School of Postgraduate Studies

Department of Project Management

THE EFFECT OF PROJECT COMMUNICATION MANAGEMENT ON PROJECT PERFORMANCE

(A CASE OF FIVE STAR ELEVATOR MANUFACTURING PLC)

By

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Addis Ababa, Ethiopia
February, 2025

DECLARATION

I Milliyon Atalo the under signed, declare that this thesis entitled: the effect of project communication management on project performance a case of five-star elevator manufacturing plc is my original work. I have undertaken the research work independently with the guidance and support of the Temesgen Belayneh (PhD). This study has not been submitted for any degree or diploma program in this or any other institutions and that all sources of materials used for the thesis has been duly acknowledged.

Researcher's Name	Date	Signature
Milliyon Atalo	_____	_____

CERTIFICATE

This is to certify the thesis prepared by Milliyon Atalo entitled the effect of project communication management on project performance in case of five star elevator manufacturing plc and submitted in partial fulfilment of the requirements for the degree of masters science in project management analysis and evaluation complies with the regulations of the college and meets the accepted standards with respect to originally and quality.

Adviser's Name	**Date**	**Signature**
Temesgen Belayneh (PhD)	_____	_____

ST. MARY'S UNIVERSITY

SCHOOL OF POSTGRADUATE STUDIES

DEPARTMENT OF PROJECT MANAGEMENT

APPROVAL SHEET

THE EFFECT OF PROJECT COMMUNICATION MANAGEMENT ON PROJECT PERFORMANCE

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BY: MILLIYON ATALO

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ACKNOWLEDGEMENTS

First and for most I would like to thank my advisor Temesgen Belayneh (PhD) for his unreserved guidance, constructive comments and kind and polite treatment to the realization of this study. I would also like to thank employees and managers of Five Star Elevator Manufacturing PLC for providing the necessary inputs during the data collection process that helped me for the successful completion of my thesis. Finally, my deepest thank goes to my family and friends who have been devoting in sharing their knowledge, giving comments and suggestions on the work to conduct this thesis.

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ACRONYMS

PCM= Project Communication Management

AV= Audio Visual

SPSS= Statistical Package for Social Sciences

ANOVA=Analysis of Variance

R= Coefficient of Correlation

R Squared= Coefficient of determination

WBS = Work break down structure

PMI = Project Management Institute

PMBOK = Project Management Body of Knowledge

PCM = Project communication management

ABSTRACT

Effective Project Communication Management (PCM) is crucial for the successful execution of elevator installation projects, impacting key performance metrics such as project completion time, cost control, and quality. This study aims to explain the effects of PCM on the overall performance of elevator installation projects using a quantitative approach. Data were collected through questionnaires and interviews and analyzed using descriptive statistics, Pearson's correlation, and multiple regression techniques. The findings reveal strong positive correlations between communication strategies and project performance. conflict resolution and Information Flow also significantly impacted performance. However, Feedback Mechanisms and communication plan exhibited an unexpected negative correlation with performance, need improvement on well-structured communication, message coordination and suggesting areas for further investigation. The regression analysis confirmed that conflict resolution and Information Flow are the most significant predictors of project performance. The results emphasize the importance of effective communication in enhancing project performance and suggest areas for improving conflict resolution strategies and feedback mechanisms.

Keywords: *Stakeholder Engagement, Information Flow, Communication Channels, Conflict Resolution, Project Performance*

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Project is a complex, non-routine, one time effort limited by time, budget, and resource and performance specification designed to meet customer needs (Arslan 2009). Communication management is a process of supervising information transfer in all directions (upward, down ward, horizontally), which may be formal or informal. The communication will be with external stakeholders or between the team members of the company. Project communication management encompasses the processes, tools, and techniques used to facilitate the exchange of information among project stakeholders. It involves not only the transmission of data and updates but also the interpretation, feedback, and resolution of issues arising during project execution. Effective communication management ensures that stakeholders are adequately informed, engaged, and aligned with the project's objectives, thereby minimizing misunderstandings and conflicts that may impede progress.

Excellent communication is paramount to the success of any project. Research consistently highlights that poor communication is a leading cause of project failures. The Project Management Institute (PMI, 2021) reports that ineffective communication contributes to approximately 20% of project failures. This underscores the importance of robust communication strategies in ensuring project success. The Standish Group Chaos Report (2021) further reinforces this by identifying constant communication as a key factor in successful projects, while its absence is noted as a significant failure factor in IT projects. Effective communication management entails being present, engaged, and responsive to both the project's team and sponsors, addressing their concerns and challenges throughout the project's life cycle.

In today's dynamic and competitive business environment, effective project management has become indispensable for organizations aiming to achieve their strategic objectives efficiently and successfully. At the heart of successful project management lies effective communication, which serves as the lifeblood of project execution, coordination, and control. The ability to convey information, share ideas, and address challenges in a timely and clear manner can significantly impact the outcome of a project.

Project performance refers to how well a project meets the goals of the project that are assigned before implementing the project. And it can be characterized by its relevancy, impact and sustainability of the project. Project performance directly depends on project

managers communication management skills.

In the construction industry, communication is particularly critical as project managers spend a substantial portion of their time engaging with various stakeholders. Barriers to effective communication can significantly impact project outcomes, including delays, cost overruns, and compromised quality (Kuala Lumpur, Malaysia, 2022). Miscommunication can lead to misunderstandings and project delays, emphasizing the need for consistent and clear communication procedures (Čulo & Skendrović, 2021).

In Ethiopia there are numbers of foreign non-governmental organizations established by foreign owners for different purposes. Five-star elevator manufacturing plc is one of them established by chines man on elevator business. It works manufacturing, importing and installing elevators, escalators, and G power in our country. The main purpose of the company is profit maximization. The company start to control elevator industry in Ethiopian in short period of time and can attract many elevators technicians' interest at its starting period. But at this time its sailing rate decreases exponentially, and technicians are leaving the company reputedly. There is not any study concerning to this problem; why the sailing rate of product decrease and senior technicians leave the company. This research proposal seeks to investigate "The Effect of Project Communication Management on Project Performance," with a specific focus on Five Star Elevator Manufacturing PLC. The choice of Five Star Elevator Manufacturing PLC as the focal organization is motivated by its prominence in the elevator manufacturing industry and its significant reliance on project-based operations. By examining the communication practices within Five Star Elevator Manufacturing PLC, this study aims to shed light on the relationship between project communication management and project performance, ultimately contributing to both academic literature and practical project management strategies.

The significance of effective communication in project management cannot be overstated. According to the Project Management Institute (PMI), poor communication is cited as one of the primary causes of project failure, leading to delays, cost overruns, and stakeholder dissatisfaction. In contrast, projects that prioritize clear, timely, and transparent communication tend to achieve better outcomes in terms of schedule adherence, budget compliance, and stakeholder satisfaction. This underscores the critical role of project communication management in shaping project success.

1.2 Statement of the problem

The essential role of effective communication for project success is undeniable. Project communication management, one of the areas of project management, is considered to be of crucial importance to the success of the project (Ofori, 2013; Kerzner, 2013). Project communication management ensures timely and appropriate generation, collection, dissemination, storage, and disposition of project information. Open and clear communications are required among planners, implementers, and all levels of the organization for project success. effective communication is a key component of leadership, impacting team dynamics, stakeholder engagement, and overall project performance (Turner, J. R., & Müller, R. (2017) offer insightful explanations of the nature of leadership and communication, they frequently do not include empirical data that measures the precise ways in which particular communication techniques affect project performance indicators. Project communication plays a vital role, including stakeholder engagement, clarity of project goals, and the management of expectations. They emphasize that effective communication strategies lead to better alignment among stakeholders and improved project outcomes. (Baker, B. N., & Murphy, D. C. (2018). the quick development of communication technologies (such project management software and collaborative tools). To comprehend how these technologies impact project outcomes and communication efficacy, research is required.

Project management is a common strategy used in when studying communication. Including ideas from organizational behavior, sociology, and psychology could improve knowledge of communication dynamics and how they affect project success. The common barriers to effective communication, such as fragmented information flow, cultural differences, and the complexity of project environments.(Zhao, X., & Zuo, J. (2019)). barriers to project communication have an impact on the project's performance, thus planning work and the creation of common systems are necessary. Therefore, the study aims to examine the practice of project communication management, and relationship between project communication and project performance in elevator manufacturing at Supervisors of five-star elevator manufacturing plc.

1.3 Research Objective

1.3.1 General objective

The general objective of this research is to investigate the effect of project communication management on project performance within Five Star Elevator Manufacturing PLC.

1.3.2 Specific Objectives

1. To describe the key communication practices utilized in electromechanical construction projects.
2. To determine the strength and significance of the relationship between communication management strategies and project performance.
3. To identify major communication-related challenges and their frequency in electromechanical construction projects.
4. To examine the correlation between communication management effectiveness and key project performance indicators such as cost, time, and quality.
5. To assess the impact of stakeholder communication on project success

1.4 Research questions

1. What are the prevalent communication practices in electromechanical construction projects?
2. Is there a significant relationship between communication management strategies and project performance in electromechanical construction projects?
3. What are the major communication-related challenges faced by project managers in electromechanical construction projects?
4. How does effective communication management correlate with project performance outcomes such as cost, time, and quality?
5. What impact does stakeholder communication have on the success of electromechanical construction projects?

1.5 Significance of the Study

The findings of this research hold significant implications for both theory and practice in the field of project management. From a theoretical perspective, the study contributes to the existing body of knowledge by providing empirical evidence of the impact of project communication management on project performance, particularly within the context of the elevator manufacturing industry. Additionally, the identification of factors influencing

communication effectiveness can enrich theoretical models of project communication management, guiding future research endeavors in this area. From a practical standpoint, the insights generated from this research can inform project management practitioners, particularly those operating within project-based organizations like Five Star Elevator Manufacturing PLC. By understanding the key drivers of effective communication and implementing targeted improvements in communication processes and systems, organizations can enhance their project performance, mitigate risks, and achieve greater success in their project endeavors.

Finally, this research proposal seeks to explore the vital nexus between project communication management and project performance, with the ultimate aim of advancing knowledge, informing practice, and fostering excellence in project management within Five Star Elevator Manufacturing PLC and beyond. Through rigorous empirical investigation and thoughtful analysis, this study endeavors to make a meaningful contribution to the discipline of project management and pave the way for future research and innovation in this critical domain.

1.6 Scope of the study

The scope of the research is delimited to five-star elevator manufacturing plc projects out of many elevator manufacturing and installing companies found in Ethiopia. The scope of the study is delimited on one of the Project management Knowledge areas out of the ten project knowledge areas which is only project communication management.

1.7 Definition of significant terms

The following terms were used in this study. The meaning of each term in the context of this study is given below:

Communication Management: is a process of supervising information transfer in all directions (upward, downward, horizontally or diagonally), which may be formal or informal. He also states that project performance directly depends on Project manager's competence in managing communications (Kerzner, 2009).

