employed, using structured questionnaires to collect data from 157 engineering and administrative staff, randomly selected from a total population of 258. Data were analyzed using SPSS version 26 through descriptive statistics, correlation, and multiple regression analysis.

The results show that most of organizational culture components have a significant and positive influence on construction quality. Effective leadership enhances motivation and accountability; clear communication reduces errors and improves coordination; and continuous training strengthens technical skills and adaptability. The study concludes that a strong organizational culture secured in human centered practices is essential for delivering high quality construction products. It recommends strengthening leadership capabilities, encouraging open and transparent communication, and cultivating a learning oriented workplace to boost performance and competitiveness in the construction sector.

Keywords: *Organizational Culture, Construction Quality, Leadership, Communication, Training and human resource development, Shared organizational value and Norms*

CHAPTER ONE

1. Introduction

This chapter deals with a brief background to the study, which leads to an introduction to organizational culture and quality specifically in construction industries, briefly describes the statement of the problem of the study, the objective of the study, significance of the study, scope of the study, basic assumptions of the study, definition of significant terms regarding organizational culture, and organization of the survey then be presented.

1.1. Background of the Study

The construction sector plays a critical role in Ethiopia's economic transformation and infrastructure development. Over the last two decades, the Ethiopian government has prioritized the industry through strategic initiatives such as the growth and transformation plan II and the construction industry development policy. These frameworks were designed to enhance construction quality, minimize delays, and promote sustainable infrastructure by encouraging innovation and sound project management (FDRE, 2015)

Despite these efforts, the sector continues to face persistent challenges, including substandard quality time overruns, and cost inefficiencies (Yohannes, 2020). A frequently underappreciated factor contributing to these challenges is OC, the system shared organizational value and norms, leadership styles and communication patterns, training and human resource development practice that shape organizational behavior (Schein, 2016). While much attention has been given to technical capacity and financial resources, soft elements such as leadership effectiveness and communication practices significantly influence the project outcomes (Gunderson, 2014).

Ethiopia's building proclamation mandates that contractors and consultants adhere to professional and quality standards (FDRE., 2017). However, the regulation does not explicitly address internal organizational dynamics such as leadership, communication, human development and training, that influence actual implementation of these standards. This regulatory gap is especially evident in private sector firms, where leadership and organizational practices vary widely and have pronounced effect on project performance (Worku, 2009).

This study focusses on EO, a leading private construction firm based in Addis Ababa Ethiopia. Although, the company has strong reputation for successfully executing complex projects recent

internal assessment by management and my personal observations suggest that inconsistencies in project quality may be liked to OC. Understanding how cultural elements influence project quality will help to align internal practice with organization's goal with in the frameworks. This study aims to asses the effect of OC on the QCP within EO. The findings are intended to guide companies' leadership and relevant stakeholders by providing practical insights that can enhance organizational effectiveness and contribute to the broader development of EO's performance.

1.2. The Statement of the Problem

The construction industry is a major contributor to economic growth and development globally. However, the sector faces determined challenges such as delays, cost variances, poor quality. While external issues like inflation and bureaucracy contribute internal organizational factors particularly OC play a critical but often overlooked role (Esayas, 2020).

OC is shared values and practices within an organization (Schein, 2016) influences leadership, communication, and employee performance, all of which impact construction quality (Cameron, 2011). At EO, internal observations reveal gaps in leadership, interdepartmental coordination, and staff development, which may be affecting project outcomes. Although some studies, (Meseret, 2017), have explored organizational culture in Ethiopia's public sector, little empirical work has linked it to construction quality in the private sector.

Therefore, this study aims to fill the gap by investigating how leadership, communication, training and human resource development, and shared organizational values and norms influence the QCP at EO, offering insights for the organizational improvement.

1.3. Research Questions

Based on the gaps identified in the problem statement, the following research questions have been formulated to guide the study and achieve its objectives:

- How did leadership within EO influence the quality of its construction projects?
- In what ways did communication affect the quality of construction projects at EO?
- How did training and human development initiatives contribute to the quality of construction projects in EO?
- What did shared organizational values and norms influence on the quality of construction projects at EO?

1.4. Research Objectives

1.4.1. General Objective

The general objective of this study is to examine the effect of organizational culture on the quality of construction projects, using EO as a case study.

1.4.2. Specific Objectives

- To investigate the impact of Leadership on the quality of construction projects: the case of EO.
- To evaluate the effect of Communication on the quality of construction projects: the case of EO.
- To identify the contribution of Training and human development on the quality of construction projects: the case of EO.
- To examine the influence of shared organizational values and norms on the quality of construction projects: the case of EO.

1.5. Significance of the Study

This study highlights the critical role of OC specifically leadership, communication, shared organizational values and norms, and training and human resource development in shaping QCP. By focusing on EO, it offers practical insights for enhancing project performance and operational efficiency. The findings are particularly valuable to the strengthen quality standards and overall organizational effectiveness.

1.6. The Scope of the Study

This study was limited to the construction project s undertaken by EO, focusing specifically on ongoing and active projects. It examines how the company's OC influence the overall QCP. The research employs a quantitative approach, incorporating a review of relevant literature and survey data collected from company's Engineering and administrative staff. The study uses leadership, communication, training and human resource development, and shared organizational values and norms as a key indicator of OC to assess the effect of OC on the QCP, with all data and analysis confined to EO.

1.7. Limitations of the Study

This study was limited to EO only, which constraints the generalizability of its influence to other construction firms or broader contexts. Additionally, time and budget limitations affected the depth of the data collection. The open-ended questionnaire was distributed, but not returned, further limiting the richness of qualitative insights. The research focused on selected dimensions of OC, while other potentially influential factors were not examined. Despite the limitations, the study offers meaningful insights for practical application and future research in EO.

1.8. Definition of Basic Terms

To ensure the clarity and consistency throughout the thesis, the following key terms are defined as the are used in the context of the study.

Organizational Culture: The shared values, beliefs, norms, and practices that shape the behavior and thinking of individuals within an organization (Schein, 2016). It influences how decisions are made, how employees interact, and how work is performed.

Leadership: The ability of individuals, especially those in management positions, to influence and guide employees toward achieving organizational goals. In this study, leadership refers to how managerial attitudes and behaviors affect construction project outcomes (Northouse, 2018).

Communication: The process of exchanging information between individuals or groups within the organization. Effective communication involves clarity, consistency, and openness across all levels of the construction project (Robbins & Judge, 2019).

Training and Human Development: Structured programs and activities aimed at improving employees' knowledge, skills, and competencies. In the construction context, it refers to efforts that enhance technical expertise, safety awareness, and quality assurance skills (Armstrong, 2020).

Shared Values and Norms: Common principles and behavioral expectations embraced by the majority of members within an organization. These values influence decision-making, accountability, teamwork, and the overall project culture (Deal & Kennedy, 2000).

1.9. Organization of the Study

This study is organized in to five chapters. Chapter one introduces the research by outlining the background of the study, statement of the problem, objectives, questions, significance of the study, scope of the study and organization of the study. Chapter Two reviews relevant theoretical and empirical literature on OC and QCP. Chapter Three explains the research methodology, including design, sampling, data collection and analysis procedures. Chpter Four presents and interprets the study's findings while chapter Five summarize key results, draws conclusions, provide recommendations and suggests for further studies.

CHAPTER TWO

Review of the Related Literature

2. Introduction

This chapter reviews existing literature on OC and QCP, exploring their relationship and key insights relevant to the study's objectives. It provides a comprehensive overview of theoretical and empirical findings from research conducted in Ethiopia and globally, laying the theoretical foundation and highlighting important evidence for the study.

2.1. Theoretical Frameworks

Culture is universal, but not fixed; it uniquely shapes societies. Studies worldwide have shown that cultural differences significantly affect organizational operations and performances (Meseret, 2017).

2.1.1. Organizational Culture

2.1.1.1. Concept and Definition of Organizational Culture

OC is a fundamental concept that reflects an organization's core values, guiding principles, and evolving philosophies. It encompasses the shared experiences, beliefs, and expectations that influence how individuals behave and how the organization operates as a whole. (Wallach, 1983).

Denison emphasizes that OC shapes the working style of both individuals and the organization as a whole. It reflects the enacted values and beliefs, which in turn have a significant impact on organizational performance, either positively or negatively (Denison, 2020). Similarly, Schein defines it as the shared values, ideologies, and norms that guide the behavior of organizational members (Schein, 2016)

The other scholar (Daft, 2011) identifies two key functions of OC: internal integration and consistency, fostering a unified environment, and external adaptation, enabling the organization to respond effectively to its surroundings. Expanding on this, (Nelson, 2012) proposes four additional functions: establishing identity, fostering commitment, reinforcing values, and serving as a control mechanism to shape member behavior.

The origins of organizational culture can be traced back to various elements, including organizational structure, ethical practices, ownership structures, and employee characteristics (Johnson, 2016). Additionally, (Kotter, 2012) highlights its significant impact on performance, emphasizing how a strong culture can enhance employee satisfaction and confidence in solutions, ultimately leading to improved performance.

To understand the impact of organizational culture, the study considers the four key points of organizational culture developed by (Barney, 1986). First, knowing the culture of an organization allows employees to understand both the organization's history and current methods of operation. Second, organizational culture can nurture a commitment to the organization's philosophy and values and it leads to working toward the company's common goals. Third, organizational culture with its norms and values, assists as a control mechanism to divert behaviors to the desired behavior of the organization. And finally, it is associated with greater effectiveness and productivity. Organizational culture could be a source of constant economic advantage, various practical examinations, knowledge management, organizational excellence, innovation, and performance. To achieve these, organizational culture must be valuable, occasional, and difficult to reproduce.

In conclusion, organizational culture serves as the fundamental essence of an organization, shaping how people work and aligning them with its objectives. It is a dynamic interplay of values, principles, and behaviors that guide decision-making, influence behavior, and ultimately contribute to the organization's success and sustainability.

2.1.1.2. Organizational Culture in Construction Industries

While organizational culture is widely recognized as a crucial factor in organizational performance across various industries, it has often been ignored in the construction sector. This is particularly concerning given the industry's dynamic and fragmented nature, where stakeholders frequently encounter new organizations with diverse cultural norms (Awolesi., 2019). He concluded that understanding and navigating these cultural differences is essential for construction firms to effectively manage their projects, mitigate misunderstandings and conflicts, and ultimately enhance performance, quality, and long-term success.

The construction sector plays a fundamental role in global development, acting as a basis for a nation's economic development. This becomes evident when examining the sector's significant

contributions, such as infrastructure development, job creation, and overall economic growth. The three main key players in construction projects are the employer, the consultant, and the contractor. Each party holds distinct responsibilities outlined by contractual agreements and professional ethics, ensuring a successful project outcome (Afzal, 2022).

