ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

SCHOOL OF BUSINESS

THE EFFECT OF COMMUNICATION AND INTEGRATION MANAGEMENT ON PROJECT SUCCESS: THE CASE OF AYAT SHARE COMPANY

BY

YARED YISRU

JUNE, 2024

ADDIS ABABA

THE EFFECT OF COMMUNICATION AND INTEGRATION MANAGEMENT ON PROJECT SUCCESS: THE CASE OF AYAT SHARE COMPANY

BY

YARED YISRU

ADVISOR: MISGANAW SOLOMON (Ph.D.)

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN PROJECT MANAGEMENT

JUNE, 2024

ADDIS ABABA

ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

SCHOOL OF BUSINESS

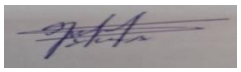
THE EFFECT OF COMMUNICATION AND INTEGRATION MANAGEMENT ON PROJECT SUCCESS: THE CASE OF AYAT SHARE COMPANY

BY

YARED YISRU

Id Number: SGS/0532/2015A

APPROVED BY BOARD OF EXAMINERS

_____	_____
Dean, Graduate Studies	**Signature**
Misganaw Solomon (PhD)	_____
Advisor	**Signature**
Yilkal Wasie (Asst. Prof.)	
External Examiner	**Signature**
Temsgen Belayneh (Phd)	_____
Internal Examiner	**Signature**

DECLARATION

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

Yared Yisru _____

Name **Signature**

St. Mary's University, Addis Ababa, June, 2024

ENDORSEMENT

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

Misganaw Solomon (Ph.D.) _____

Advisor **Signature**

St. Mary's University, Addis Ababa, June, 2024

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

I extend my deepest appreciation to the God for granting me the strength and perseverance to reach this significant milestone. I am grateful for the unwavering guidance, support, and expertise provided by my advisor, Dr. Misganaw Solomon and plays a crucial role in shaping the research process and ensuring its successful completion.

My heartfelt thanks also go out to my family for their continuous support and encouragement throughout this journey.

Lastly, I express profound gratitude to the staff of Ayat Share Company, specifically Seife, Beza, and Betty, for their invaluable assistance and cooperation in providing essential information for the successful completion of this research.

LIST OF ACRONYMS

GDP	Gross Domestic Product
ASC	Ayat Share Company
CME	Communication Management Effect
IME	Integration Management Effect
DBB	Design Bill and Build
KI1, KI2, KI3, KI4	Numbers of Key Informant
KII	Key Informant Interview
SPSS	Statistical Package for Social Sciences
KPIs	Key Performance Indicators
ECIDP	Ethiopian Construction Industry Development Policy
GDCF	Gross Domestic Capital Formation
HQ	Head Quarter

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The study was conducted at Ayat Share Company, aiming to analyze the effect of communication and integration management on project success using both explanatory and descriptive research designs. Both qualitative and quantitative research approaches were employed, and data collection instruments such as questionnaires and interviews were used to collect primary data and review of published materials was used for collecting secondary data. A census survey approach was applied to the study in order to obtain more reliable and inclusive data. Accordingly, 31 questionnaires were distributed and all were collected, while four individuals from different departments were interviewed. Descriptive statistics such as frequency counts and percentages were applied to analyze the data gathered. Also, correlation and ordinal regression were employed in the analysis of the collected data. The relationship among the effects of communication management, integration management, and suitable channels of communication was analyzed through correlation. The causal relationship between project success indicators such as cost, time, and quality and the effect of communication and integration management practices has been analyzed by ordinal regression. All analyses were done by SPSS 26 software. The findings demonstrate the high significant impact of integration and communication management on project success. Effective integration and communication practices enhance project team performance, facilitate integrated work among departments, and improve project outcomes. Likewise, well-informed and appropriately assigned team members contribute to successful project coordination, while current communication methods foster effective information sharing and timely decision-making. The study highlights the importance of maintaining flexible, adaptable, and cost-effective communication channels that are perceived positively by the project team. Moreover, project team performance is enhanced through collaborative work and continuous top management guidance. The study recommends benchmarking studies and setting performance metrics (KPIs), communication channels equipped with technology and skill, continuously refining communication and integration methods, and fostering a culture of collaboration.

Keywords: Communication management, Integration management, Communication channels

CHAPTER ONE
INTRODUCTION

1.1 Background of Study

Thewodros (2016) defines the construction industry as a crucial sector that converts resources into economic and social infrastructure for socioeconomic growth. It involves planning, designing, obtaining, producing, building, altering, maintaining, and demolishing physical infrastructure. Furthermore, according to Hussin et al. (2013) the construction industry significantly contributes to a country's economic growth by providing socio-economic infrastructure like roads, hospitals, and schools, enhancing citizens' quality of life. Likewise to the previous mentioned studies, this study emphasizes the significance of understanding the context of the construction industry, a crucial sector that significantly contributes to a country's growth.

For the purpose of further understanding of construction sector in Ethiopian context, the following issues have been raised to gain comprehensive knowledge about the subject matter by reviewing some related literature. Ethiopia's Construction sector Policy sought to foster the growth of a dynamic, effective, and sustainable local sector that could satisfy the market for its services and further the country's goals of social and economic sustainability (ECIDP, 2014) cited in (Zewdu, 2014).

According to Ministry of Urban Development and Construction (MUDC), in 2012 cited in (Zewdu, 2014), the construction industry's percentage contribution to the national GDP at constant basic price grew from 4.3% in 1993 E.C. to 5.8% in 2002 E.C. However, Desta (2015) indicates that the political ideologies and official perceptions of the Ethiopian construction sector have presented obstacles during the industry's history. These past studies imply that the construction sector in Ethiopia is highly significant with hindering and challenging issues, that is why the researcher is attracted to the industry in Ethiopia context.