Communication channel (Pattern): a regular and intelligible form or sequence discernible in the way in which something happens or is done" or "an excellent example for others to follow (Karolina Muszyńska, 2011).

Communication Methods- are standard methods to communication which are speaking, writing by a sender and listening or reading the receiver, accessed 4 May 2019,

Project communication- Project communication refers to information exchanges intended to create understanding among project stakeholders (Ruuska, 1996)

Project Performance: defining and evaluating project performance differs when different perspectives are employed (Shenhar et al. 1997; Chan and Chan 2004).

1.8 Organization of the study

This project paper covers the following areas: The first chapter contains the background of the study, the statement of the problem, purpose of the study, objectives, Research questions, significance of the study, scope of the study, and the definitions of significant terms. The second chapter which is the Literature Review containing the Introduction, Concept of communication, project communication management, project performance, project communication management influence on project Performance , Conceptual framework and Gaps in Literature Review and summary of the Literature review. The third chapter is the Research methodology and it contains the introduction, Research Design, Target population, Sample size and sample selection, Data Collection Instruments, Pre- testing, Validity, Reliability, Procedure of Data Collection, Methods of data Analysis, Operational Definition of the Variables and Ethical Considerations. Chapter four is Data analysis, presentation and interpretation. Chapter five is conclusion and recommendations containing introduction, conclusion, recommendations, and recommendation for further studies.

CHAPTER TWO

REVIEW OF LITERATURE

Project communication management plays a pivotal role in project success by facilitating the exchange of information, ideas, and feedback among project stakeholders. This section reviews existing literature on project communication management and its impact on project performance, drawing upon theoretical frameworks, empirical studies, and best practices in the field of project management.

2.1 Theoretical Foundations

At the core of project communication management lies the Communication Theory, which posits that effective communication is essential for achieving shared understanding and alignment among project stakeholders (Shirani et al., 2017). According to this theory, communication encompasses not only the transmission of messages but also the interpretation, feedback, and response mechanisms that facilitate mutual comprehension and coordination. Within the context of project management, effective communication is crucial for clarifying project objectives, allocating resources, managing risks, and resolving conflicts (Görög & Dömötör, 2016).

Drawing upon the Communication Accommodation Theory (CAT), project communication management can be conceptualized as a dynamic process of mutual adaptation and adjustment among project stakeholders (Gonzalez et al., 2019). CAT emphasizes the importance of linguistic and behavioral alignment in fostering rapport, trust, and collaboration among individuals from diverse backgrounds and perspectives. In the context of project teams, effective communication entails not only linguistic clarity but also cultural sensitivity, empathy, and flexibility in accommodating the communication preferences and needs of team members (Kraus et al., 2017).

2.1.1Types of Project Communication

There are various definitions of communication. PMI (2013, p.310-320) defines Communication as: The giving, receiving, processing and interpretation of information. Information can be conveyed verbally, non-verbally, actively, passively, formally, informally, consciously and unconsciously. The project manager and the Project Management Office (PMO) are in the key positions to develop and maintain all the communication links, both within the company and the project team, and outside the company with the client, contractors, suppliers, consultants, other stakeholders and interested parties. The purpose of a

project communication system is to transfer information from one team member to another. Several different communication models have been devised by several researchers among which Shonubi and Akintaro (2016), indicated the following:

David Berlo's Model of Communication: Send - Message – Channel -Receiver (Linear Communication Model)

Harold Lasswell's Communication Model: Who – What – Which -Whom – What effect; S.M.R.E Model of Communication: Communication explained in terms of input output relationship involving formulation, transmission, reception, and interception. S.M.R.E. stands for Source, Message, Receiver and Effect. The key components of the communication process are the sender who encodes and sends (transmits) the message, and the receiver who decodes and interprets the message. The receiver then feeds back a response to the sender and closes the loop. The communication model focuses on each element of the process to identify what should happen and to prevent misunderstanding.

2.1.2 Different Types of Communication for Effective Project Management

According to Michael Martinez PMP (2012), there are different types of communication for effective project management that depend on the following perspectives:

Project Perspective: from a project perspective, communication can be looked at as either internal or external. Internal communication is the communication that takes place between project team members. Generally, this type of communication is "raw." It may involve a lot of back-and-forth discussion as plans or issues are worked out. External communication is communication between project team members and the other project stakeholders. Examples include communication with internal and external customers, other projects, and the media. Generally, this type of communication is cleaned up or otherwise prepared before being presented or sent to the receiving party.

Organizational Perspective: Communication from an organizational perspective can be categorized as vertical, horizontal, or diagonal. This perspective takes into account the way organizations are structured. Vertical communication is the upward and downward communication flow that happens between different hierarchical levels of the organization. An example of upward communication is when a project team member provides the project manager with a status update of his assigned tasks. An example of downward communication is when the project manager shares the project goals with the project team. Horizontal communication refers to communication between people at the same organizational level.

An example of horizontal communication is when project team members discuss project topics with each other. Diagonal communication takes place between different functional divisions of the organization. Diagonal communication has become more important as matrix and project-based organizations become more common. To be effective in these types of organizations, a project manager has to be familiar with the different functions and managers within the organization and then plan his communications accordingly.

Formality Perspective: another way to look at project communication is on whether it is formal or informal. Some examples of formal communication include reports, presentations, and media releases. This type of communication is usually planned and takes some time and effort to prepare. Informal communication has increased as many projects start to use social networking. Many people don't put much thought into their informal communications. However, effective project managers realize this type of communication is just as important as formal communication. Whether formal or informal, you need to make sure you communicate with a purpose and that you put some thought into how you communicate in order to get the results you want.

Channel Perspective: project managers also need to give consideration to the communication channel they will deliver their message over. This perspective deals with how your message will be communicated. For example: - Verbal or Non-Verbal - Written or Oral - Face-to-Face or via Telephone

2.1.3 Methods of Communication

There are several communication methods used to share information among project stakeholders KsenijaCulo, Vladimir Skendrovic (2010, p. 229). These methods can be broadly classified into:

Interactive communication: Between two or more parties performing a multidirectional exchange of information. It is the most efficient way to ensure a common understanding by all participants on specified topics, and includes meetings, phone calls, video conferencing, etc. Push communication: Sent to specific recipients who need to know the information. This ensures that the information is distributed but does not certify that it actually reached or was understood by the intended audience. Push communication includes letters, memos, reports, emails, faxes, voice mails, press releases etc.

Pull communication: Used for very large volumes of information, or for very large audiences, that requires the recipients to access the communication content at their own discretion. These methods include intranet sites, e-learning, and knowledge repositories, etc.

2.1.4 Project Communication Management Process

Communication is a vital element of a well-managed project. There are two main groups of people with whom the project manager needs to ensure clear and effective communication, the stakeholders and the project team (Rajkumar, 2010). According to PMI's Pulse research on Essential role of communications report, 55 percent of Project Managers agree that effective communication with all stakeholders is the most critical success factor in project management. Qualitative research conducted by Beleiu, Cisan and Nistor (2015), on main factors influencing project success, 40% of project managers chose communication and consultation with stakeholders as a critical factor. Effective communication is one of the most important factors contributing to the success of a project.

Project Communications handbook 2nd edition p. 2, defines Project communication as the exchange of project-specific information with the emphasis on creating understanding between the sender and the receiver. PMI (PMI, 2013, p. 287) defines project communications management as the method that includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information. Successful communication is not only developing the plan, but also implementing the plan for continuous engagement with stakeholders (PMBOK, 2004) The Project Management Institute study notes that project communications management processes include; Identify Stakeholder, Plan Communications, Distribute Information, Manage Stakeholder Expectations, Report Performance

2.1.5 Evaluating the Effectiveness of Communication

An effective communication system, by which information can be exchanged in a clear and understandable manner is necessary, though not sufficient, for any project to succeed. Communication is the basis of every human interaction and the foundation of every community. It is the process by which information is exchanged between individuals through a common system of symbols (Holzman & Globerson, 2003) Kerzner (2001) suggests a graphical model for representation of responsibility matrix of communications management in project. The matrix provides an overall picture of the communications process during the project life cycle and answers the following questions: What information should be transferred? Who transfer the information and to whom? When should the information be transferred? How the information should be transferred?

From the study made by M. D. Murray,J. E. Tookey, A. Langford1 and C. Hardcastle (2000)

,the Construction Industry Institute (CII) from the USA identified six categories of communications effective as a measure of project communication effectiveness .i.e. accuracy, procedures, barriers, understanding, timeliness and completeness. For research purpose the measurement of general communication effectiveness was reduced to the gagging of the following four attributes:

Completeness – monitors whether the information transfers sustain all the requirements allocated to the transfers without any loss of relevant data.

Timing – monitors whether the information transfers, actually arrive within the assigned time frame.

Accuracy – monitors whether the transfers to and from, the receiver, are actually, clear, legible, understandable and precise.

Volume – monitors whether all the required information is transferred, while unnecessary and irrelevant information that might clog the system is rejected. These attributes, or dimensions, are equivalent to four parameters - breadth, depth, quality and timeliness – that affect the organizational knowledge as suggested by Alavi and Leidner (2001) in a discussion on information technology and knowledge management initiatives.

2.1.6 Project Success in Relation to Project Communication

Most of the earlier studies (1980s) which were concerned, being determined on a basis of time, cost and quality. Project effectiveness is usually referred as project success in most of the Project Management literature (Stamatia, K. Dr George, B. & Leif, H & Dr Tanev, 2012, p. 212-213). For the past several decades, it has been estimated that project managers spend about 90 percent of their time on communication-related issues.

This is why it is imperative to apply and manage communication in a project environment appropriately so that every project staff and stakeholder of a project can communicate effectively and efficiently for the success of a project. Poor communication is often used as a scapegoat during periods of adversity and disappointing project development. When unexpected issues, changes in plans and other common factors arise during project implementation, the phrase “it’s a communications issue” is often heard.

This umbrella term usually refers to a multitude of problems, all of which can affect the successful completion of a project. To avoid this pitfall, it is important that project managers and team leaders have the ability to communicate effectively and efficiently with a diverse set of stakeholders. These include anyone from senior executives and contractors, to technical specialists and various functional groups. Effective communication with a broad range of

stakeholders requires the project leader to possess a number of interpersonal skills, most of which center on communications.

2.2. Communication Technology

Communication technology refers to the various methods and systems that enable people to exchange information, ideas, and messages. It includes tools such as telephones, computers, the Internet, and mobile devices, as well as platforms like social media and video conferencing. These technologies have transformed how we communicate, allowing for instant global connections and the swift exchange of information across vast distances. The evolution of communication technology has had a profound impact on society, changing how we interact, work, and share information.