The construction industry is known for its multifaceted nature, characterized by temporary collaborations among diverse organizations. This often leads to adversarial relationships as parties with different priorities work together on unique, single-shot projects. Compared to manufacturing and other service industries, construction is also widely recognized as less susceptible to innovation. This unique project-based approach necessitates collaboration between a large number of diverse construction firms, both large and small. These varying collaborations present both challenges and opportunities for the industry (Sexton, 2003).

The construction industry plays a crucial role in a nation's development, but faces challenges related to project performance and quality. Traditional evaluation methods focus on limited aspects like budget and schedule, neglecting the potential impact of organizational culture. Researchers emphasize the need to consider the cultural aspects of construction firms for improved project delivery and quality (Awolesi. , 2019). He highlighted in his study the significance of organizational culture in shaping employee behavior, commitment, and ultimately, company performance. It argues that a weak culture in construction firms can negatively affect employee morale and productivity, potentially contributing to the industry's quality and efficiency issues. Additionally, cultural differences between project participants are identified as a source of conflict, hindering delivery and quality of construction projects.

2.1.2. Quality

2.1.2.1. Concept and Definition of Quality

The concept of quality is multifaceted. Historically, definitions of quality reflected trends in quality management. Today's widely accepted definition centers on customer satisfaction – meeting or exceeding customer expectations. Yet, sustainability and digitalization demand a broader view of quality, one that considers a wider range of stakeholders to address both current and future societal needs (Jason Martin, 2020).

2.1.2.2. Quality in Construction Industries

Quality in construction projects means, that a project is accomplished within the defined procedures set out in the scope of the work. Quality of construction can be defined as meeting the legal aesthetic and functional requirements of a project. The requirements of the project may be simple or complex. However, the quality is attained when the requirements are adequate or it conforms to the specified function (Arditi, 1997).

Traditionally in construction, quality means the aesthetics of the building, user experience, and meeting of functional requirements. In construction, it is all about satisfying the needs of various stakeholders (Ferguson., 2022). From the viewpoint of a Construction Company, quality management in a construction project should mean keeping of the quality of works at the required standards, so that the customer will satisfy and will bring long-term competitive advantage (Tan, 2005).

Quality management system acts as a backbone of construction projects, merging through every phase of the project, from conceptual planning and feasibility studies to design, procurement, construction, commissioning, and long-term maintenance. Properly implementing a quality management system in each stage of construction projects, can unlock the door to successful and high-performance products (Ashokkumar, 2014).

In conclusion, quality in construction projects is not only meeting the design, schedule, and budget. However, it is a complex process to fulfill the requirements of end-user needs, design conformance, budget adherence, durability, serviceability, aesthetics, and overall characteristics of the end product.

2.2. Empirical Literature Review

2.2.1. Organizational Culture

Organizational culture is a complex concept investigated in various fields like anthropology and psychology. It is described through aspects, dimensions, traits, and elements that share patterns of development within a company (Akpa, 2021). A focus on organizational culture becomes the everyday activity of organizations. Because the performances have become perceived as dependent on the organization's culture (Racelis, 2010). Organizational culture should include

behavior, criteria, job specification, organizational values, philosophy, and organizational climate (Martins, 2003).

A strong working environment culture contributes to effective knowledge management and sharing experiences. It shapes company values, beliefs, and how things get done, developing an environment where employees are encouraged to learn, create, and share knowledge. Values guide the decisions and actions, when workers embrace a culture that gives attention for innovation and education, they are more likely to test, adapt, and ultimately enhance the performance of the organizations (Cayla, 2008).

Schein, a prominent scholar, projected a key model of organizational culture by focusing on why and how it develops within organizations. He argues that a fundamental human need for integration and meaning derives from the evolution of shared elements like values, beliefs, and procedures. These elements have proven successful over time, become ingrained in the organization, and influence member's behavior. Building on this understanding, he created a model of interdependent cultural levels, which has become a fundamental framework in an organizational framework (Schein, 2016).

According to the model, organizational culture can be analyzed on three levels. The first one includes visible artifacts like logos, dress codes, and rituals. The second is the deeper level, which includes shared values and beliefs, and the third contains hidden roots or unconscious assumptions. This three-layered view of culture helps us to understand how organizations grow and succeed. Most tools only dig to the branches, but the deeper levels tell the bigger story (Schein, 2016).From the above thoughts, we can conclude that the organizational culture is a construct by the members of the organization with the common usual agreements, representing the organization's identity and shipping unstated standing orders to how the members of the organization act and work together.

2.3. Elements of Organizational Culture

2.3.1. Leadership

Leadership is the capability of an individual or group of people to influence and guide the members of the team of the organization. Leaders are vital to guiding, influencing, and driving organization goals, engaging various leadership styles to manage and motivate the members of the organization

(Salsabiila Astari Putri, 2020). Leadership is the most significant component that affects the group of people to accomplish the common goal of the organization (Northouse, 2013). In simple words, leadership is the ability to inspire, motivate, and empower individuals or groups of people to work collaboratively and effectively. In addition to that, it encompasses a wide range of skills, traits, and behaviors, including decision-making, communicating, strategic thinking, and vision setting which are significantly important for every leader (Wajdi, 2017).

Leadership style encompasses a leader's unique method of directing and motivating team members, surrounding their behaviors, decisions, communication, and environment creation. It reflects their preferences, values, and beliefs about guiding others, and significantly impacts team dynamics, productivity, and culture within organizations or groups. Different leadership styles exist, each capable of shaping these aspects in diverse ways (Bwalya, 2023).

2.3.1.1. Effect of leadership on the QCP

Construction projects in developing countries are plagued by performance problems like cost and safety management. However, strong leadership is vital to address the issues, the industry prioritizes technical and managerial skills, leaving leadership development sadly inadequate. This discrepancy needs to be corrected to improve the output of construction projects (Tanko, 2017).

The essence of quality in construction projects centers on effective leadership. In the context of quality, employers are not just expensive assets, but the very creators of quality. It will be enhanced through the building of strong connections and recognition of their vital role that unlocks their ability to deliver excellence. To implement this leadership is required to guide them to understand tasks, coordinate efforts, and motivate them towards successful project outcomes. In this context the project manager becomes the crucial substance, transforming management into leadership and ultimately motivating the workforce to develop quality in every element of the project (Tanko, 2017).

Leadership in construction projects has gone from a neglected topic to a recognized driver of success. Early research explored ideas like Chinese management frameworks and involving engineers in policy development. Today, leadership style is seen as a crucial skill for project managers, with studies analyzing its impact on the performance and quality of projects and identifying ideal styles for specific projects. This growing field emphasizes understanding the project engineer's competence and leadership style to ensure the success of the project. Within the

last two decades, leadership impact on construction projects has been widely acknowledged with the research growing since 1992. Existing studies have reviewed the field, but most of them lack quantitative analysis. The knowledge in this area is fragmented, requiring a comprehensive understanding of its structure for future improvement (Wang., 2022).

The success of the construction project is highly dependent on the ability of the project manager. Each outcome, good or bad, resulted from their deliberate choices. Project success can be measured through cost-effective, timely delivery, and performance of the output. To keep the truck through all this, strong leadership is vital. PMI 2008 explains strong leadership as the competency of the application of skills, tools, resources, and techniques to develop the project activities to meet the requirements of the project. The development of project activities needs project employees who understand the objectives and the limitations of the projects as well as the roles of each participant.

PMI (2008) defines leadership competencies as the application of skills, tools, and techniques to develop project activities to meet project requirements. The development of project activities requires project employees who understand the objectives and limitations of the project, as well as the roles of each participant.

All construction project faces limitations like budget, time, resources, and scope, creating risks and hindering progress. Project employees tasked with managing and achieving desired results must be resourceful holistic skilled in technical and leadership strategies. They oversee project details while managing diverse personalities, making their success crucial for the entire project. Simply, project employees are the masters of navigating complexity and leading teams effectively to achieve the goal of the project (Kloppenborg, 2003).

As we have seen from the above literature, construction projects in developing countries suffer from performance issues like cost, safety, and quality. To tackle this strong leadership is the key practice. Traditional focus on technical and managerial skills has neglected leadership development, hindering construction project quality. Recognizing employees as a creator of quality, not just costs, requires building strong connections, motivating them, and guiding them toward excellence. Project managers must transform management into leadership, motivating the workforce to deliver quality in every element of the construction projects. This growing field is actively exploring the impact of leadership style and manager competence on project success, aiming to bridge the knowledge gap and empower construction projects in developing countries.

2.3.2. Communication in construction projects

Communication is the act of transferring information from one place, person, or group to another. In communication, there is always at least one sender, a message, and a recipient. Even though it may seem simple, communication is a very difficult subject. To turn an organization successfully and safely to complete the projects, communication is crucial in the field of the construction industry. There are different types of communication, including written, verbal, and nonverbal. Understanding the significance of each of these types of communication and knowing how to utilize them effectively is very important to constructing successful construction projects.

The survey found that communication is the heart of efficient construction projects, with managers spending 90% of their time on it. However, various challenges are developed during these essential stages of transferring the project information. In the survey, the author aimed to underline the key limitations and results that will aid the project manager in effectively interacting with all interested parties. Finally, because the construction project communication needs to be properly managed, he recommends that a communication management plan must be installed and considered as a main element and requirement of the project (Taleb, 2017).

Even though communication is crucial for construction projects, some barriers affect the flow of information. In principle, the process of communication is expected to be simple and understandable. However, when it comes to practical, it is a complicated process. According to the report, a lack of communication can hurt project progress approximately 74% of difficulties in the construction project (Carvalho., 2008).

As per the study (Fox, 2001), communication barriers are primarily grouped into four categories, verbal, environmental, interpersonal, and emotional reactions. This classification serves as a foundation for classification. He also prioritizes the major communication barriers as the lack of face-to-face interaction, reliance on formal communication mode, inadequate performance of informal communication methods, unclear structure of project communication, and predetermining how communication will take place.

2.3.2.1. Effect of communication on QCP

The construction industries in the developing countries are crucial for their development. It faces challenges due to its project-based nature, diverse workforce, and the need for clear communication mechanisms. Despite being labor intensive, efficient, and success centers on

multicultural collaboration and effective information exchange. In construction, a successful project hinges on effective communication throughout the entire lifecycle. Technical skills alone will not make communication between diverse project players in vital. Unfortunately, poor communication is a major industry issue, directly contributing to project failure. Improving communication is key to the success of the project (Gamze, 2023).

Quality management in construction projects increases on a unique and crucial type of communication. Unlike the standard exchange of information, it demands clear, consistent, and targeted interaction between all stakeholders to effectively implement and understand the project's quality goals. This deep-seated communication becomes the life blood of a successful quality management system initiative, empowering everyone to work in unity toward excellence (.Pop, 2006).