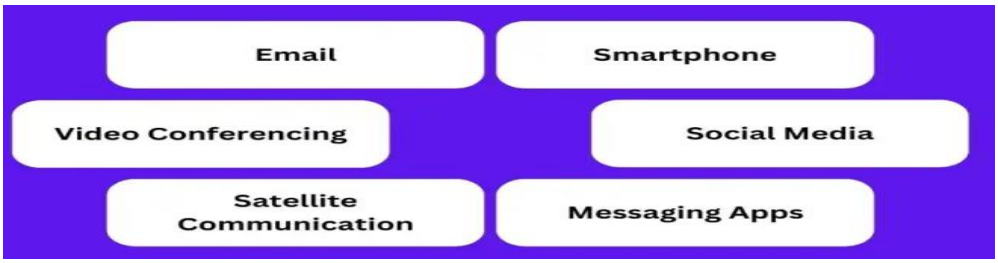


Figure 1 : Communication technology

The project environment plays a crucial role in determining the most suitable communication technology to be used by the team. Factors such as team size, geographical dispersion, cultural differences, and organizational structure all influence the choice of communication technology. For example, in a large and globally dispersed team, video conferencing tools like Zoom or Microsoft Teams may be more effective in fostering collaboration and communication. On the other hand, for smaller and co-located teams, instant messaging platforms like Slack or Microsoft Teams may suffice. It's important to assess the project environment and select the communication technology that best meets the team's needs. For instance, if the team members are scattered in different zones, using the internet is a good way to transfer information effectively among team members (PMBOK 6th Edition, 2017). Finally, all information channel through different communication technologies should be kept confidential among all team members.

2.3. Key Challenges in Communication

Figure 2: Key Challenges in Communication

Communication can bring numerous benefits to a team or organization, but it also comes with its fair share of challenges. Some key challenges in communication include:

1. Information Overload: In today's digital age, project managers are bombarded with a deluge of information from various sources. Distinguishing relevant information from noise can be overwhelming, leading to crucial details being missed. It can also be the case when project managers share information with stakeholders. The right amount and level of information to share will depend on each stakeholder group or individual.

2. Communication barriers can be a significant challenge for multidisciplinary teams. Differences in terminology, jargon, and cultural backgrounds can make it difficult for team members to understand each other and collaborate effectively. Project managers play a crucial role in ensuring that these barriers are addressed and overcome to facilitate smooth communication within the team.

By fostering an environment of open communication, actively listening to team members, and promoting mutual understanding, project managers can help bridge the gap created by these barriers and enhance overall teamwork and productivity.

3. lack of clarity in communication can lead to various issues in project management. Project managers need to ensure that all communication channels are clear and concise to avoid misunderstandings and confusion among team members. This helps in keeping everyone on the same page and ultimately leads to the successful completion of projects.

4. Remote Work Challenges This study certainly provides some insights on how project managers can overcome these challenges in remote work settings. To address time zone differences, project managers can set up clear communication protocols, establish overlapping working hours for team members in different time zones, and utilize tools like scheduling software to coordinate meetings and tasks efficiently.

These challenges underscore the importance of actively addressing communication issues, fostering a culture of open communication, and utilizing tools and strategies to enhance clarity and understanding in interactions.

2.4 Empirical Evidence

The importance of communication in the success of a project is immense and prior studies have analyzed and concluded the impact of communication on performance is vital.

Numerous studies have highlighted the importance of effective communications for project success (Biggs 1997). It was concluded in a study that the top 30 potential problems contributing to poor project performance could be classified under five categories, out of which communication problems are listed as the third category and all five categories involve communications to some extent (Thomas et al. 1998). For example, time delays and increased cost in construction projects can be traced back to poor coordination caused by inadequate, insufficient, inappropriate, inaccurate, inconsistent, late information or a combination of them all.

Empirical studies have provided empirical evidence of the significant impact of project communication management on various dimensions of project performance. For example, a study by Kerzner (2018) found a positive correlation between communication effectiveness and project success, as measured by key performance indicators such as schedule adherence, cost control, and stakeholder satisfaction. Similarly, research by Bakker et al. (2020) identified clear communication as a critical success factor in complex engineering projects, contributing to better decision-making, risk management, and conflict resolution.

Moreover, meta-analytic studies have confirmed the robust relationship between project communication management and project performance across diverse industries and organizational contexts (Dai & Wells, 2018). These studies have highlighted the role of communication processes, tools, and technologies in enhancing project coordination, collaboration, and knowledge sharing among team members (Möller et al., 2019). Furthermore, research by Huang et al. (2021) underscored the importance of proactive communication strategies in mitigating project risks and adapting to unforeseen challenges, particularly in dynamic and uncertain environments.

Jiang and Pretorius (2011) in their descriptive survey study of cross-cultural communication behaviors in international engineering projects from Chinese and South Africa perspectives showed that there is a significant and strong relationship between communication behavior and project management activities such as project communication, negotiation, conflict

resolution, contract process and project team building.

The communication methods that are the most important to use during execution of a project are written, oral and electronic communication of which written and oral communication are regarded as the most effective communication methods (Zulch, 2014).

A descriptive survey study by Linda Berg (2017) indicated that an appropriate choice of communication tools will likely have great impact on project performance as communication tools enable project communication. but also, of having good personal contact with team members, developing positive relationships and obeying fundamental rules of clear and positive communication (i.e., activities related to the emotional and practical categories of communication practices).

Bond-Barnard and Steyn (2013) in their study of the program benefits of improving project team communication through a contact center found out that by using a contact center to improve the communication between project team members, their perception of 26 communication effectiveness, quality of project deliverables, service delivery and customer satisfaction of the program dramatically increases.

With regard to organization structure of projects, a descriptive survey study by Jana et al (2012) on project communication in function, process and project-oriented industrial companies in Slovak Republic have found that process- oriented and project-oriented companies have better communication management during all project life cycle.

Arthur Ahimbisibwe and Sudi Nangoli (2012) study revealed that project communication, individual commitment, and social networks were significant predictors of project performance.

2.5 Best Practices and Recommendations

In light of the theoretical insights and empirical findings, several best practices and recommendations have been proposed to enhance project communication management and optimize project performance. Establishing clear communication channels and protocols to ensure the timely and accurate exchange of information among project stakeholders (Kerzner, 2018). Leveraging technology-enabled communication platforms and tools to facilitate real-time collaboration, document sharing, and virtual meetings (Bakker et al., 2020). Fostering a culture of open communication, trust, and transparency within project teams, where individuals feel empowered to voice their opinions, raise concerns, and seek feedback (Huang et al., 2021).

Providing training and development opportunities for project managers and team members to

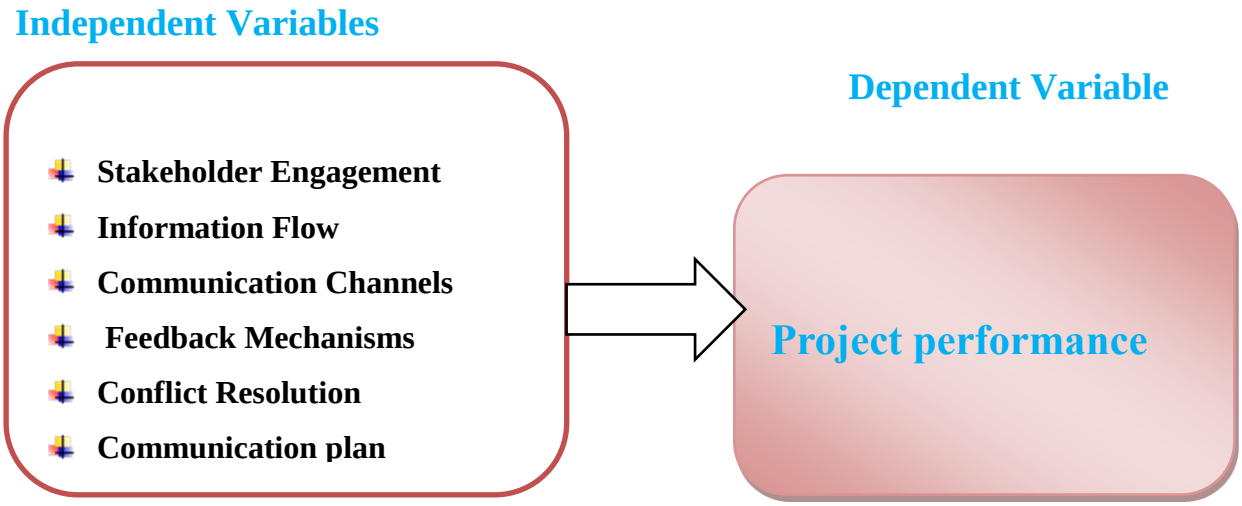
enhance their communication skills, conflict resolution abilities, and cultural intelligence (Görög & Dömötör, 2016).

2.6 Conceptual framework

A conceptual framework is a visual or written product that explains, either graphically or in narrative form, the main things to be studied, the key factors, variables, or constructs, and any presumed relationships among them. (John W. Creswell's 2018)

This study aimed to examine the various communication method and channel practiced by project team members five-star elevator manufacturing plc, to analyze the relationship between project communication management and project performance in five-star elevator manufacturing plc, and to determine barriers of communication and project performance. The independent variable for this study will be

1. Communication plan
2. Stakeholder Engagement
3. Information Flow
4. Communication Channels
5. Feedback Mechanisms
6. Conflict Resolution



Source: (Adamu et al., 2020).

Figure 3 : Conceptual framework of the study

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the study research approach and design, target population, data type and sources, data collection methods, data analysis techniques, data gathering tools, method of data collection and analysis, data analysis and presentation, that had employed in investigating the effect of project communication management on project performance within Five Star Elevator Manufacturing PLC. Besides, the section deals with a discussion on the ethical issues followed while conducting the study.

3.2 Research approach and design

This study applied quantitative approaches of research. The research design employed under this study was explanatory and also descriptive. The study was explanatory because it emphasized to explain the association between project communication management and project performance. It was partly descriptive because it attempts to describe and determine practice of project communication management (Stakeholder Engagement Information Flow, Communication Channels, Feedback Mechanisms, Conflict Resolution Communication plan in the context of five-star elevator manufacturing plc). The study adopts adopt a quantitative research method to obtain a comprehensive understanding of the relationship between project communication management and project performance.

3.3 Data Type and Source

The study had conducted by collecting data from both primary and secondary sources. Primary data were conducted from the respondent's base on a structurally design questionnaire and interview make with leaders and experts in the area of study. The survey questionnaire administers for employees and managers in a random sampling and purposive sampling technique with unstructured interview with leader of five-star elevator manufacturing plc who are the source of primary data. The researcher also uses secondary data- sources like 2018-2023 report and plan of five-star elevator manufacturing plc if possible. To extract as much information as possible as that helps the researcher in addressing the objective of the study. Questionnaires were distributed to employee and leaders of five-star elevator manufacturing plc.

3.4 Target population

Generally, the study of population refers to the total collection of elements which one will be like to study or make inferences (Igella, 2014). This study conducted in five-star elevator manufacturing plc The study population were the entire manager and technicians in different level in five-star elevator manufacturing plc, the study population were heterogeneous having different character. The total numbers of population for this study were 124 employees and managers who are working in five-star elevator manufacturing plc.

3.5 Data Collection methods

Data collection is the process of collecting and analyzing information on relevant variables in a predetermined methodical way so that one can respond to specific research questions, test hypothesis, and assess results. Data collection can be either qualitative or quantitative. In case of this study quantitative data gathering methods had applied. For quantitative data, survey questionnaire had administered to project managers, team members, and other key stakeholders with in Five Star Elevator Manufacturing PLC. The questionnaire includes closed-ended questions designed to assess perceptions of communication effectiveness, project performance metrics, and factors influencing project communication management. Likert scales used to measure the extent of agreement or disagreement with statements related to communication practices, project outcomes, and organizational factors.

3.6 Data Gathering Tools

The data gathering tools for this study were questionnaire, interview and document. These tools used to collect data from both primary and secondary sources necessary to examine and interpret the opinion of respondents to obtain reliable and objective information. The primary data are those which are collect afresh and for the first time, and thus happen to be original in character, the secondary data on the other hand will those which already collect by someone else and which already posse through the statistical process (Kothari, 2004). The primary data were collected using standardize questionnaire and interview from the leaders and employees of five-star elevator manufacturing plc.

3.7. Data Analysis Techniques

Data analysis the process of systematically applying statistical and or logical techniques to describe and illustrate, condense and recap, and evaluate data (shamoo and Resnik 2003). Statistical analysis software such as SPSS (Statistical Package for the Social Sciences) or SPSS used to analyze the Quantitative survey data. Descriptive statistics (e.g., means,

frequencies, percentages) had computed to summarize the responses to closed-ended survey questions. Inferential statistical techniques, such as correlation analysis and regression analysis, had employed to examine the relationships between project communication management variables and project performance outcomes.

3.8 Data Presentation

This study had employed quantitative method of data analysis. The collected data were organized in tabular form to analyze the quantitative data. After making the necessary coding, the data were analyzed using Statistical Packages for Social Science (SPSS- Version 26)**.** Both descriptive and inferential statistical procedures were employed to analyze the data. Descriptive statistical tools such as frequencies, percentages, means and standard deviations and inferential statistical tools such as correlation analysis and regression were used to analyze quantitative data (Best & Kahn, 2006).

3.9. Reliability and Validity Test

Reliability is the degree to which the measure of a construct is consistent or dependable. Internal consistency reliability is a measure of consistency between different items of the same construct (Bhattacherjee, 2012). Reliability is the extent with which findings repeat/consistent. Reliability refers to the accuracy and consistency of information attained in a study. Reliability is the consistence of a score from one occasion to the next occasion (Cooper and Schindler, 2011).

Cronbach alpha with acceptable cut off points 0.7 demonstrate that all attributes are internally consistent the reliability test for the instrument was used for the study which was conducted using SPSS the results shows that the items will be reliable. Therefore, in this study, to test the reliability of the research instruments, a pilot study will carry out before the final research will conduct from (10%) of the sample size. On the other hand, the researcher will carry out validity test. According to Bhattacherjee (2012), validity means the extent to which a measure adequately represents the underlying construct that it is supposed to measure. It concerns with how well the concept is defined by the measure. The researcher used content validity of instruments; initially the researcher developed questionnaires and interview questions under close guidance of advisor. In addition, the researcher used experts in the field to ensure that the instrument contains all the aspects of the subject matter validate the instrument.

Table 1 : **Reliability Test of Measurement Items**

Variables	Cronbach alpha value	Decision
Stakeholder Engagement	0.889	Reliable
Information Flow	0.822	Reliable
Communication Channels	0.823	Reliable
Feedback Mechanisms	0.837	Reliable
Conflict Resolution	0.843	Reliable
Communication Plan	0.800	Reliable
Project performance	0.874	Reliable
Composite Reliability	0.841	Reliable

Source: Field Survey, 2024

In this study, in order to test the reliability of the research instruments, a pilot test was carried out before the final research was commenced from 12(10%) participants. The alpha value for, Stakeholder Engagement, Information Flow, Communication Channels, project, Feedback Mechanisms and Conflict Resolution, project performance is 0.800, 0.889, 0.822, 0.823, 0.837, 0.843 and 0.874, The overall alpha value for all measurement items used in this study is 0.84114, which is considered to have very good reliability; this implies that there is a very good internal consistency among measurement items.

3.10 Model Specification

A model that incorporates more than one independent variable is known as multiple regression models. Regression according to McNabb (2009) helps to estimate the value of one variable from the value of other variables. The underlying importance of regression is to determine whether changes in one variable were influenced change in another. The purpose of using multiple regressions in this study is to determine the contribution that communication management practices which constitute the independent variables in this model formulation made to the change in project performance which is the dependent variable. Moreover, multiple regressions prefer when there are more than one independent variable influencing the dependent variable (Pallant, 2009). This allows the individual independent variable to have its coefficient which is a measure of its influence on the dependent variable. The regression equation for this study is

$Y = A0 + A1X1 + A2X2 + A3X3 + A4X4 + A5X5 + A6X6 + \Sigma$

Where Y = Dependent variable (project performance)

A0 = Constant (point of interception). This becomes project performance level if the values of

X1, X2, X3, and X4 are zero.

X1 =Measured value for Stakeholder engagement

X2 =Measured value for information flow

X3 =Measured value for communication channel

X4 =Measured value for feedback mechanism

X5= Measured value for conflict resolution

X6= Measured value for communication plan

Σ = Error term describes the effect on Y of all other factors other than stake holder engagement, information flow, communication channel, feedback mechanism, conflict resolution and communication plan. The implication of this equation is that as X1, X2, X3, X4, X5, X6 change, project performance (Y) equally changes.

3.11 Ethical Considerations

This research had adhered to ethical principles and guidelines for research involving human participants. Informed consent will be obtained from all participants, and their confidentiality and anonymity will be maintained throughout the research process. Participants had assured of their right to withdraw from the study at any time without penalty. Any potential conflicts of interest had disclosed, and appropriate measures had taken to minimize bias and ensure the integrity and validity of the research findings.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter covers data analysis, presentation and interpretation of the general information of the respondents which includes the study of the respondents' demographics. It also tackles the research questions where each of the questions is answered by the analysis of the obtained data and presented through tables. The practice of project communication management and its impact on project performance is evaluated by the research findings obtained and analyzed using frequencies, correlation, regression and percentages of the responses given. The chapter also gives the summary of the analysis.

4.1.1 Demography of the participants.

In the study, the researcher collected data from 93.5% (n=124) of the sampled population. This is good as compared to the 75 % recommended by Mugenda (2009) in her description of the required sample, (n=1) were missing, Table 2 below illustrates this information.

Table 2 : Demography of population

No	Demographic characters	Scales	Frequency	Percentage
1.	Age	20-30	38	30.6
2.		31-40	41	33.1
3.		41-50	33	26.6
4.		51-60	12	9.7
5.	Sex	Male	100	80.6
6.		Female	24	19.4
7.	Educational level	Below diploma	4	3.2
8.		Diploma	38	30.7
9.		Bachelor degree	65	52.4
10.		Masters	17	13.7
11.	Experiences in projects	0-3years	57	46
12.		4-7 years	39	31.5

13.		8-10 years	18	14.5
14.		>10 years	10	8

As shown in table 4.1 Respondents were asked about their age and analysis was done using frequencies and percentages. Majority, 33.1% (n=41) of the respondents were aged between 31-40 years, 30.6% (n=38) were 20-30 years, 26.6% (n=33) were aged between 41-50 years, while 9.7% (n=12) were aged between of 51-60 years, this indicates that most respondents were young and their age lies between 20-51 years. Respondents were asked about their gender and analysis was done using frequencies and percentages. 80.6% (n=100) of the respondents were male while 19.4% (n=24) were female, this indicates that majority of the respondents were male. Respondents were asked about their education level and analysis was done using frequencies and percentages. Majority 52.4% (n=65) of the respondents had a Bachelor degree, 30.7% (n=38) had diploma, 13.7% (n=17) had Master's Degree, and 3.2% (n=4) were below diploma. This clearly indicates that most of the respondents were completed first Degree implies that the respondents have educational knowledge enough to thoroughly respond to the area of the study. Respondents were asked about their experience in a project and analysis was done using frequencies and percentages. Majority 46% (n=57) of the respondents had experience of between 0-3 years, 31.5% (n=39) had experience between 4-7 years, 14.5% (n=18) had experience of between 8-10 years, and 8%(n=10) had experience above 10 years. This clearly indicates that most of the respondents were less experienced (0-3 years) and are less familiar with terms used in responding on the area of the study.

4.2 Responses of the employees

Table 3: Descriptive Statistics of Communication Plan

Statements	SD	DA	N	A	SA	Mean	Std deviation
1.1 The project communication plan clearly outlines communication objectives, stakeholders, and methods	3	8	4	37	71	4.37	0.944
1.2 The communication plan is regularly updated to reflect changes in project requirements.	11	7	4	50	51	4.00	1.221
1.3 Team members are aware of their roles and responsibilities regarding communication as outlined in the plan.	6	12	1	81	23	3.84	1.003
1.4 The communication plan effectively addresses communication needs across different project phases.	4	7	3	51	58	3.99	1.327
1.5 Overall, how well do you think the communication plan is implemented in this project?	4	7	3	51	58	3.999	1.309

Source: Survey Questionnaires, 2024

A significant majority (57.7%) agree that the communication plan clearly outlines objectives, stakeholders, and methods, indicating strong initial clarity. While 41.5% agree that the plan is regularly updated, a notable 14.6% disagree (combining SD and DA), suggesting room for improvement in adaptability to changing project needs. A large portion (65.9%) feels team members understand their communication roles.

However, there's still a small percentage (14.7%) that disagrees, indicating potential gaps in awareness. Both questions about the effectiveness of the communication plan across different phases and its overall implementation received similar responses. Around 41.5% are neutral, while 47.2% feel positively about its effectiveness, indicating general satisfaction but also highlighting a significant number of neutral responses that could suggest ambivalence.

Table 4: Descriptive Statistics of stakeholder engagement

Statements	SD	DA	N	A	SA	Mean	Std deviation
2.1 Stakeholders are regularly informed about project progress and updates.	4	10	5	41	63	4.21	1.065
2.2 Stakeholders are actively involved in decision-making processes when appropriate.	5	7	3	41	67	4.28	1.044
2.3 Feedback from stakeholders is taken into consideration when making project decisions.	4	10	5	63	41	4.03	0.999
2.4 Stakeholders express satisfaction with the level of communication they receive.	6	10	8	67	32	3.89	1.042
2.5 Overall, how satisfied are you with stakeholder engagement in this project?	10	11	6	68	28	3.76	1.131

Source: Survey Questionnaires, 2024.

A majority of 63 respondents (51.2%) strongly agree that stakeholders are regularly informed about project progress. Combined with the 41 respondents (33.3%) who agree, this indicates a robust perception of effective communication with stakeholders. Here, 67 respondents (54.5%) strongly agree that stakeholders are actively involved in decision-making processes, with an additional 41 respondents (33.3%) agreeing. This suggests a strong belief in stakeholder inclusion, critical for project success.