Internal communication thrives on four split strategies, which are informing, motivating, controlling, and rewarding, An Effective quality management system in the construction industry centers on clear, non-biased communication that drives understanding, raises motivation, and minimizes misunderstandings. Consistent, focused communication, as evidenced by quality plans, empowers staff and ensures everyone knows their role and responsibilities, paving the way for quality project deliveries (Buehring., 2009).

Quality management performance relies heavily on strong and clear communication processes. Leadership training, encouraging supervisor-employee dialogue, and fostering two-way communication during appraisals all strengthen employee understanding of quality expectations, boost morale, and improve compliance with quality rules. While financial aspects are important, effective communication recognizes employee well-being and is also a crucial factor in achieving quality.

Effective communication is crucial for project success. Various studies show a strong correlation between clear communication and project goals being met. This is specifically true in today’s globalized world with virtual teams and complex information exchange. Technology can assist communication, but understanding the cultural variety and projects is crucial. The key is to communicate effectively, keeping everyone informed about the project’s goals and their contributions to achieve timely delivery. Clear communication is not talking more, it is about ensuring everyone understands the message and its impact (Michael, 2021).

As we have seen in various literature, communication stands as one of the core elements of organizational culture and has a great impact on the quality of construction projects. While it identifies it facilitates the identification and resolution of quality issues, the quality of communication itself becomes a crucial factor for construction project quality. Within quality management, communication plays a dual role. First, it supports quality assurance by building customer confidence in the organization's ability to meet requirements. Second, it enhances quality management by ensuring everyone understands the quality management system goals and directs their effort accordingly. The ability of effective communication to bridge cultural and geographical divides becomes a key strategy for success, fostering a quality-oriented organizational culture focused on performance.

2.3.3. Training and Human Resource Development

Training is a multi-tool for empowering employees and organizations. It equips individuals with knowledge and skills to grow both on the job and personally, while also driving measurable performance improvements that benefit the company as a whole. This makes it a crucial tool for human resource development, with its potential extending beyond technical training to areas like leadership, community building, and even rural development.

In the ever-growing world of work, training stands as a foundation for employee expertise and organizational success. Without proper training programs, employees remain free, lacking the necessary skills and knowledge to fulfill their duties effectively. This concept of employee training goes far beyond simple institution, it encompasses the provision of information, the cultivation of new skills, and the creation of opportunities for professional growth. Identifying performance needs through analysis and competency assessment ensure targeted programs that address specific deficiencies and capitalize on opportunities for improvement. Ultimately, effective training bridges the gap between an employee's current and desired performance, fostering a more capable and productive workforce. This can be achieved through diverse methods, ranging from formal coaching and mentoring to noble collaboration and employee participation, ensuring that the learning process is designed to meet individual needs and fosters a culture of continuous growth within the organization (Daniel, 2018).

2.3.3.1. Effect of training and human resource development on the QCP

Despite the crucial role employees play in organizational success, research on effective training particularly in developing countries lags behind broader human resource management studies. This gap highlights the need for designed training programs that not only enhance performance but also equip employees with the skills to navigate today's competitive business landscape, a challenge especially relevant in developing economies.

It is known that the construction industry is a dynamic and ever-changing field, with new technologies and techniques. To stay competitive and successful in the market, professionals in this industry need to invest in ongoing training and education. Investing in training and education in the construction industry can have numerous benefits for both employees and employers. It is one of the best things you can do to advance your career in construction. You can develop your skills with the right training and education (Tank, 2023).

As per his (Tank, 2023) investigation, the main outcome we could gate from training is the quality of the project. Investing in training in the construction industry enhances the quality of work. Workers who are trained in the latest techniques and technologies can produce higher-quality products, which can lead to greater customer satisfaction and retain them, In addition to that training helps the workers identify and address potential issues before they become a major problem for the company. Quality is essential in the construction industry. Poor quality work can result in safety hazards, costly repairs, and damage to the reputation of the contractor. Proper training and education can help workers understand the importance of quality and the steps they can take to ensure that their work meets the highest standards. Workers who have received proper training and education are also more likely to be familiar with the latest building codes and regulations. This can help ensure that the construction project complies with local, state, and federal laws, reducing the risk of costly fines and legal issues.

As we have seen in the above, bridging the gap for training is crucial for construction industry to achieve the goal of the project. Especially in the developing country facing a dynamic landscape like construction. Designed programs that not only enhance performance but also equip workers with the competitive edge to navigate today’s challenge are essential. As demonstrated by construction industry, where quality reigns supreme, proper training empowers workers to deliver

superior results, ensuring customer satisfaction and company success. From proactively addressing potential issues to safeguarding compliance, the benefits are multilayered.

2.3.4. Shared Organizational Values and Norms

Organizational values and norms play a crucial role in shaping behavior, guiding decision-making, and determining organizational effectiveness. Several empirical studies have investigated the impact of these intangible elements on organizational outcomes.

The study conducted by (Chatman, 2014), explored the alignment of organizational culture, particularly values and norms, with employee behavior and firm performance. Using survey data from employees and financial performance data from organizations, the authors found that strong alignment between personal and organizational values leads to higher job satisfaction, reduced turnover intentions, and improved organizational performance. The study also demonstrated that norms such as collaboration, innovation, and adaptability had a statistically significant impact on team performance and individual engagement.

Another relevant empirical contribution is by (Schein., 2016), who emphasizes that organizational norms emerge from shared learning experiences and leaders' behavior. He outlines how these norms can either facilitate or hinder innovation and quality improvement. While not strictly quantitative, Schein's work is based on longitudinal case studies that offer empirical grounding in real-world observations.

In a cross-cultural study, (House, 2004) from the GLOBE project examined how organizational norms vary across cultures and how they influence leadership expectations and effectiveness. Their quantitative findings revealed significant correlations between organizational cultural dimensions and workplace behaviors.

The above concepts demonstrate that organizational values and norms are foundational to shaping employee behavior, organizational effectiveness, and overall performance. When individual values align with organizational values, outcomes such as job satisfaction, commitment, and productivity improve significantly. Norms that promote adaptability, collaboration, and innovation are particularly influential in enhancing team dynamics and organizational responsiveness. Furthermore, cross-cultural research underscores that values and norms are context-dependent, varying across societies and influencing leadership styles and expectations. Therefore,

understanding and managing organizational values and norms is essential for building cohesive, high-performing, and adaptive organizations in both local and global contexts.

2.3.4.1. Effect of shared organizational values and Norms on the QCP

Bringing the above concepts to this study, Organizational values and norms significantly influence the quality outcomes of construction projects by shaping employee behavior, communication, leadership, and decision-making processes. In the construction industry characterized by complexity, tight schedules, and the need for coordination among diverse stakeholders shared values and norms are crucial in ensuring consistent performance and quality standards.

A study by (Toor & Ogunlana, 2009) investigated leadership styles and organizational culture in large construction firms in Thailand. The findings showed that values such as accountability, teamwork, and commitment to quality, when embedded in an organization's culture, led to improved project delivery, higher quality outcomes, and better stakeholder satisfaction. The study emphasized that norms encouraging open communication and proactive problem-solving contributed to fewer defects and rework in projects.

Similarly, (Walker & Rowlinson, 2008) highlighted the role of organizational culture including values and norms in project governance. Their research indicated that norms fostering safety, ethical behavior, and continuous improvement helped maintain quality control throughout the construction lifecycle. These cultural attributes also enhanced collaboration between contractors, consultants, and clients, which is essential for managing quality-related risks.

In addition to the above (Kujala, 2013) analyzed how organizational culture influences the delivery of complex infrastructure projects. Their findings confirmed that norms and values promoting transparency, learning, and trust had a positive effect on adherence to quality standards and reduced the likelihood of disputes and claims.

The other researcher (Wong, 2005) conducted a study on partnering behavior in construction projects, finding that shared organizational values such as mutual trust, long-term commitment, and open communication enhanced collaboration and improved project quality. Their empirical data, collected from Hong Kong construction projects, showed that a positive value system helped reduce conflicts, improve teamwork, and maintain consistent quality outcomes.

2.4. The research gap

While OC has been validity recognized as a key determinant of organizational performance, it's specific effect on the construction industry, particularly in developing countries like Ethiopia remains independently explored. Most existing studies are either conceptual or based on data from developed countries, where the organizational environment benefits from stronger infrastructure, clear governances, and more developed systems of communication and leadership. This creates a gap in practical understanding, especially in contexts where construction projects ore often fragmented, short-term, and involve multiple stakeholders with varying properties. Core OC dimensions such as leadership, communication, training and human development, shared organizational values and norms are seldom investigated using localized, empirical approaches that reflect the realities of Ethiopia's construction sector.

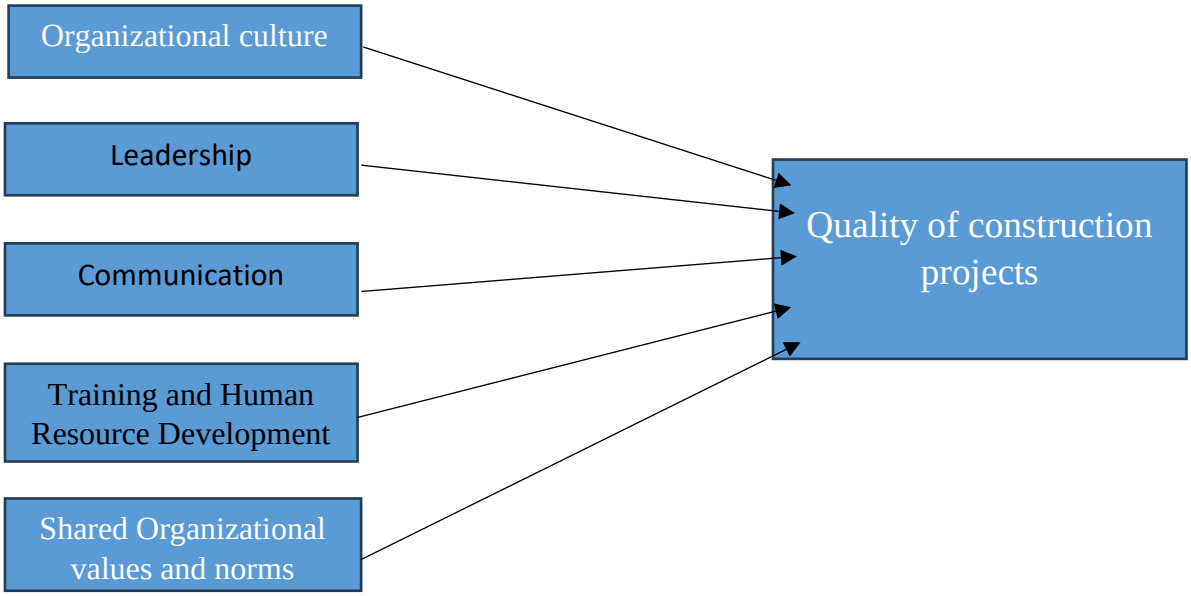
Although, a few Ethiopian studies have attempted to address these issues, they often suffer from limited empirical depth and overlook systematic barriers such as weak institutional frameworks, low level of employee engagement, and undeveloped learning cultures. These persistent gaps highlight the need for rigorous, context-sensitive, and data-driven research that can uncover how specific elements of OC influence QCP. Such insights are essential for informing practical strategies, fostering organizational improvement, and guiding operation mechanism that can enhance construction quality and performance in EO.