While 63 respondents (51.2%) agree that feedback from stakeholders is taken into consideration, there's a notable 14 respondents (11.3%) who disagree (combining SD and DA). This indicates an opportunity for improvement in how stakeholder feedback is utilized. A total of 67 respondents (54.5%) agree that stakeholder's express satisfaction with the level of communication they receive. However, with 6 respondents (4.9%) strongly disagreeing, it suggests that while most are satisfied, some may feel their needs are not fully met. For overall satisfaction, 68 respondents (55.3%) agree that they are satisfied with stakeholder engagement. The 28 respondents (22.8%) who express a neutral stance highlight a significant number who may feel uncertain about their engagement experience.

Table 5: Descriptive Statistics of Information Flow

Statements	SD	DA	N	A	SA	mean	Std deviation
3.1 Information is communicated to team members in a timely manner.	14	50	6	25	28	3.02	1.411
3.2 Information distributed is accurate and relevant to project tasks.	11	14	2	62	24	3.45	1.368
3.3 The communication channels used facilitate effective sharing of information.	10	12	7	76	18	3.65	1.101
3.4 There are clear guidelines on how information should be documented and accessed.	6	17	3	73	24	3.75	1.076
3.5 Overall, how effective do you find the flow of information in this project?	7	17	4	50	45	3.93	1.168

Source: Survey Questionnaires, 2024

A notable 64 respondents (52.1%) either disagree (combining SD and DA) or are neutral about the statement that information is communicated in a timely manner. Only 28 respondents (22.8%) strongly agree, indicating that timeliness is a concern among a significant portion of the team.

While 62 respondents (50.4%) agree that the information distributed is accurate and relevant, the presence of 25 respondents (20.3%) who disagree suggests there may be issues with the relevance or accuracy of some communications. A majority, 76 respondents (61.7%), agree that the communication channels facilitate effective sharing of information, which is a positive indicator.

However, 22 respondents (17.9%) disagree, highlighting a potential area for improvement in the chosen channels. A strong 97 respondents (78.8%) either agree or strongly agree that there are clear guidelines for documenting and accessing information. This reflects positively on the project's organizational structure regarding information management. For the overall effectiveness of information flow, 95 respondents (77.3%) either agree or strongly agree that they find it effective. However, the 24 respondents (19.5%) who are neutral or disagree suggest that there may still be a lack of clarity or satisfaction among some team members.

Table 6 : Descriptive Statistics of Communication Channel

Statements	SD	DA	N	A	SA	Mean	Std deviation
4.1 Email communication is used effectively to convey important project information.	4	8	8	35	68	4.26	1.055
4.2 Project management tools/software is utilized efficiently for collaboration.	4	8	7	79	25	3.92	0.902
4.3 Communication channels used are accessible to all relevant stakeholders.	2	11	4	53	53	4.17	0.973
4.4 Overall, how satisfied are you with the communication channels used in this project?	17	8	8	68	22	3.57	1.255
4.5 Meetings are scheduled at appropriate intervals to discuss project progress.	8	13	4	63	35	3.85	1.145

Source: Survey Questionnaires, 2024

A strong majority, 68 respondents (55.3%), strongly agree that email communication is used effectively to convey important project information. This suggests that team members find email to be a reliable channel for crucial updates. Similarly, 79 respondents (64.2%) agree that project management tools and software are utilized efficiently for collaboration. This high level of agreement indicates effective use of technology to support team interactions and project tasks. There is a balanced response regarding the accessibility of communication channels, with 53 respondents (43.1%) agreeing and another 53 respondents (43.1%) strongly agreeing.

However, the presence of 13 respondents (10.5%) who disagree indicates that there may be some barriers to access for certain stakeholders. Overall satisfaction with communication channels shows that 68 respondents (55.3%) are satisfied, but with 25 respondents (20.3%) expressing a neutral stance and 17 respondents (13.8%) disagreeing, there's a clear indication that not all team members feel completely satisfied with the channels used. A total of 63 respondents (51.2%) agree that meetings are scheduled at appropriate intervals, which is a positive sign for project progress discussions. However, the 21 respondents (17.1%) who

disagree suggest there may be room for improvement in how meetings are timed and organized.

Table 7 : Descriptive Statistics of Feedback Mechanism

Statements	SD	DA	N	A	SA	Mean	Std deviation
5.1 There are opportunities for team members to provide feedback on project communication.	2	7	1	86	27	4.04	0.772
5.2 Feedback received on project communication is acknowledged and addressed promptly.	3	17	1	66	36	3.93	1.038
5.3 Team members feel comfortable expressing concerns or suggestions regarding communication.	5	11	3	83	21	3.85	0.950
5.4 There is a structured process in place for collecting and analysing feedback on communication.	2	7	1	86	27	4.07	0.726
5.5 Overall, how well do you think feedback mechanisms are implemented in this project?	3	17	1	66	36	3.93	1.034

Source: Survey Questionnaires, 2024

A strong majority of 113 respondents (91.9%) agree that there are opportunities for team members to provide feedback on project communication, with 86 respondents (69.9%) strongly agreeing. This suggests a positive environment for sharing thoughts and ideas. While 66 respondents (53.7%) feel that feedback is acknowledged and addressed promptly, 20 respondents (16.2%) (Combining SD and DA) express concern about this process. This indicates that while many feel heard, there is still room for improvement in the responsiveness to feedback. A significant 104 respondents (84.6%) feel comfortable expressing concerns or suggestions about communication, reflecting a supportive atmosphere.

However, the 16 respondents (13.0%) who disagree indicate that some team members may still hesitate to share their thoughts. Similar to question 5.1, 86 respondents (69.9%) agree

that there is a structured process for collecting and analyzing feedback on communication. This consistency suggests that the organization prioritizes feedback mechanisms.

Table 8 : Descriptive Statistics of Conflict Resolution

Statements	SD	DA	N	A	SA	Mean	Std deviation
6.1 Communication channels effectively manage and resolve conflicts among team members.	4	8	9	30	72	4.28	1.068
6.2 Misunderstandings are addressed promptly through clear communication.	4	8	7	80	24	3.91	0.896
6.3 There are established protocols for escalating communication-related conflicts.	2	11	4	34	72	4.333.67	1.012
6.4 Team members feel supported in resolving communication issues that arise.	16	8	7	61	31	3.77	1.284
6.5 Overall, how satisfied are you with the conflict resolution processes related to communication in this project?	7	15	5	68	28	3.77	1.107

Source: Survey Questionnaires, 2024

The vast majority of 102 respondents (82.9%) concur that team members' conflicts may be readily resolved when communication channels are managed well. Although 104 respondents (84.5%) concur that there are misunderstandings in communications, providing a rapid solution will help everyone communicate well. Establish guidelines for handling communication-related disputes that escalate so that all disputes are handled according to them. The company will prepare these protocols by analyzing the lift installation process because 106 respondents (86.1%) agree with this concept. on fixing problems with communication 24 respondents (19.5%) expressed dissatisfaction with the company's management for failing to provide the help needed to resolve problems. The majority of workers are happy with the conflict resolution procedure, but the company will strengthen communication and standards to make it better.

Table 9 : Descriptive Statistics of project performance

Statements	SD	DA	N	A	SA	Mean	Std deviation
7.1 Quality control measures ensured that Elevator installations met or exceeded standards.	12	23	7	63	18	3.43	1.215
7.2 Inspections and testing procedures for Elevator installation were rigorous and effective.	7	8	11	69	28	3.01	1.334
7.3 Any deficiencies identified during quality checks were promptly addressed and resolved.	11	21	4	69	18	3.52	1.169
7.4 Overall, how satisfied are you with the quality assurance processes related to electromechanical work in this project?	10	23	3	68	19	3.53	1.169
7.5 Client expectations regarding Elevator installations were clearly understood and met.	13	12	7	46	45	3.81	1.289
7.6 Communication with the client regarding Elevator installations progress and issues was clear and proactive.	27	14	8	58	16	3.18	1.385
7.7 Client feedback on Elevator installations and performance has been positive.	12	23	7	63	18	3.42	1.228
7.8 Overall, how satisfied do you think the client is with the Elevator installations aspects of this construction project?	3	23	2	54	41	3.88	1.128

Source: Survey Questionnaires, 2024

A majority (65.8%) agree that quality control measures ensured standards were met. Minorities (28.5%) disagrees or strongly disagree so the company will be check standards of quality and improve on the group of quality member efficiency. Inspections and Testing

78.8 % agree that inspections and testing were effective and improve the quality of elevator installation 12 % express some level of disagreement they need training to inhace their ability. Deficiencies Addressed 70.7% agree that deficiencies were promptly resolved and 26% disagree or strongly disagree there is communication gap on addressing we must improve on communication. Satisfaction with Quality Assurance 70.6% is satisfied with quality assurance processes and 26.8% show some dissatisfaction company work to improve communication between assurance and technicians. Client Expectations Met 74% agree that client expectations were met and 20.4% disagree we must improve some customer engagement to enhance project performance. Communication with Client 60.2% perceives communication as clear and proactive and 33.1% disagree or strongly disagree that mean there is communication gap between client and company we give clear information for better understanding. Positive Client Feedback 65.8% state that client feedback has been positive and 28.5% disagree because of some material delivery delaines issue they will work to improve deliver material on time to resolve problem. Overall, Client Satisfaction 77.3% believe the client is satisfied with the project's aspects and 21.1% are not confident in client satisfaction. Overall, there is general satisfaction with the electromechanical aspects, though some areas like inspections and communication show room for improvement.

4.3. Pearson correlation Analysis

The researcher performed a bivariate correlation analysis to identify the strength and direction of association between the independent and dependent variables of the study. Pearson's Correlation Coefficient-Correlation is a technique for investigating the relationship between two quantitative, continuous variables. In this study Pearson's correlation coefficient (r) is a measure of the strength of the association between the independent and dependent variables. Alwadaei (2010) suggested that if correlation (r) is 0.000 it is said to no correlation, if it is between 0.01-0.09 it is very weak, if it is 0.10-0.29 the correlation is weak, if it is between 0.30-059 the correlation is moderate if it is between 0.60-0.79 the correlation is strong and if it is between 0.80-1.0 the correlation is very strong. Therefore, the correlation of measurement items in this study is descried based (Alwadaei, 2010) description in this study. Table 4.3 below clearly depicts the Pearson correlation coefficient results between predictors (Communication Plan, Stakeholder Engagement, Information Flow, Communication Channels, Feedback Mechanisms and Conflict Resolution) and the dependent variable (project performance).

4.4 Correlation analysis

Table 10: Correlations

		CP	SE	IF	CC	FM	CR	PP
CP	Pearson Correlation	1	.984**	.946**	.983**	.931**	.980**	.907**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	123	123	123	123	123	123	123
SE	Pearson Correlation	.984**	1	.947**	.988**	.963**	.986**	.905**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000
	N	123	123	123	123	123	123	123
IF	Pearson Correlation	.946**	.947**	1	.964**	.918**	.959**	.967**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
	N	123	123	123	123	123	123	123
CC	Pearson Correlation	.983**	.988**	.964**	1	.963**	.992**	.926**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
	N	123	123	123	123	123	123	123
FM	Pearson Correlation	.931**	.963**	.918**	.963**	1	.955**	.853**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	123	123	123	123	123	123	123
CR	Pearson Correlation	.980**	.986**	.959**	.992**	.955**	1	.930**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	123	123	123	123	123	123	123
PP	Pearson Correlation	.907**	.905**	.967**	.926**	.853**	.930**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	

N	**123**	**123**	**123**	**123**	**123**	**123**	**123**

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

The correlation matrix reveals strong positive relationships among the seven variables related to organizational processes and performance. Communication Plan exhibits a robust positive correlation with all other variables, highlighting its central role in enhancing various aspects of organizational effectiveness. Specifically, it is strongly associated with Stakeholder Engagement (r = 0.984), Information Flow (r = 0.946), Communication Channels (r = 0.983), Feedback Mechanisms (r = 0.931), Conflict Resolution (r = 0.980), and Performance (r = 0.907), all with statistical significance at the 0.01 level.

Stakeholder Engagement shows even stronger positive correlations with Feedback Mechanisms (r = 0.963), Conflict Resolution (r = 0.986), and Performance (r = 0.905). These correlations indicate that effective stakeholder engagement is crucial for improved feedback, better conflict resolution, and higher overall performance. The correlations between Stakeholder Engagement and Information Flow (r = 0.947), as well as Communication Channels (r = 0.988), further underscore the importance of stakeholder engagement in facilitating effective communication.

Information Flow is positively correlated with Communication Channels (r = 0.964), Feedback Mechanisms (r = 0.918), Conflict Resolution (r = 0.959), and Performance (r = 0.967). These correlations suggest that efficient information flow supports better communication channels, enhances feedback mechanisms, improves conflict resolution, and contributes to higher performance outcomes.

Communication Channels have a significant correlation with Feedback Mechanisms (r = 0.963), and strong correlations with Conflict Resolution (r = 0.992) and Performance (r = 0.926). This indicates that effective communication channels facilitate feedback and are crucial for resolving conflicts and achieving better performance.

Feedback Mechanisms show strong positive correlations with Conflict Resolution (r = 0.955) and Performance (r = 0.853), suggesting that effective feedback is essential for resolving conflicts and enhancing performance. Finally, Conflict Resolution is positively correlated with Performance (r = 0.930), indicating that better conflict resolution contributes to improved overall performance. In summary, the analysis demonstrates that strong correlations exist between communication strategies, stakeholder engagement, information flow, and feedback mechanisms, all of which are integral to enhancing performance and resolving

conflicts effectively. The results highlight the interconnected nature of these variables, suggesting that improvements in one area are likely to lead to positive outcomes in others.

4.5. Regression Assumption

To minimize the influence of potential violations, normality, linearity, homoscedasticity and multi collinearity were tested. The results of these assumptions were interpreted below.

Normality: when draw a histogram of the residuals are normally distributed. Even though the distribution is slightly skewed, but it is not hugely deviated from being normal distribution we can say that this distribution satisfies the normality. As a result of the histogram residuals assumption is a bit skewed, that means the assumption is satisfied.

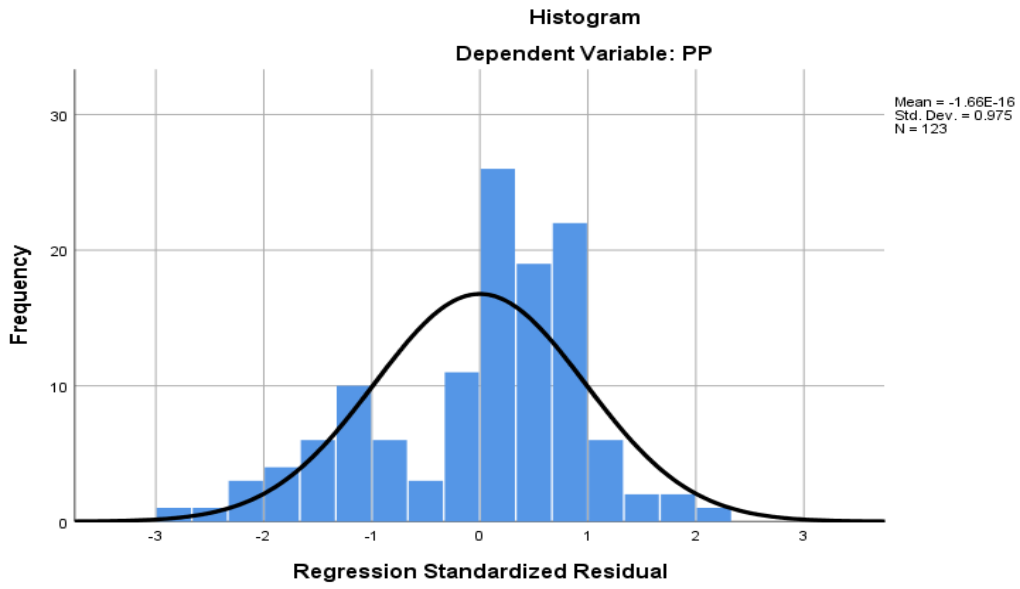


Figure 4: Histogram normality assumption measure

Linearity: the relationship between the dependent and independent variable should be linear in respect to their parameter, which is checked by the scatter plot of dependent variable to that of standardize predicted. As it has indicated below, the plot shows that there is approximately linear relationship between project performance and the set of predictor variables represented by standardized predicted value

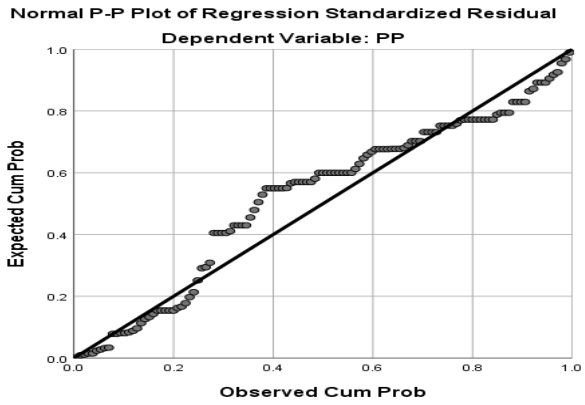


Figure 5 : Linearity Assumption

Constant variance (Homoscedasticity): the third assumption of multiple linear regressions is error assumption that is error terms should have a constant variance; if this assumption is violated there is a problem of homoscedasticity, which is a problem of data to be treated before analysis. This can be checked by drawing the scatter plot of standardize residual versus standardize predicted value. To attain this assumption, the distribution or the scattered ness of the point on the graph should be random. As indicated below the distribution of points has not any pattern which is random, so the assumption of constant variance was attained.

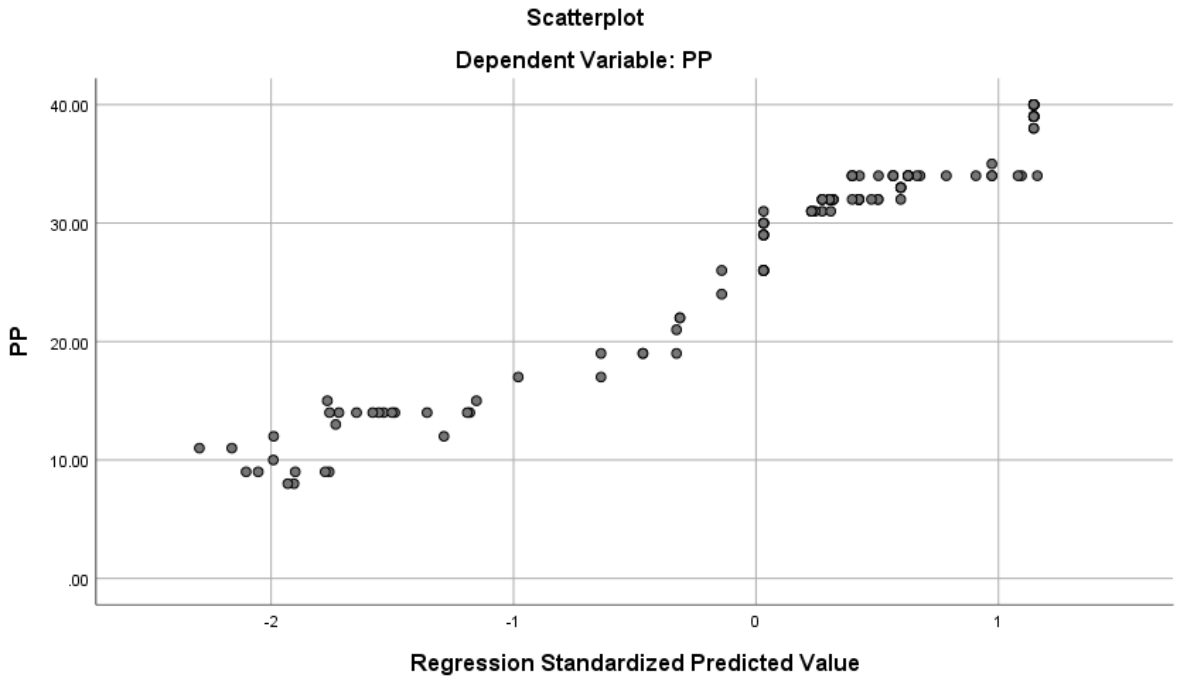


Figure 6 : Constant variance (Homoscedasticity)

Table 11 : Multi Collinearity

Model		Tolerance	VIF
1	(Constant)		
	CP	.412	4.157
	SE	.310	4.618
	IF	.508	2.706
	CC	.211	5.094
	FM	.451	3.975
	CR	.314	4.493

The collinearity statistics provide insights into the potential multi collinearity issues among the predictor variables in the regression model. Tolerance values indicate the proportion of variance in a predictor that is not explained by the other predictors, while Variance Inflation Factor (VIF) measures how much the variance of an estimated regression coefficient increases due to collinearity.

In this model, the Tolerance values range from 0.211 to 0.508, and the corresponding VIF values range from 2.706 to 5.094. Generally, tolerance values below 0.2 or VIF values above

10 suggest severe multi collinearity. In this case, all VIF values are below 10, and tolerance values are above 0.2, indicating that while there is some degree of collinearity, it is not severe.

Communication Plan has a tolerance of 0.412 and a VIF of 4.157, suggesting that it is moderately collinear with other variables but not excessively so. Stakeholder Engagement shows a tolerance of 0.310 and a VIF of 4.618, which indicates a higher level of collinearity but still within acceptable limits. Information Flow has a tolerance of 0.508 and a VIF of 2.706, reflecting relatively low collinearity. Communication Channels has the lowest a tolerance of 0.211 and the highest VIF of 5.094, indicating the highest level of collinearity among the predictors. Feedback Mechanisms has a tolerance of 0.451 and a VIF of 3.975, showing moderate collinearity. Conflict Resolution has tolerance of 0.314 and VIF 4.493 indicating moderate collinearity. Overall, the collinearity statistics suggest that while there is some multi collinearity present, it is not extreme. The VIF values indicate that multi collinearity is a consideration but not likely to severely distort the regression coefficients. Therefore, the predictors are reasonably independent of each other, which is important for the interpretation of the regression model.