2.5. Conceptual frameworks

A conceptual framework is a visual or written product, one that explains, either graphically or in narrative form, the main things to be studied, the key factors, concepts, or variables, and the presumed relationships among them (Miles, 1999). It provides a structure for the research study by identifying the main constructs and showing their interrelationships. It is also the researcher's construction that articulates the concepts and relationships they expect to find in the study. It serves as a lens through which the problem is examined (Ravitch, 2017).

There for the conceptual framework for this study shows that construction quality results from OC, Leadership, communication, training and human resource development, and shared organizational values and norms.

Figure 1: Conceptual Framework



Source: Developed by the researcher

CHAPTER THREE

Research Design and Methodology

3. Introduction

The previous chapter reviewed relevant theories and studies, highlighting the knowledge gap this research address. This chapter outlines the research methodology used to achieve the studies objectives. It covers the research design, approach, population, sample, sampling techniques, data collection, and analysis methods. The final section presents the model and describe the study variables.

3.1. Research Design, Approach, and Methodology

3.1.1. Research Design

A cross-sectional survey design was used to collect data at a single point in time from employees of EO. This design was appropriate for capturing the current perceptions of OC and its effect on QCP. It allowed for a representation analysis of the organizational environment, making it effective for identifying trends and relationships among variables within the organization.

3.1.2. Research Approach

This study adopted a quantitative research approach, which is suitable for examining relationships between measurable variables. It aligns with post-pivotal assumptions that seek to identify cause and effect patterns through empirical observation and statistical analysis. The approach enabled objective investigation in to how key elements of OC specifically leadership, communication, training and human development, and shared organizational values and norms affect QCP.

3.1.3. Research Methodology

Structured questionnaires were used to collect quantitative data which were analyzed using descriptive, correlation, and regression analysis. Descriptive statistics summarized the characteristics of the sample and variables. Correlation analysis measured the strength and direction of relationships between OC elements and QCP, while regression analysis identified which factors most significantly predicted QCP. The methodology ensured a systematic, data driven evaluation of OC’s influence on QCP.

3.2. Target Population, Sampling Technique, and Sample Size Determination

3.2.1. Target Population

The target population for this study consists of employees of EO, specifically those working in engineering and administrative roles across various construction projects. Although, the projects are geographically dispersed both in Addis Ababa and outside of it, they operate under the same organizational policies and procedure, ensuring consistency across the study population. According to the latest data from the HRM department, the total number of engineering and admirative staff is 258. This distribution serves as the basis for determining a representative sample, which is crucial for accurately assessing the effect of OC on the QCP.

Table 1 ***Target Population Size and its department***

Departement	Population size
Engineering staff	220
Administration staff	38
Total	**258**

Source: EO. HRM Department

3.2.2. Sampling Technique

This study focused on professional staff at EO, specifically targeting both engineering and administrative personnel actively involving in ongoing projects. Participants were drawn from the head office and project sites to ensure the broad representation of the organization's technical and engineering workforce.

To promote objectivity and reduce selection bias, this study employed a stratified random sampling technique. The target population was first divided in to two strata based on departmental categories specifically engineering and administrative staff. From each stratum, respondents were proportionally allocated according to the number of eligible professionals with in the group. Subsequently, participants were randomly selected from each stratum, ensuring that every individual had an equal and independent chance being included in the sample.

This method allowed for a more accurate representation of both technical and administrative perspectives within the organization. By ensuring that key subgroups were adequately represented, stratified random sampling enhanced the validity of the findings and supported more meaningful comparisons between departments regarding the impact of organizational culture on construction project quality.

3.2.3. Sample Size Determination

Due time and financial constraints, and given that the target population was relatively small and well defined, the study employed (Yamane, 1967) formula to determine the appropriate sample size. As shown in the table 1 the total population included in the study was consists of 258 employees, comprising both engineering and administrative staff.

To ensure representativeness across these key subgroups, a stratified random sampling technique was applied. The population was first divided in to two distinct strata based on department engineering and administration. The required sample size was then proportionally allocated to each stream based its share of the total population. Finally, respondents were randomly selected with in each stratum to maintain objectivity and ensure that very individual had an equal and independent chance of being included in the sample.

This combination of Yamane's formula for determining sample size and stratified random sampling for participant selection allowed the researcher to maintain statistical reliability while ensuring balanced representation across relevant employee groups.

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

Where N = population size

n = Sample size

e = Level of precision

Thus, $n = \frac{220}{(1+257(0.05)2)}$ = **133.94= 135** for engineering staff

$n = \frac{38}{(1+257(0.05)2)}$ = **23.12= 23** for administrative staff

Using Yamane's formula, with a 5% margin of error and 95% confidence level, the required sample was calculated from population of 220 engineering staff and 38 administrative staff, yielding a total of 157 respondents. The sample was proportionally allocated across the two strata and randomly selected. This approach ensures a balance between statistical accuracy, resource constraints, and alignment with the study's objectives,

Table 2: ***determined sample size***

Department/ section	Population	Sample	%
Engineering staff	220	134	85
Administrative staff	38	23	15
Total	**258**	**157**	**1**

Source: own, derived from Table 3.1

3.3. Data Source, Method of Data Collection, and Measurement of Data

3.3.1. Data Source

This study applied primary data source, collected through structured questionnaire distributed to engineering and administrative staff within the company. Aligned with the study's objective of examining the effect of OC on QCP, the questionnaires were designed with closed ended questions to generate qualifiable data from the target population. This approach enabled the researcher to systematically analyze the relationship and effect of key OC variables on QCP within the company's construction operations.

3.3.2. Method of Data Collection

This study relied on primary data collected from questionnaire distributed to engineering and administrative staff at EO to effectively measure the independent variables OC, leadership, communication, training and human developments, and shared organizational values and norms and the dependent variable QCP, the survey used closed ended questionnaire using a five-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). This format, as noted by (Neuman, 2003) supports quantitative analysis by enabling the identification of trends and relationships among variables.

The questionnaire was structured into three sections: the first collected general demographic information; the second focused on OC components such as leadership, communication, and training; and the third assessed respondents' perceptions of QCP and its linkage to the OC dimensions examined.

3.4. Measurement of Data

This study used a structured questionnaires with closed ended questions, adapted from previous research to fit the context of EO. The variables of OC were measured on an ordinal scale to capture participants perceptions of organizational culture and its influential on QCP. In addition to descriptive analysis, correlation analysis was conducted to assess the strength and direction of the relationship between OC and QCP. Furthermore, regression analysis was applied to determine the extent to which specific elements of OC predict construction quality outcomes, offering deeper insights into their influence.

3.4.1. Data Analysis Method

Following data collection, the response was coded and organized into tables for analysis. Descriptive statistics, including frequencies means, and standard deviations, were used to summarize the data. To examine the relationship between OC and QCP at EO, both correlation and multiple regression analyses were conducted using SPSS version 26. This combination of methods provided a comprehensive understanding of the associative and predictive effects of OC on QCP within the organization.

3.4.2. Correlation analysis

Correlation analysis was conducted to assess the strength and direction of any association between these variables. This provided essential insights into whether OC and QCP are linked and, if so, in what way.

3.4.3. Multiple Regression Analysis

To examine the causal relationship between OC and QCP at EO, a multiple linear regression analysis was employed. This statistical method enables the study to go beyond identifying correlations by quantifying how specific elements of OC, leadership, training and human resource development, shared organizational values and norms, and communication predict changes in

construction quality. It provides insight into the extent and direction of each variable's impact, revealing the mechanisms through which organizational culture influences project outcomes.

The model for this research can be formulated as $Y= \alpha+\beta1X1+ \beta2X2 + \beta3X3……+ \beta nXn$, where: Y is the dependent variable, "α" is a regression constant; β1, β2, β3 and βn are the beta coefficients; and X1, X2, X3, and Xn are the independent (predicator) variables.

3.5. Validity and Reliability

A fundamental concern in research is ensuring that measurement tools accurately capture the intended concepts. This is known as validity. In this study, validity was addressed by thoroughly reviewing existing literature and adapting well-established instruments to suit the specific research context.

Reliability refers to the consistency of a measurement tool in producing stable and repeatable results across different occasions or respondents. To assess reliability, this study employed Cronbach's alpha, which estimates internal consistency based on a single administration of the questionnaire (Easterby, 2008). According to George and Mallery, Cronbach's alpha values range from 0 to 1, with higher values indicating stronger consistency among items measuring the same construct.

- >.9: Excellent reliability
- > .8: Good reliability
- > .7: Acceptable reliability
- > .6: Questionable reliability
- ≤ .5: Unacceptable reliability

The specific reliability scores for our measurements of organizational culture and Quality of Construction Projects are presented in the table below.

Table 3*: **Reliability Statistics***

Reliability Statistics			
	Cronbach's Alpha	**N of Items**	**Reliablity range**
Organizational Culture	.842	10	Good
Quality of Construction Projects	.839	10	Good
Leadership	.803	6	Good
Communication	.820	8	Good
Training and Human Resource Development	.899	9	Good
Organizational Values and Norms	.873	10	Good

*Source: generated from **SPSS 2026** survey data*

The reliability of the study's measurement instruments was evaluated using Cronbach's Alpha, which assesses internal consistency. All variables demonstrated strong reliability, with alpha values exceeding the acceptable threshold of 0.8. The highest reliability was recorded for Organizational Values and Norms, with a Cronbach's Alpha of 0.923. Training and Human Resource Development followed, scoring 0.899 based on 9 items. Communication, measured with 8 items, had a reliability of 0.820, while Leadership, assessed with 6 items, scored 0.803. Both OC and QCP, each measured by 10 items, also showed high reliability, with alpha values of 0.842 and 0.839, respectively. These results confirm that all measurement scales used in the study are statistically reliable, thereby supporting the consistency and credibility of the research findings.

3.6. Ethical Consideration

Ethical standards were strictly followed throughout the study. The questionnaire clearly stated the research purpose to ensure informed consent. Participation was voluntary, and confidentiality was fully maintained with no identifying information collected. All findings were based on objective analysis, ensuring the study's integrity and ethical soundness.

CHAPTER FOUR

Data Presentation, Analysis, and Interpretation

4. Introduction

This chapter is organized into three main sections: descriptive analysis, correlation analysis, and regression analysis. The descriptive analysis section presents and interprets the data collected through questionnaires, summarized in tabular form. The correlation analysis section examines the strength and direction of relationships between key variables. Finally, the regression analysis section evaluates the statistical effect of OC on the quality of construction projects, specifically in the context of EO.

4.1. Descriptive analysis

For this study, the first section of the survey questionnaire provides the demographic profile of the respondents to be used as a building frame for interpreting the results. The respondent's profile is organized in terms of gender, age, level of education, employment category, and total years of experience. The result of this demographic presentation is stated below using descriptive statistics analysis with tables, graphs, and charts. The respondents' demographic profile is captured and analyzed below in Table 4.

Table 4: Response rate

Target Population	Questionnaire distributed	Questionnaire returned	Response Rate
258	177	157	88.7%

Source: Own Survey data (2025)

4.1.1. Findings from descriptive analysis of the response rate

A total of 177 questionnaires were distributed to engineering and administrative staff at both the project site and the head office. Of these, 157 were completed and returned, resulting in a response rate of 88.7%. Although 177 questionnaires were distributed to account for potential non-responses, the required sample size based on Yamane's formula was 157, which was successfully achieved.

Table 5 Discriptive analysis of demographic profile

		Frequency	Percent
i. Sex	Male	98	62.4
	Female	59	37.6
	Total	177	100.0
ii. Age	20-25	13	8.3
	26-30	27	18
	31-35	38	17.2
	36-40	34	21.7
	41-45	32	20.4
	> 45	13	8.3
	Total	177	100.0
iii. Educational background	Deploma	10	6.4
	BSc/BA	102	65
	MSc/MSc//MA	45	25.7
	Total	157	100.0
iv. Employment category	Senior project manager	27	17.2
	Project manager	30	19.1
	Office Engineer/Site Engineer	44	28
	Senior technical support staff	15	9.6
	Electrical and Mechanical engineer	11	7
	Administration staff	30	19.1
	Total	157	100.0
v. Years of experience	1-5	35	22.3
	6-10	70	44.6
	11-15	35	22.3
	>15	17	1.2
	Total	157	100.0

Source: Own Survey data (2026)

4.1.2. Findings from descriptive analysis of the demographic Profile

As we have seen from table 5, out of 157 respondents, 62.4% were male and 37.6% female. Most of the respondent were aged 31-35 and held a BSc. Or BA degree. The largest job category was office and site Engineer, followed by project manajor and Administrative staff. Interms of experience, most of the respondent had 6-10 years of experience, the rest ranging from 1 to over 15 years.

Table 6 Deceptive analysis OC at EO

Items	N	M	St.Dv	SD (%)	D (%)	N (%)	A (%)	SA (%)
1. Getting things right the first time is crucial.	157	4.59	0.698	0.6	0.6	6.4	23.6	68.8
2. Mistakes are openly discussed as learning opportunities.	157	4.41	0.733	0	2.5	7	37.6	52.9
3. Employees are encouraged to share ideas for quality improvement.	157	4.46	0.747	0.6	3.2	1.9	38.2	56.1
4. Departments collaborate effectively to achieve quality standards.	157	4.34	0.868	1.9	1.3	10.8	32.5	53.5
5. Cost and time are prioritized over quality, causing shortcuts.	157	4.07	1.215	7.6	5.7	7	31.2	48.4
6. Employees face pressure to meet unrealistic deadlines.	157	4.4	0.98	2.5	5.1	5.1	24.2	63.1
7. Empowered with authority and autonomy at work.	157	4.5	0.695	0	1.9	5.7	33.1	59.2
8. Goals within Elmi Olindo are well-aligned.	157	4.3	0.78	0.6	1.3	12.1	39.5	46.5
9. A consistent set of values and norms in the organization.	157	4.46	0.813	1.3	1.3	8.9	26.8	61.8
10. Departments are effectively coordinated to accomplish goals.	157	4.46	0.764	1.3	0.6	7	32.5	58.6
Organizational Culture (Average)	—	**4.4**	**0.829**	**1.17**	**2.15**	**7.69**	**31.42**	

Source: Own Survey data (2025)

4.1.3. Findings from Discriptive analysis of OC at EO

From table 6 , the study concluded that a generally positive OC at EO, with an over all average mean score of 4.40 out of 5. A majority of respondents agreed with favorable cultural statements, particularly regarding the importance of getting things first time, employee empowerment, and idea sharing reflecting a quality focused and productivity work environment. High scores in areas such as collaboration, shared values, and coordination further demonstrate strong alignment and effective teamwork across departements. However, slghtly lower mean scores and greater

variability in responses related to time and cost pressure, as well as unrealistic deadlines, suggest operational challenges that could affect quality. Overall, the findings portray a healthy OC, though improvements are needed in balancing workload and and performance expectations.

Table 7: Discriptive analysis of QCP at EO

Items	N	(M)	St.Dv	SD (%)	D (%)	N (%)	A (%)	SA (%)
i. The organization maintains a consistent level of high-quality materials in all of its construction projects.	157	4.56	0.719	0.6	1.9	3.8	28	65.6
ii. Defects and rework occur occasionally on projects within the organization.	157	4.29	0.825	1.3	2.5	8.3	42	45.9
iii. Projects are successfully finished within the designated timeline and budget.	157	4.44	0.787	0.6	0.6	12.7	26.1	59.9
iv. Clients are highly satisfied with the final quality of construction projects.	157	4.59	0.725	1.3	0.6	4.5	24.8	68.8
v. There is a clear process for identifying and resolving quality issues.	157	4.43	0.672	0	0.6	8.3	38.2	52.9
vi. The organization continually adopts improved ways of doing the jobs.	157	4.57	0.709	0.6	1.3	5.1	26.1	66.9
vii. Clients' and end users' feedback and recommendations are essential for ensuring quality.	157	4.47	0.73	1.3	0.6	4.5	36.9	56.7
viii. The organization has a clear mission that prioritizes quality.	157	4.59	0.708	0.6	1.3	5.1	24.8	68.2
ix. The employees are highly committed to delivering a high-quality project.	157	4.52	0.748	1.9	0	3.8	33.1	61.1
x. The quality of construction projects is influenced by the flow of information within the organization.	157	4.52	0.773	1.9	0.6	3.8	30.6	63.1
Quality Management (Average)	—	**4.5**	**0.739**	**0.91**	**1.19**	**6.01**	**31.36**	

Source: Own Survey data (2026)

4.1.4. Findings from Discriptive analysis of QCP at EO

The statistics resulted from Table 7, reveal a strong and consistent perception of quality management within the EO. Based on the response from 157 respondents, the mean scores for the assessed items ranged from 4.29 to 4.59, with an overall average of 4.5. This indicates a high level of agreement with positive statements related to construction quality. Items such as client satisfaction, a clear mission prioritizing quality, and the adoption of improved work practices received the highest ratings, with over 605 of respondents strongly agreeing. Although the item regarding occasional defects and rework had the lowest mean score of 4.29, and the highest variability SD of 0.825, it still reflected strong agreement overall. Frequency analysis further supports these findings, with an average of 88% of participants selecting “agree” or “strongly agree” across all items.The low standard deviations across the dataset suggest consistent responses, reinforcing the presence of a well-established and positively viewed quality management culture in EO.

Table 8: Leadership as an element of organizational culture

Items	N	(M)	St.Dv	SD (%)	D (%)	N (%)	A (%)	SA (%)
I. Open communication and feedback among project members regarding goals and expectations are encouraged in EO.	157	4.43	0.81	1.3	3.2	3.2	36.3	56.1
II. The project managers empower and cultivate a collaborative and supportive work environment among team members.	157	4.37	0.779	0.6	3.8	3.2	42.7	49.7
III. The project managers ensure that team members are held accountable and responsible for their exceptional performance to achieve high quality.	157	4.41	0.776	1.9	0.6	4.5	40.8	52.2
IV. The project leaders prioritize meeting deadlines over ensuring quality workmanship.	157	4.24	1.032	2.5	7.6	5.7	31.8	52.2
V. The project leaders provide clear direction and guidance throughout the project lifecycle.	157	4.52	0.748	1.3	1.3	3.8	31.8	61.8
VI. There is a strong focus on continuous improvement in quality management practices.	157	4.5	0.722	0.6	0.6	7.6	30.6	60.5
Average	—	**4.41**	**0.811**	**1.37**	**2.18**	**4.67**	**35.67**	**55.43**

Source: Own Survey data (2025)

4.1.5. Findings from Descriptive analysis of Leadership

The finding from the descriptive analysis of leadership in Table 8 disclosed that a strong and positive perception of leadership effect on the QCP at EO.With a sample of 157 respondents, the mean score ranges from 4.24 to 4.52, and overall average mean is 4.41, which indicate high level of agreement that leadership practices support construction quality.The highest rated item " project leader provide clear direction and guidance throughout the project lifecycle " scored 4.52, with 61.8% of respondents strongly agreeing, " there is a strong focus on construction improvement in quality management practices" rcieved a high mean of 4.5, highlighting a leadership commitement in quality enhancement. On the other hand, the statement "Project leaders prioritize meeting deadlines over ensuring quality workmanship" had the lowest mean score of 4.24, and the highest standard deviation of 1.032, suggesting a greater diversity of views and potential concern over the balance between schedule and quality. Across all items, the combined percentage of "Agree" and "Strongly Agree" responses averaged over 91%, while disagreement remained minimal. These results suggest that leadership at Elmi Olindo fosters a culture of accountability, collaboration, and continuous improvement, all of which significantly contribute to the successful delivery of high-quality construction projects.

Table 9: Communication as an element of organizational culture

Items		N	(M)	Std. (SD)	SD (%)	D (%)	N (%)	A (%)	SA (%)
I.	Project information is communicated to all relevant stakeholders.	157	4.61	0.686	0.6	0.6	5.7	23.6	69.4
II.	There are established channels for regular communication updates and progress reports in EO & Co.	157	4.41	0.825	2.5	0.6	4.5	37.6	54.8
III.	Meetings are well-organized and focused and result in clear action items.	157	4.32	0.832	0.6	3.2	10.2	35.7	50.3
IV.	Important information is documented and readily accessible to all team members.	157	4.38	0.764	0	3.2	7.6	36.9	52.2
V.	Different departments effectively communicate and collaborate to achieve quality.	157	4.48	0.829	1.9	0.6	8.3	26.1	63.1
VI.	There is a culture of open communication where concerns and problems can be freely discussed.	157	4.37	0.842	0	4.5	10.2	29.3	56.1
VII.	Misunderstandings and misinterpretations of project information are rare.	157	4.32	0.794	0	3.8	8.9	38.2	49
VIII.	Delays in communication often lead to rework or schedule disruptions.	157	4.32	0.786	0.6	3.2	6.4	42.7	47.1
Average		—	**4.4**	**0.796**	**0.78**	**2.06**	**7.6**	**33.76**	

Source: Own Survey data (2026)

4.1.6. Findings from desciptive analysis of communication

The descriptive analysis of communication-related items shows that respondents generally view communication practices within Elmi Olindo Contractors as highly effective and supportive of construction project quality. The overall average mean score of 4.40 on a 5-point Likert scale indicates strong agreement with favorable statements, while the low standard deviation of 0.796 reflects consistent perceptions among participants. The highest-rated item, stating that project information is communicated to all relevant stakeholders, scored 4.61, highlighting the effectiveness of information flow. Other strengths include interdepartmental collaboration with a score of 4.48, the presence of regular communication channels scoring 4.41, and the accessibility of documented information scoring 4.38.