4.6. Multiple Regressions

Multiple linear regression analysis was applied to test how far Communication Plan, Stakeholder Engagement, Information Flow, Communication Channels, Feedback Mechanisms and Conflict Resolution had impact on project performance. Higher value of R2 represents greater explanatory power of the regression equation. In addition, multiple regression analysis was carried out to know which independent variables among Communication Plan, Stakeholder Engagement, Information Flow, Communication Channels, Feedback Mechanisms and Conflict Resolution affects more the dependent variable.

Table 12 : Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.978[a]	.957	.955	1.03002

a. Predictors: (Constant), CR, FM, IF, CP, SE, CC

b. Dependent Variable: PP

The regression analysis provides a robust understanding of how various predictors influence organizational performance. The model summary reveals a high correlation between the predictors and performance, with an R value of 0.978, indicating a strong positive relationship. The R^2 value of 0.957 suggests that approximately 95.7% of the variance in performance is explained by the model, which is further supported by an adjusted R^2 of 0.955, showing that the model accounts for the number of predictors effectively. The standard error of the estimate, 1.03002, indicates a reasonable fit of the model to the data.

Table 13: ANOVA

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10661.039	6	1776.840	431.169	.000[b]
	Residual	478.034	116	4.121		
	Total	11139.073	122			

a. Dependent Variable: PP

b. Predictors: (Constant), CR, FM, IF, CP, SE, CC

The ANOVA results demonstrate the model's overall significance, with an F-value of 431.169 and a p-value of 0.000, confirming that the predictors collectively have a significant impact on performance. The sum of squares for regression (10661.039) compared to the residual sum of squares (478.034) shows that a substantial portion of the variance in performance is explained by the model.

Table 14 : Coefficient

		B	**Std. Error**	**Beta**		
1	(Constant)	2.538	1.039		2.443	.016
	CP	-.741	.235	-.434	-3.156	.002
	SE	.282	.310	.150	.912	.364
	IF	1.613	.123	.970	13.146	.000
	CC	.129	.401	.068	.321	.749
	FM	-1.141	.198	-.509	-5.777	.000
	CR	1.296	.305	.696	4.246	.000

a. Dependent Variable: PP

Examining the coefficients, information flow has the strongest effect on performance with a coefficient of 1.613, a standardized beta of 0.970, and a highly significant p-value of 0.000, highlighting its critical role in improving performance. Conflict resolution also significantly impacts performance with a coefficient of 1.296 and a beta of 0.696, and a p-value of 0.000. feedback mechanism shows a negative effect with a coefficient of 1.141 and a significance level of 0.000, though its impact is less pronounced compared to conflict resolution and Information Flow. Communication Channels has a smallest effect with a coefficient of 0.129 and a p-value of 0.749, indicating not significance. Stakeholder engagement has effect with coefficient of 0.282 and p-value 0.364 indicating not significant.

Communication plan has a negative coefficient of -0.741 and a significance level of 0.002, suggesting an unexpected inverse relationship with performance that might warrant further exploration.

In summary, the results underscore the importance of conflict resolution and Information Flow as key predictors of performance, with stakeholder engagement and Communication Channels also contributing positively. The negative impact of Feedback Mechanisms and communication plan is unusual and could benefit from additional investigation, but stakeholder engagement and communication channel do not appear to significantly affect performance in this model.

4.7. Summary

Interpreting the results in the context of the role of effective communication management in elevator installation projects at five star involves examining how communication influences various aspects of project performance. Here's an interpretation of the results based on the provided questions:

Role of Effective Communication Management: Effective communication management is crucial in enhancing the overall performance of elevator installation projects at five star. Communication channels that are clear and timely ensure that all team members are informed about project updates, changes, and requirements. This alignment helps in preventing misunderstandings, reducing conflicts, and ensuring that all project phases are executed smoothly. Participants acknowledging the effectiveness of email communication and project management tools; it is evident that robust communication practices are integral to maintaining project cohesion and efficiency.

Influence on Planning and Coordination: Effective communication significantly influences the planning and coordination of elevator installation projects at five stars. For instance, the positive feedback on the use of project management tools and email communication indicates that these methods facilitate better coordination and planning. When information is shared promptly and accurately, it enables project teams to align their efforts, schedule tasks efficiently, and make informed decisions. This results in streamlined operations and better synchronization among various project stakeholders, enhancing overall project execution.

Impact on Technical Implementation: Clear and consistent communication impacts the technical implementation of elevator installation systems by ensuring that technical requirements, design specifications, and installation procedures are well-understood and followed. The positive assessment of the accuracy and relevance of distributed information (suggests that technical teams receive the necessary details to execute their tasks effectively. However, occasional discrepancies highlighted by a small percentage of respondents indicate that improving clarity and consistency could further enhance the technical implementation and reduce errors.

Contribution to Cost Management and Timelines: Communication management contributes to efficient cost management and adherence to project timelines by ensuring that all stakeholders are aware of budgetary constraints, project schedules, and any changes. The mixed feedback on satisfaction with communication channels points to a need for improvement in how cost and timeline-related information is communicated. Effective communication helps in early identification of potential cost overruns or delays, enabling timely corrective actions to stay within budget and meet deadlines.

Quality Assurance and Client Satisfaction: Communication management plays a vital role in quality assurance and enhancing client satisfaction. Positive feedback on the processes for addressing deficiencies and the structured approach to feedback collection indicates that effective communication helps in maintaining high-quality standards and addressing issues promptly. Furthermore, the generally favourable responses regarding client expectations and feedback suggest that clear communication contributes to meeting client needs and improving their satisfaction. Nonetheless, addressing the concerns raised by a small percentage of respondents about quality assurance and client feedback could further enhance these aspects.

In summary, effective communication management at five stars is integral to the success of elevator installation projects. It impacts various facets including planning and coordination,

technical implementation, cost management, and quality assurance. While there is generally positive feedback, addressing areas of concern can further improve project outcomes and client satisfaction.

4.8. Discussion

The findings from the regression analysis offer valuable insights into the relationships between various organizational processes and performance. The high R^2 value of 0.957 underscores the model's robustness in explaining nearly 96% of the variance in performance, suggesting that the included predictors—Stakeholder Engagement, Information Flow, Communication Plan, Communication Channels, Feedback Mechanisms, and Conflict Resolution—collectively contribute significantly to performance outcomes.

Information Flow emerges as the most influential predictor, with a standardized coefficient of 0.970 and a p-value of 0.000. This result supports the communication and information flow theories, which emphasize that efficient dissemination and receipt of information, are crucial for organizational effectiveness (Daft & Lengel, 1986). Empirical research similarly underscores that organizations with robust information systems and practices tend to perform better (e.g., Chen et al., 2010). Effective information flow facilitates decision-making and operational efficiency, directly influencing performance.

Conflict resolution is also influential predictor, with a standardized coefficient of 0.696 and a highly significant p-value of 0.000. Theoretically, effective conflict resolution should lead to better performance by reducing disruptions and fostering a collaborative work environment (Thomas & Kilmann, 1974).

The Communication Plan exhibit a surprising negative effect on performance, with a coefficient of -0.434 and a p-value of 0.002. This finding is unexpected as the theoretical framework of strategic communication, which argues that well-structured communication plans contribute to organizational success by aligning messaging and facilitating coordination (Grunig & Hunt, 1984). Empirical evidence also supports this, indicating that strategic communication planning is associated with improved organizational outcomes (e.g., McCoy & Evans, 2010).

Communication Channels have a non-significant positive effect with a coefficient of 0.068 and a p-value of 0.749. Theoretically, the effectiveness of communication channels is critical in ensuring that information reaches all relevant stakeholders efficiently (Shannon & Weaver, 1949). Empirical as theoretical frameworks typically argue studies suggest that diverse and

effective communication channels enhance organizational performance by improving internal and external communication (e.g., Fulk et al., 1996).

In contrast, Feedback Mechanisms exhibit a surprising negative effect on performance, with a coefficient of -0.509 and a p-value of 0.000. This finding is unexpected, that feedback mechanisms are vital for organizational learning and performance improvement (Ashford & Cummings, 1983). The negative result could be attributed to potential issues such as feedback overload or ineffective feedback practices that might hinder rather than help performance. This result suggests a need for further investigation into how feedback is implemented and its impact on performance.

Stake holder engagement has non-significant effect on project performance on this study. This does not align with theoretical perspectives on stakeholder theory, which posits that actively engaging stakeholders can lead to improved organizational outcomes by addressing their needs and concerns (Freeman, 1984). Empirically, studies have consistently demonstrated that effective stakeholder engagement is linked to better performance outcomes across various sectors (e.g., Agle et al., 1999; Mitchell et al., 1997). However, the lack of significant impact in this study might indicate that stake holder engagement either not being utilized effectively or that the effects on performance are less direct than other factors. Overall, the findings highlight the critical role of conflict resolution and Information Flow in enhancing organizational performance, consistent with both theoretical and empirical frameworks. The positive effects of stake holder engagement and Communication Channels further support the importance of strategic communication practices. However, the unexpected negative impact of communication plan and feedback mechanism and the non-significant effect of Communication Chanell and stake holder engagement warrant further exploration to understand their roles better and refine organizational strategies accordingly.

CHAPTE FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Introduction

The main purpose of this thesis is to assess the effect of project communication management on the overall performance of elevator industry projects. The first section of chapter five mainly deals with the summary findings of the study based on the analysis and interpretations of data gathered from primary sources collected from respondents. The second section is about the conclusion and the third section is about recommendations.

5.2. Summary of the major findings

The descriptive statistics reveal a diverse respondent profile across several dimensions. Most respondents are aged between 31-40 years (33.1%), with a significant representation of younger adults (20-30 years, 30.6%). The gender distribution is skewed towards males (80.6 %). Educational qualifications are primarily at the degree level (52.4%), with fewer holding diplomas (30.7 %) or master's degrees (13.7%). In terms of work experience, respondents are fairly distributed across categories, with a notable concentration in the 0-3 years range (46 %) and from 4-7 years range (31.5 %).

Strong Positive Correlation Between Communication and Performance Project communication management (PCM) strategies, including stakeholder engagement, information flow, communication channels, and conflict resolution, show a strong positive correlation with project performance.

Pearson's correlation analysis indicates that information flow (r=0.967) and conflict resolution (r=0.930) are the strongest predictors of project success. Challenges in Communication Management Feedback Mechanisms and Communication Plan Unexpectedly, these showed a negative correlation with project performance, indicating that while communication exists, it may not be effectively structured or coordinated. A delays in Information Flow a significant portion of employees felt that information was not always timely or accurate, leading to misunderstandings and project inefficiencies.