Although the ratings were generally high, a few items scored slightly lower, including the clarity of meeting outcomes, the rarity of misunderstandings, and the impact of communication delays, each with a mean score of 4.32. These results indicate areas where communication can be further enhanced to improve meeting productivity and minimize disruptions. On average, more than 86 percent of respondents agreed or strongly agreed with the positive statements, while disagreement was minimal, below 3 percent. These findings affirm that Elmi Olindo Contractors maintains a strong and quality-focused communication environment, with only minor areas that could benefit from targeted improvement. Refer to Table 9.

Table 10: Training and human development as an element of organizational culture

Items		N	(M)	Std. Dv.	SD (%)	D (%)	N (%)	A (%)	SA (%)
I.	The organization provides adequate training programs to equip employees with the necessary skills for their roles.	157	4.24	1.215	6.4	6.4	7	17.8	62.4
II.	Training programs are regularly updated to reflect industry best practices and new technologies.	157	4.18	1.217	7	6.4	5.1	24.8	56.7
III.	Employees are encouraged to participate in relevant training and development opportunities.	157	4.26	1.15	5.1	7	4.5	23.6	59.9
IV.	The organization invests in on-the-job training and mentorship programs.	157	4.13	1.096	5.7	4.5	6.4	38.2	45.2
V.	Training programs are effective in improving employee knowledge and skills relevant to quality construction practices.	157	4.41	0.906	2.5	2.5	5.7	29.9	59.2
VI.	Construction projects meet or exceed planned quality standards.	157	4.48	0.748	0.6	—	11.5	26.8	61.1
VII.	Defects and rework are minimized throughout the construction process because of effective training.	157	4.37	0.908	1.3	3.8	10.2	26.1	58.6
VIII.	Employees consistently follow quality control procedures.	157	4.22	0.842	—	5.7	9.6	42	42.7
IX.	There is a culture of continuous improvement in quality management practices.	157	4.54	0.703	—	1.3	8.3	26.1	64.3
Average		—	**4.31**	**0.976**	**3.23**	**4.08**	**7.61**	**28.37**	**58.9**

Source: Own Survey data (2026)

4.1.7. Findings from Desciptive analysis of training and human development

The descriptive analysis of the data related to training, human resource developement at EO demonstrates a strong organizational commitment to building employee capacity and achieving high QCP. The overall average mean score of 4.31 shows that most respondents agreed or strongly agreed with the positive statements, while the average standard deviation of 0.976 indicates moderate consistency in responses. Notably, the highest-rated item was the presence of a culture of continuous improvement in quality management practices, with a mean score of 4.54 and strong support from respondents. This was followed by high ratings for the achievement of planned quality standards and the effectiveness of training in enhancing employee skills, scoring 4.48 and 4.41 respectively.

Training-related responses also reflected a generally favorable perception. Employees acknowledged the organization's efforts in encouraging participation in relevant training opportunities and providing adequate training programs, with mean scores of 4.26 and 4.24. However, slightly lower scores were reported for the organization's investment in on-the-job training and mentorship programs, as well as the regular updating of training content to reflect industry best practices, which scored 4.13 and 4.18 respectively. These areas present opportunities for further improvement. Overall, the findings highlight that EO has cultivated a positive environment that prioritizes employee development and quality construction outcomes, supported by a culture of learning and continuous improvement. Refer table 10

Table 11: Shared organizational Value and Norms as an element of organizational culture

Items		N	M	St.Dv	SD (%)	D (%)	N (%)	A (%)	S A (%)
I.	Delays in communication often lead to rework or schedule disruptions.	157	4.32	0.786	0.6	3.2	6.4	42.7	47.1
II.	The organization provides adequate training programs to equip employees with necessary skills.	157	4.22	1.217	6.4	6.4	7.6	17.8	61.8
III.	Training programs are regularly updated to reflect industry best practices and new technologies.	157	4.28	1.091	5.1	4.5	5.1	28	57.3
IV.	Employees are encouraged to participate in relevant training and development opportunities.	157	4.34	1.036	3.8	5.1	3.8	27.4	59.9
V.	The organization invests in on-the-job training and mentorship programs.	157	4.21	0.981	3.2	5.1	5.1	40.8	45.9
VI.	Training programs are effective in improving employee knowledge and skills relevant to quality construction practices.	157	4.5	0.676	0.6	0.6	4.5	36.3	58
VII.	Construction projects meet or exceed planned quality standards.	157	4.39	0.896	1.3	3.2	10.8	24.8	59.9
VIII.	Defects and rework are minimized throughout the construction process because of effective training.	157	4.45	0.737		1.9	8.9	31.8	57.3
IX.	Employees consistently follow quality control procedures.	157	4.22	0.829		5.7	8.3	43.9	42
X.	There is a culture of continuous improvement in quality management practices.	157	4.53	0.721		2.5	5.7	28	63.7

Source: Own Survey data (2026)

4.1.8. Findings from discrptive analysis of Shared Values and Norms(Table 10)

The analysis of shared organizational values and norms reveals strong employee agreement on the factors that contribute to project success and quality management at Elmi Olindo Contractors P.L.C. A significant majority, 89.8 percent, agree that communication delays often cause rework or scheduling issues, emphasizing the importance of timely communication. Training programs are also viewed positively, with 79.6 percent affirming their adequacy in skill development and 85.3 percent acknowledging that they are regularly updated to reflect industry advancements. Additionally, 87.3 percent of employees feel encouraged to participate in training, and 86.7 percent appreciate the company's investment in on-the-job training and mentorship. The effectiveness of training is reinforced by 94.3 percent of respondents who agree it enhances knowledge and skills related to quality construction.

High agreement levels also reflect positive outcomes in project performance, with 84.7 percent of respondents stating that projects meet or exceed planned quality standards, and 89.1 percent noting a reduction in defects and rework due to training. While 86 percent report consistent adherence to quality control procedures, a small group remains neutral or disagreeing, indicating room for improvement. Most notably, a strong culture of continuous improvement is recognized by 91.7 percent of respondents. Overall, the findings suggest a deeply embedded culture that prioritizes communication, ongoing learning, and quality. Maintaining and strengthening these shared values will support ongoing performance improvement, minimize errors, and reinforce a proactive quality management approach.

4.2. Conclussion of findings from descriptive analysis

The descriptive findings highlight a strong organizational culture at Elmi Olindo Contractors P.L.C., marked by effective communication, quality-focused leadership, robust training programs, and shared values that support continuous improvement. High response rates and consistent agreement across various dimensions reflect a well-aligned workforce committed to construction quality. Minor areas for improvement include clearer meeting outcomes, more updated training content, and further reinforcement of quality control practices.

4.3. Correlation and Regression Analysis

4.3.1. Correlation

Correlation is a statistical method used to measure the strength and direction of the linear relationship between two variables. Pearson's correlation coefficient, which ranges from minus one to plus one, is the most commonly used measure. A value close to plus one indicates a strong positive relationship, a value close to minus one indicates a strong negative relationship, and a value near zero suggests little or no linear association.

According to Gravetter and Wallnau (2014), correlation is not only about identifying the presence of a relationship, but also quantifying its strength and direction. This is particularly useful in the early stages of research, where the objective is often to identify patterns or associations that may require further investigation through regression or experimental analysis. Importantly, while correlation can reveal associations, it does not imply causation. That is, just because two variables are correlated does not mean one causes the other.

Table 11: Pearson correlations

Correlations							
		Quality of construction projects	Leadership	Communication	Training	Organizational culture	Organizational values and norms
Quality of construction projects	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	157					
Leadership	Pearson Correlation	.624**	1				
	Sig. (2-tailed)	0.000					
	N	157	157				
Communication	Pearson Correlation	.710**	.735**	1			
	Sig. (2-tailed)	0.000	0.000				
	N	157	157	157			
Training	Pearson Correlation	.613**	.614**	.742**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
	N	157	157	157	157		
Organizational culture	Pearson Correlation	.789**	.591**	.764**	.734**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
	N	157	157	157	157	157	
Organizational values and norms	Pearson Correlation	.258**	.305**	.342**	.331**	.382**	1
	Sig. (2-tailed)	0.001	0.000	0.000	0.000	0.000	
	N	157	157	157	157	157	157
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: SPSS result, 2026

The correlation matrix presents the Pearson correlation coefficients between the QCP and key OC dimensions leadership, communication, training, OC, and organizational values and norms. All correlation values are positive and statistically significant at the 0.01 level, indicating a meaningful relationship between each factor and construction project quality. Notably, OC shows the strongest correlation with QCP, with a coefficient of 0.783, followed by communication at 0.708 and leadership at 0.620. This suggests that improvements in these cultural dimensions are strongly associated with enhanced project quality. Additionally, training, with a correlation of 0.612, and organizational values and norms, at 0.405, also show moderate to strong positive correlations, reinforcing their relevance in construction performance.

Furthermore, the matrix reveals strong interrelationships among the independent variables themselves, such as the high correlation between training and communication, which is 0.746, and between communication and leadership, which is 0.734. This implies that these elements of OC are not only individually important but also function cohesively as part of an integrated cultural system. The strong linkages between variables such as OC with leadership at 0.590, communication at 0.762, and training at 0.731 further emphasize that fostering a quality-oriented culture in construction projects depends on the synergy of these internal elements. Overall, the findings support the conclusion that a strong and collaborative OC significantly contributes to better construction project outcomes.

4.3.2. Testing assumptions of multiple linear regression

Testing multiple linear regression assumptions is essential to ensure valid and reliable results. In this study on the impact of organizational culture on construction quality at Elmi Olindo Contractors P.L.C., verifying these assumptions ensures the regression accurately reflects how factors like leadership, communication, training, and HR development influence project quality.

4.3.3. Multi collinearity Test

Multi collinearity test refers to the relationship among the independent and dependent variables. Multi collinearity exists when the independent variables are highly correlated when r = 0.9 and above(Julie, 2005).