Impact of Communication Strategies Conflict Resolution and Information Flow were identified as the most critical factors in ensuring project success. Stakeholder Engagement showed strong influence, with active involvement in decision-making improving overall satisfaction and performance. Communication Channels (email, meetings, project management tools) were widely used but required better accessibility and clarity.

Regression model indicated that 95.7% of project performance variability is explained by communication management factors. Information flow and conflict resolution had the highest predictive value for project success.

5.3. Conclusion

The main conclusions of the study corresponding to research objectives are summarized here under.

1. Describing Key Communication Practices: Descriptive statistics reveal that effective communication practices in elevator projects at five star elevator manufacturing plc include the use of information flow regular updates through diverse communication channels, and comprehensive communication plans. The conflict resolution mechanism between stake holders they participate on elevator project need rules and protocols .The majority of respondents reported positive experiences with email and project management tools for information dissemination, suggesting these methods are crucial for maintaining project alignment and facilitating collaboration. Additionally, the structured protocols for feedback and are recognized, though there are communication plan areas needing refinement. These insights highlight the importance of a multifaceted communication approach in managing complex elevator projects.

2. **Determining the Strength and Significance of Communication Management Strategies:** Regression analysis demonstrates that communication management strategies have a significant impact on project performance in elevator construction projects. The analysis reveals strong positive relationships between effective communication practices and key performance outcomes, such as timely project completion and adherence to quality standards. This correlation underscores that strategic communication practices—such as well-defined conflict resolution and efficient Information Flow are critical in enhancing overall project performance. However, the results also indicate areas where communication management strategies may not fully translate into performance improvements, particularly concerning feedback mechanisms and communication plan.

3. Identifying Major Communication-Related Challenges: Descriptive statistics highlight that communication-related challenges in elevator projects often revolve around issues such as delays in information dissemination, unclear feedback mechanisms, and It will be

challenging to support work across the organization with an unstructured communication plan.The frequency of these challenges points to significant areas where communication practices need improvement. For instance, while many respondents appreciate the stake holder engagement, there are recurring problems with feedback processing and response times. Addressing these challenges by refining communication protocols and enhancing responsiveness can mitigate their impact on project outcomes.

4. Examining Correlation between Communication Management Effectiveness and Project Performance Indicators: The analysis shows a positive correlation between communication management effectiveness and key project performance indicators, including cost control, project timelines, and quality of work. Effective communication practices, such as clear and timely information flow and conflict resolution mechanisms, contribute to better management of project costs and schedules, and higher quality outputs. Conversely, ineffective communication can lead to budget overruns, delays, and quality issues. This correlation underscores the importance of robust communication strategies in achieving desired project outcomes and maintaining project integrity.

5. Assessing the Impact of information flow and conflict resolution on Project Success: Regression and correlation analysis reveal that information flow and conflict resolution has a significant positive impact on project success in Elevator projects. Effective information flow between team members, channels that information flow and the documentation method it highly impact on project performance. Conflict resolution management and organizational communication protocols are used to improve projects and facilitate work.

5.4 Recommendations

To address the specific needs and challenges identified in the analysis of communication management for elevator projects at five-star elevator manufacturing plc, the following tailored recommendations can enhance overall performance: By implementing these specific recommendations, can enhance stakeholder engagement, improve information flow, and refine communication and feedback mechanisms. This targeted approach will help address identified challenges, streamline project processes, and ultimately lead to improved project performance and client satisfaction

- **Enhance Stakeholder Engagement: Recommendation:** Implement a structured stakeholder engagement framework that includes regular, scheduled updates and feedback

sessions specifically tailored to the needs of different stakeholder groups in elevator projects. Develop targeted communication plans for each group, such as clients, contractors, and team members, to ensure their concerns and needs are proactively addressed. For example, establish monthly progress meetings with key stakeholders and create detailed project reports to keep them informed and engaged.

- **Improve Information Flow: Recommendation:** Invest in an integrated communication platform that centralizes project information, such as project management software with real-time updates and document-sharing capabilities. Ensure that all team members and stakeholders have access to this platform and are trained on its use. Implement automated notifications for critical updates and changes to prevent information delays and ensure that everyone involved is on the same page. Regularly audit the effectiveness of this platform and gather feedback to make necessary adjustments.

- **Strengthen Communication Plans: Recommendation:** Develop a detailed communication plan specific to elevator projects, outlining key messages, target audiences, and communication methods. Include protocols for handling project changes, delays, and technical issues. Regularly review and update this plan at project milestones or when significant changes occur. For instance, update the plan to reflect new project phases or adjust communication strategies based on stakeholder feedback and project performance metrics.

- **Optimize Communication Channels: Recommendation:** Evaluate and diversify communication channels used within organization to include a mix of digital tools (e.g., instant messaging, email, video conferencing) and traditional methods (e.g., in-person meetings). Ensure that channels are integrated, with clear guidelines on when and how to use each. For example, use video conferences for complex discussions and emails for formal updates, ensuring all channels are accessible and user-friendly for all team members and stakeholders.

- **Reevaluate Feedback Mechanisms: Recommendation:** Review current feedback mechanisms to identify areas where feedback might be overwhelming or ineffective. Implement a streamlined feedback process that focuses on actionable insights and reduces redundancy. For instance, create a feedback portal where stakeholders can submit

concerns and suggestions in a structured format, and establish a regular review cycle to address and integrate this feedback into project plans.

- **Enhance Conflict Resolution Practices: Recommendation:** Assess the existing conflict resolution strategies to ensure they are aligned with the needs of projects. Develop and communicate clear procedures for escalating and resolving conflicts, including designated conflict resolution teams and tools. For example, set up a conflict resolution committee that meets bi-weekly to review ongoing issues and provide support to project teams, ensuring that conflicts are addressed promptly and constructively.

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APPENDIX

ST MARY's UNIVERSITY

Master of Project Management Questionnaire on practice of project communication management and project performance in case of Five Star Elevator Manufacturing plc

Dear Participants: My name is Milliyon Atalo kassa, I am a PM student at **St Mary's University**. As part of my PM project work, I am studying the project communication management practice and project performance in Five Star Elevator Manufacturing plc I kindly request you to participate in this research study by completing the attached questionnaire. The information you provide will be used purely for academic purpose and will be kept confidential and please do not write your name. As well I sincerely request you to respond to the questions as honestly as possible and return the completed questionnaires. Knowing that your time is valuable please, please take few minutes of your time to complete the questionnaire. Thank you very much your time and assistance in my educational endeavors.

I. DEMOGRAPHIC PROFILES OF RESPONDENTS

Please provide me with some information about yourself. Please make a cross "**(×)** or √"

1. **What is your age in years?**

☐ 20-30 years ☐ 30-40yrs ☐ 40-50yrs ☐ 50 years and above

2). **Sex:**

☐ Male ☐ Female

3) Level of Education

☐ Below Diploma ☐ Diploma ☐ bachelor's degree ☐ Master's degree

4). What is your role in the project?

☐ Junior ☐ technician ☐ technician 2 ☐ senior ☐ supervisor ☐ manager

5) How many years of experience do you have in project works?

☐ 0-3 years ☐ 4-7 years ☐ 8-10 years ☐ 16-20 years ☐ above 10 years

II Questionnaires the Effect of Project Communication Management on Project Performance the Case of five star elevator manufacturing PLC the table below shows the descriptive statements Effects of Project Communication Management on Performance of elevator installation Construction Projects five star elevator manufacturing PLC**.** For each statement, please indicate to which degree you display the behavior described. The questionnaires were collected from different sources to answer the basic research questions and to achieve the research objectives.

Circle or tick on the answer, which is appropriate for you

1. Strongly Disagree (SD) 2. Disagree (D) 3. Neutral (N) 4. Agree (A) 5. Strongly agree (SA)

Statements		**SD**	**D**	**N**	**A**	**SA**
1	**Communication Plan**:	1	2	3	4	5
1.1	The project communication plan clearly outlines communication objectives, stakeholders, and methods.					
1.2	The communication plan is regularly updated to reflect changes in project requirements.					
1.3	Team members are aware of their roles and responsibilities regarding communication as outlined in the plan.					
1.4	The communication plan effectively addresses communication needs across different project phases.					

1.5	Overall, how well do you think the communication plan is implemented in this project?					
2	**Stakeholder Engagement:**	**1**	**2**	**3**	**4**	**5**
2.1	Stakeholders are regularly informed about project progress and updates.					
2.2	Stakeholders are actively involved in decision-making processes when appropriate.					
2.3	Feedback from stakeholders is taken into consideration when making project decisions.					
2.4	Stakeholders express satisfaction with the level of communication they receive.					
2.5	Overall, how satisfied are you with stakeholder engagement in this project?					
3	**Information Flow:**	**1**	**2**	**3**	**4**	**5**
3.1	Information is communicated to team members in a timely manner.					
3.2	Information distributed is accurate and relevant to project tasks					
3.3	The communication channels used facilitate effective sharing of information.					
3.4	There are clear guidelines on how information should be documented and accessed.					
3.5	Overall, how effective do you find the flow of information in this project?					
4	**Communication Channels**:	1	2	3	4	5
4.1	Email communication is used effectively to convey important project information.					
4.2	Project management tools/software are utilized efficiently for collaboration.					
4.3	Communication channels used are accessible to all relevant stakeholders.					
4.4	Overall, how satisfied are you with the communication channels used in this project?					

4.5	Meetings are scheduled at appropriate intervals to discuss project progress.					
5	**Feedback Mechanisms:**	**1**	**2**	**3**	**4**	**5**
5.1	There are opportunities for team members to provide feedback on project communication.					
5.2	Feedback received on project communication is acknowledged and addressed promptly.					
5.3	Team members feel comfortable expressing concerns or suggestions regarding communication.					
5.4	There is a structured process in place for collecting and analyzing feedback on communication.					
5.5	Overall, how well do you think feedback mechanisms are implemented in this project?					
6	**Conflict Resolution:**	**1**	**2**	**3**	**4**	**5**
6.1	Communication channels effectively manage and resolve conflicts among team members.					
6.2	Misunderstandings are addressed promptly through clear communication.					
6.3	There are established protocols for escalating communication-related conflicts.					
6.4	Team members feel supported in resolving communication issues that arise.					
6.5	Overall, how satisfied are you with the conflict resolution processes related to communication in this project?					
7	**project performance**	**1**	**2**	**3**	**4**	**5**
7.1	Quality control measures ensured that Elevator installations met or exceeded standards.					
7.2	Inspections and testing procedures for Elevator installation were rigorous and effective.					
7.3	Any deficiencies identified during quality checks were promptly addressed and resolved.					

7.4	Overall, how satisfied are you with the quality assurance processes related to electromechanical work in this project?					
7.5	Client expectations regarding Elevator installations were clearly understood and met.					
7.6	Communication with the client regarding Elevator installations progress and issues was clear and proactive.					
7.7	Client feedback on Elevator installations and performance has been positive.					
7.8	Overall, how satisfied do you think the client is with the Elevator installations aspects of this construction project?					