Table 12: Multi collinearity test statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Organizational Culture	0.262	3.822
	Leadership	0.333	3.003
	Communication	0.428	2.336
	Training and Human Resource Development	0.255	3.916
	Shared Organizational Values and Norms	0.332	3.009

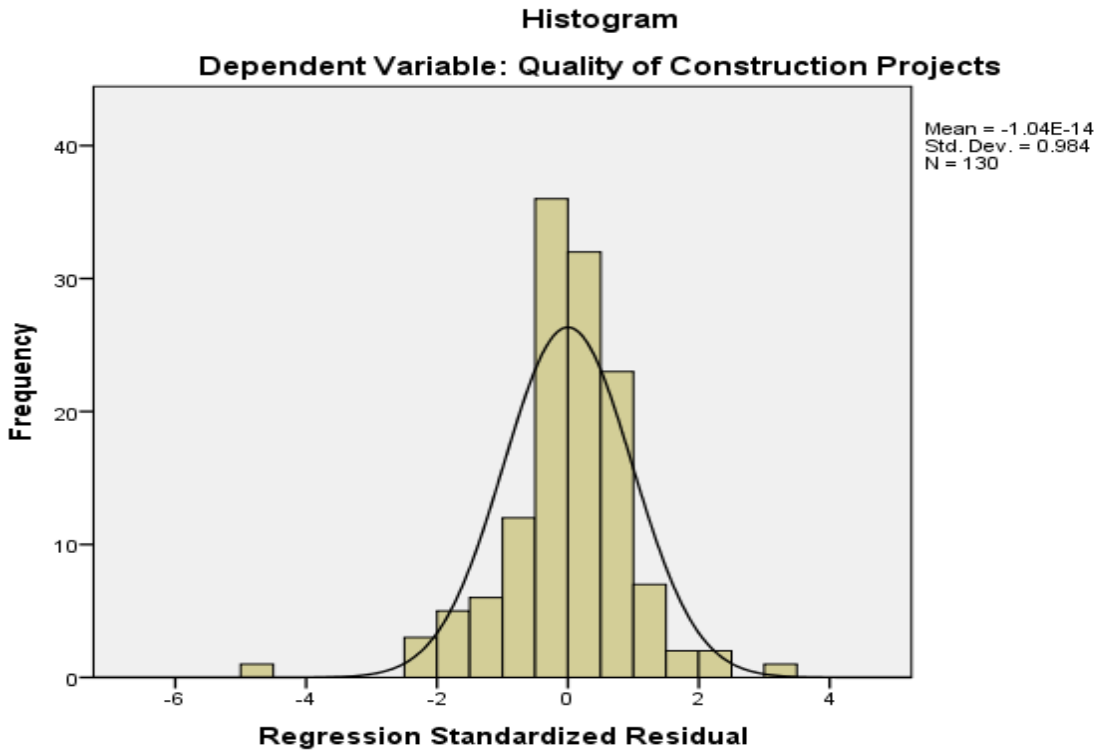
Source: SPSS result, 2026

The multicollinearity test in Table 12 shows that all predictor variables have acceptable Tolerance values ranging from 0.255 to 0.428 and VIF values ranging from 2.336 to 3.916, indicating no serious multicollinearity issues. Communication shows the least multicollinearity, while Training and Organizational Culture exhibit relatively higher VIFs but remain within safe limits. Overall, the variables are sufficiently independent for reliable regression analysis, though those with higher VIFs should be monitored in future models.

4.3.4. Test of Normality

A test of normality is a statistical method used to assess whether the data in a given data set shows a normal distribution, which is characterized by a symmetrical, bell-shaped curve (also known as a Gaussian distribution). This shape implies that most values cluster around the mean, with fewer values appearing as you move toward the extremes on either side. Normality is a critical assumption in many statistical analysis, including t-test, ANOVA and regression, as the validity of their results often depends on the assumption that the data is normally distributed.

Figure 2:Test of Normality



Source: SPSS result, 2025

In this research, the normality of the dependent variable was assessed through visual inspection of the histogram, which showed a bell-shaped, symmetrical curve indicating that the data approximates a normal distribution. This confirms that the assumption of normality is met and supports the use of parametric statistical methods.

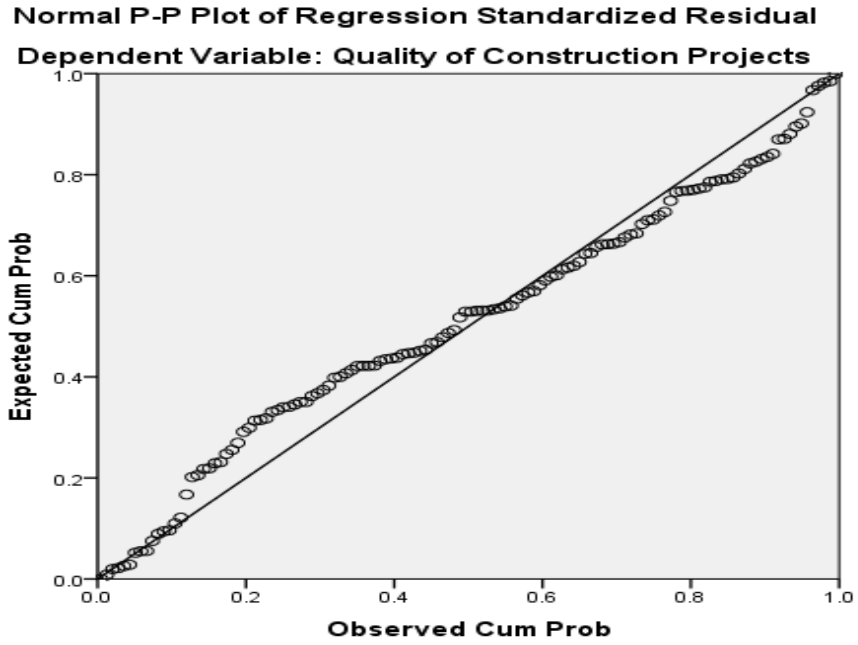
The histogram of the regression standardized residuals for the dependent variable, Quality of Construction Projects, further reinforces this. It shows a distribution that is roughly bell-shaped and centered around zero, with a mean of -1.04E-14 and a standard deviation of 0.984 both desirable in regression analysis. Although a few residuals lie at the extremes, their minimal number does not affect the overall normality. These results validate the normality assumption of the residuals, indicating the regression model is appropriate and the findings statistically reliable.

4.3.5. Test of linearity

The linearity assumption of multiple regression was examined using the scatter plot method, as recommended by Kothari (2004). The analysis revealed a linear relationship between the independent variables and the dependent variable, indicating that the data met the linearity requirements for regression

analysis. Moreover, the distribution of residuals was found to be approximately centered on a mean of zero, supporting the assumption that the residuals are normally distributed and that the linear model is appropriate for the data.

Figure 3: Test of linearity



Source: SPSS result, 2026

The normal P-P plot of the regression standardized residuals for the dependent variable, QCP, offers a visual check of the normality assumption in regression analysis. In this plot, the observed cumulative probabilities are compared to those expected from a normal distribution. The data points closely align with the diagonal reference line, indicating that the residuals are approximately normally distributed. Although slight deviations appear at the extremes, most points fall near the line, suggesting no significant violations of normality. This supports the validity of the regression model and confirms that the assumption of normally distributed residuals is reasonably met.

4.3.6. Multiple Regression Analysis

Regression analysis is a statistical technique used to examine the strength and nature of the relationship between a dependent variable and one or more independent variables. Specifically, it helps to understand how the average value of the dependent (criterion) variable changes in response to variations in any of the independent variables, while holding the other things constant.

In this study, regression analysis was employed to determine the extent to which overall constraction quality on factors namely Organizational Culture, Leadership , Communication , Training and Human Resource Development. To achieve this objective, the researcher utilized a multiple regression analysis model, as presented in the following table.

$$Y=\beta 0+\beta 1X1+\beta 2X2+\cdots +\beta kXk+\varepsilon$$

Table 13: Multiple Regression Analysis

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.813[a]	0.661	0.651	0.25851	1.815
a. Predictors: (Constant), Organizational values and norms, Leadership,					
b. Dependent Variable: Quality of construction projects					

Source: SPSS result, 2026

4.3.7. Findings from model summary

The model summary table provides key indicators of how well the regression model explains the variability in the quality of construction projects. The R value of 0.813 indicates a strong positive correlation between the combined independent variables—leadership, communication, training, organizational culture, and organizational values and norms—and the dependent variable. The R Square value of 0.661 shows that approximately 66.1% of the variance in construction project quality is explained by the model. This suggests that the selected organizational factors are highly relevant and collectively have a substantial impact on project quality.

The Adjusted R Square of 0.651 further confirms the model's reliability by accounting for the number of predictors and sample size, indicating that about 65.1% of the variation in project quality remains consistently explained even when adjusted for model complexity. The standard error of the estimate is 0.25851, indicating a relatively low average distance between observed and predicted values, which implies good model accuracy. Additionally, the Durbin-Watson statistic of 1.815 falls within the acceptable range of 1.5 to 2.5, suggesting that there is no significant

autocorrelation in the residuals. Overall, the model demonstrates a strong and valid fit for predicting construction project quality based on the organizational factors studied.

Table 14: ANOVA Table Of Analysis

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.307	5	4.461	66.761	.000[b]
	Residual	11.427	171	0.067		
	Total	33.735	176			
a. Dependent Variable: Quality of construction projects						
b. Predictors: (Constant), Organizational values and norms, Leadership, Organizational culture, Training,						

Source: SPSS result, 2026

4.3.8. Findings from ANNOVA

The ANOVA table summarizes the overall significance of the multiple regression model used to assess the influence of leadership, communication, training, organizational culture, and organizational values and norms on the quality of construction projects. The regression model is statistically significant, with an F-value of 66.761 and a significance level of 0.000. This indicates that the combined effect of the five predictors on the quality of construction projects is not due to chance and that the model as a whole provides a good fit for the data.

The sum of squares for the regression is 22.307, while the residual sum of squares is 11.427, out of a total sum of squares of 33.735. This shows that a substantial proportion of the variance in project quality is explained by the model. In particular, the model accounts for approximately two-thirds of the total variance, suggesting that the independent variables collectively have strong explanatory power for predicting construction project quality. These findings reinforce the relevance of the selected organizational factors in determining project success.

Table 15: Table of coeficients

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.269	0.233		5.453	0.000		
	Leadership	0.157	0.054	0.193	2.904	0.004	0.449	2.225
	Communication	0.144	0.075	0.165	1.912	0.058	0.266	3.757
	Training	-0.030	0.046	-0.048	-0.653	0.514	0.373	2.681
	Organizational culture	0.522	0.065	0.600	8.014	0.000	0.353	2.832
	Organizational values and norms	-0.058	0.046	-0.061	-1.259	0.210	0.847	1.180
a. Dependent Variable: Quality of construction projects								

Source: SPSS result, 2026

4.3.9. Findings from the regression anaalysis

The regression analysis was conducted to evaluate the influence of leadership, communication, training, OC, and organizational values and norms on the QCP. The results reveal that OC has the strongest and most statistically significant positive effect on project quality, with B = 0.522, β = 0.600, and p = 0.000. This indicates that improvements in OC are strongly associated with enhanced project outcomes. Leadership also shows a significant positive influence, with B = 0.157, β = 0.193, and p = 0.004, suggesting that effective leadership contributes meaningfully to construction quality. Meanwhile, communication presents a positive but marginally insignificant effect, with B = 0.144, β = 0.165, and p = 0.058, indicating that although it may positively affect quality, its influence was not strong enough to reach statistical significance within this model.

On the other hand, both training and organizational values and norms were found to have negative and statistically insignificant relationships with project quality, with B = -0.030, p = 0.514 and B = -0.058, p = 0.210 respectively. This may imply that the current training practices and organizational value systems are either ineffective or misaligned with project objectives. The

collinearity statistics indicate that multicollinearity is not a serious issue among the predictors, as all VIF values are below the threshold of 5, and tolerance values are above 0.2. Overall, the findings highlight the pivotal role of OC and leadership in driving construction project quality, while pointing to the need for further review and improvement in training and shared values and norms alignment practices.

4.4. Dicussion

The regression model demonstrates a strong and reliable fit, explaining about 66% of the variance in QCP through the combined influence of leadership, communication, training, OC, and organizational values and norms. The model is statistically significant and free from major issues like autocorrelation or multicollinearity. Among the predictors, OC has the strongest and most significant positive impact on QCP, followed by leadership, which also contributes positively and significantly. Communication shows a positive but marginally insignificant effect, while training and organizational values and norms unexpectedly exhibit negative and insignificant relationships, suggesting possible misalignment or ineffectiveness in these areas. Overall, the findings underscore the critical importance of fostering a strong organizational culture and effective leadership to enhance QCP, while indicating the need to reassess training and value systems.

CHAPTER FIVE:

CONCLUSIONS, RECOMMENDATIONS AND AREAS FOR FURTHURE STUDIES

5.1. Conclusions

From the analysis, it can be concluded that OC is a critical determinant of QCP at EO. Among the cultural dimensions, shared organizational values and norms are paramount, as they provide the foundation for collective commitment to quality standards and behaviors. Leadership's role, although positively related to quality in bivariate analysis, presents a more complicated relationship that may be influenced by leadership style, effectiveness, or organizational context; thus, its effect is not straightforward and warrants deeper investigation. Communication practices within the company are effective and serve as a vital link ensuring transparency, coordination, and stakeholder engagement, all of which support quality outcomes. The significant contribution of training and human resource development underscores the necessity of equipping employees with the skills and knowledge required to meet quality expectations consistently. Furthermore, the interdependence among these factors reflects that improving construction project quality requires a holistic approach to organizational culture that simultaneously addresses values, leadership, communication, and employee development. Consequently, construction firms should place strategic emphasis on fostering a positive culture to sustain and improve quality performance.

5.2. Recommendations

Based on the findings and conclusions, several recommendations are proposed for EO. to enhance the QCP.

- To improve leadership effectiveness through targeted leadership development programs that emphasize transformational and quality-oriented leadership styles. Leaders needs to be encouraged to engage actively with project teams, understanding their challenges and fostering an environment conducive to quality improvement.
- To refined communication systems continuously by standardizing communication protocols, leveraging modern communication technologies, and encouraging a culture of openness where feedback is valued and problem-solving is collaborative.

- To investment in comprehensive training programs should be maintained and expanded to ensure employees are equipped with up-to-date skills and knowledge. Continuous professional development and cross-functional training are essential to meet evolving quality requirements. Fi
- To cultivate positive organizational culture embedding quality values into organizational policies, recognizing and rewarding quality-driven behaviors, and addressing resistance to change through awareness and participatory management.

5.3. Areas for Future studies

Future research could build upon the findings of this study by examining leadership styles in greater depth, particularly to clarify the nature of leadership's influence on construction project quality.

- Qualitative methodologies such as interviews and focus groups could provide nuanced understanding of organizational culture dynamics and leadership practices within construction firms.
- Expanding the scope to include additional cultural dimensions such as organizational justice, empowerment, and innovation climate may yield a more comprehensive view of how culture shapes quality.
- Furthermore, studies incorporating multiple construction companies across various regions could enhance the generalizability of results.
- Longitudinal research designs would also allow for examination of how changes in organizational culture affect project quality over time.
- Finally, exploring the impact of external factors such as regulatory environments, market conditions, and client demands on the culture-quality relationship would add valuable context for practitioners and scholars alike.

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ANNEX

1. Questionnaire

Questions on Characteristics of Respondents

Please indicate your answer for general information by writing the numbers on the provided spaces.

1.1. General information of the respondents

1) **Gender**: _____

1) Male 2) Female

2) **Age:** _____

1) 20-25 3) 31-35 5) 41- 45

2) 26-30 4) 36-40 6) 46 & above

3) **Educational level**: _____

1) Diploma 3) MSc/MA/MBA

2) BSc/BA 4) Ph.D.

4) **Employment Category:** _____

1) Senior Project Manager 3) Office/ Site Engineer

2) Project Manager 4) Senior Technical support staff

5) Electrical and Mechanical engineers

6) **Years of experience:** _____

1) 1-5 years 2) 6 – 10 years 3) 11 – 15 years 4) > 15 years

2.2 Questions related to the impact of organizational culture on the quality of construction projects

This section aims to assess the influence of organizational culture on the quality of construction projects at Elmi Olindo Contractors P.L.C. Your honest feedback is crucial to this study. Please read each statement carefully and reflect on your opinion based on your experience working on construction projects. Please indicate with a check mark (√) the extent to which you agree or disagree with the following statements using a scale of 1-5, where: 1 stands for Strongly Disagree,

2 stands for Disagree, 3 stands for Neutral, 4 stands for Agree, and 5 stands for Strongly Agree.

No.	Description	5	4	3	2	1
2.2.1	**Questions on Organizational Culture**					
1	At Elmi Olindo, getting things right the first time is crucial.					
2	Mistakes are openly discussed and used as opportunities for learning in construction projects.					
3	Employees are encouraged to share ideas and suggestions for construction quality improvement.					
4	The organization's different departments collaborate effectively to achieve quality standards.					
5	The organization often prioritizes cost and time over quality, leading to shortcuts in projects to save money and time.					
6	Employees are experiencing pressure to meet unrealistic deadlines.					
7	My organization empowers me to have the authority and autonomy to manage my work.					
8	The goals within Elmi Olindo are well-aligned.					
9	There is a consistent set of values and norms in the organization					
10	Different departments within the organization are effectively coordinated to accomplish its goals.					
2.2.2	**Questions about the Quality of Construction Projects**					
1	The organization maintains a consistent level of high-quality materials in all of its construction projects.					
	Defects and rework occur occasionally on projects within the organization.					

2						
3	Projects are successfully finished within the designated timeline and budget					
4	Clients are highly satisfied with the final quality of construction projects.					
5	There is a clear process for identifying and resolving quality issues.					
6	The organization continually adopts improved ways of doing the jobs.					
7	Clients' and end users' feedback and recommendations are essential for ensuring the quality of construction projects within the organization.					
8	The organization has a clear mission that prioritizes quality.					
9	The employees are highly committed to delivering a high-quality project.					
10	The quality of construction projects is influenced by the flow of information within the organization.					

2.3 Questions related to the influence of Elements of Organizational Culture on Quality of Construction projects

This section aims to assess the influence of elements of organizational culture (Leadership, Communication, Training, and Human Resource Development) on the quality of construction projects at EO & Co. Please read each statement carefully and reflect on your opinion based on your experience working on construction projects. Please indicate with a check mark (√) the extent to which you agree or disagree with the following statements using a scale of 1-5, where: 1 stands for Strongly Disagree, 2 stands for Disagree, 3 stands for Neutral, 4 stands for Agree, and 5 stands for Strongly Agree."

No.	Description	5	4	3	2	1
2.3.1 Questions about Leadership						
1	Open communication and feedback among project members regarding goals and expectations are encouraged in EO & Co.					
2	The project managers empower and cultivate a collaborative and supportive work environment among team members.					
3	The project managers ensure that team members are held accountable and responsible for their exceptional performance to achieve high quality.					
4	The project leaders prioritize meeting deadlines over ensuring quality workmanship.					
5	The project leaders provide clear direction and guidance throughout the project lifecycle.					
6	There is a strong focus on continuous improvement in quality management practices.					

No.	Description	5	4	3	2	1
2.3.2 Questions about Communication						
1	Project information is communicated to all relevant stakeholders.					
2	There are established channels for regular communication updates and progress reports in EO & Co.					
3	Meetings are well-organized and focused and result in clear action items.					
4	Important information is documented and readily accessible to all team members.					
5	Different departments effectively communicate and collaborate to achieve quality					
6	There is a culture of open communication where concerns and problems can be freely discussed.					
7	Misunderstandings and misinterpretations of project information are rare.					
8	Delays in communication often lead to rework or schedule disruptions.					

No.	Description	5	4	3	2	1
2.3.3 Questions about Training and Human Resource Development						
1	The organization provides adequate training programs to equip employees with the necessary skills for their roles.					
2	Training programs are regularly updated to reflect industry best practices and new technologies.					
3	Employees are encouraged to participate in relevant training and development opportunities.					
4	The organization invests in on-the-job training and mentorship programs.					
5	Training programs are effective in improving employee knowledge and skills relevant to quality construction practices.					
6	Construction projects meet or exceed planned quality standards.					
7	Defects and rework are minimized throughout the construction process because of effective training.					
8	Employees consistently follow quality control procedures.					
9	There is a culture of continuous improvement in quality management practices.					

No.	Description	5	4	3	2	1
2.3.4.Questions about Shared Organizational Values and Norms						
1	Employees clearly understand the core values of the organization..					
2	The organization promotes ethical behavior and integrity in all operations.					
3	Employees consistently apply the company's values in their daily tasks.					
4	There is a strong culture of teamwork and mutual respect among staff.					
5	Management actively reinforces and models the organization's core values.					
6	Norms and expectations regarding quality are communicated across departments.					
7	Employees are encouraged to speak up about quality concerns without fear of retaliation.					
8	The organization has unwritten rules that promote attention to detail and accountability.					
9	Shared values help align employee behavior with project quality standards.					
10	There is consistency between what the organization says it values and what it practices.					