It is crucial to fully understand the notion of a project before talking about project management. Projects can be large or small, involving individuals or teams, and can be completed in one go or over several years. Examples include retail store collaborations, medical technology gadgets, and

campus infrastructure modernization (Schwalbe, 2009). In the contextual framework of this study, the projects are considered to be producing a particular product, such as a building, road, bridge, or railway project. This study concentrated more particularly on building projects that are widely implemented in developing countries like Ethiopia.

Due to a shortage of knowledge provided by global project management educators, engineers who are effective of using project management techniques, tools, and skills in their work practices are desperately needed considering the rapid developments occurring in the construction sector (Chou and Young, 2012). Accordingly ,Demirkesen and Ozorhon (2017) investigated that project management performance is critically impacted by the strong effect of integration management in the findings of the empirical study conducted in Turkey construction firms. However, the researcher strongly argues that in developing countries like Ethiopia, this issue has not been well addressed in the literature as a research gap, and the subject matter awareness is also minimal or not considered as a key element of a project in most domestic construction firms.

In the aspect of projects, communicating means emphasizing and exchanging facts and information linked to the project in order to foster mutual understanding amongst the participants (Caltrans, 2007). Moreover, as Muszynska et al. (2015) indicates communication is essential in order to keep project stakeholders informed about developments and on track activities to meet project goals. Also the researchers believes that effective communication management and integration management are crucial for fostering smooth relationships with stakeholders, sharing rewards and challenges, and delivering successful project outcomes. The previously mentioned studies showed that how communication is interrelated with other vital project elements.

As an essential component of project management, communication management is an important field that has grown in importance as a result of its profound impact on projects, particularly building projects (Wan and Che, 2017). Although, ineffective communication is the root cause of 95% of project problems according to Baker (2007).Moreover, for many years, the biggest management problem has been the failure to complete projects successfully. It has been determined that communication is the primary factor preventing companies from having an impact on and performing in project management (Nyandongo, and Davids ,2020). These studies indicate that effective communication is very crucial to project management.

The previously mentioned issues related to integration management and the indicated topics related to communication management illustrated in different paragraphs are the causes of the study to be conducted. The purpose of this study is to identify challenges, improvement areas, and opportunities for successful project delivery through effective communication and integration management and analyze their value to the project. While considering both integration and communication management, that helps the project practitioners gain a comprehensive understanding of those areas that facilitate and integrate other project elements and project participants as well.

The research primarily focused on Ayat Share Company, a prominent and Pioneering Company in Ethiopia's construction sector, and Ayat Real Estate, a crucial division of Ayat Share Company with 22 years of experience, over 8000 completed projects, and over 15000 employment opportunities for Ethiopians (Ayat, n.d) and to get insights about the current projects undertaken by Ayat Share Company see Appendix III (refer to Table 11).

1.2 Problem Statement

Meng (2012) highlights key characteristics of strong supply chain relationships in the construction industry, including participatory objectives formulation, trustworthiness, shared responsibility, effective communication, cooperativeness, integrated problem solutions, and appropriate risk allocation. Similarly the researcher suggests that effective project communication and integration management can significantly improve the strength of supply chain relationships.

The study analyzes integration and communication management in the Ethiopian construction industry, focusing on the impact and merging issues arising from conflicts and other problems. Project integration ensures proper coordination of activities, requiring project managers to understand its impact on project success (Ozorhon et al., 2017). Furthermore, Pocock et al. (1996) mentioned that the continuous application of integration practices can significantly increase the success factor or maximize project performance. The other integral part of the study which is communication management justified and illustrated in the next paragraph.

Love et al. (2008) indicated that conflicts have since become an inevitable component of working in the construction industry. While according to Alberto (2017), communication has a

vital role in the aspect of the previously indicated problem. Moreover, on a construction project, people may effectively communicate their requirements to one another when there is clear communication between them, which guarantees improved project delivery (Malik et al.,2007). Also the researcher emphasizes the importance of effective communication in project success, preventing conflicts and issues arising from the initiation, implementation, and closing stages.

From the subject side, there are several construction companies implementing projects with ineffective communication and improper collaboration with project participants, both internally and externally, especially with slight stakeholder involvement in the entire phase of project management. Unfortunately, that can cause different problems like dissatisfied stakeholders or customers, cost and schedule overruns, rework, unverified and/or lower quality project deliverables, and so on, as it is practically observed in most construction companies and reviewed in several past studies. Therefore, the researcher suggested that it is a critical issue to be investigated.

Like other domestic companies, Ayat Share Company faces unfavorable situations, which include but are not limited to the previously stated problems. This was evident during the preliminary study that the researcher conducted and during conversations with direct participants of project implementers, such as site engineers and project managers. Furthermore, the majority of earlier researches carried out in developing nations indicate that the integration and communication management techniques are inadequate. For example, Smith and Johnson's (2018) research reveals insufficient communication, low stakeholder participation, and inefficient project integration can lead to project delays and budget overruns in developing country firms.

Similarly, Jones et al. (2019) found that organizational divisions, cultural differences, and resource scarcity often hinder the integration of management approaches and effective communication in developing country firms. The studies emphasize the importance of addressing integration management and communication deficiencies to improve project outcomes and business efficiency. This study fills a knowledge gap in Ethiopian construction companies by examining the integrated effect of integration management and communication management on project success.

The study aims fostering the project achievement through gaining a comprehensive knowledge or understanding about impact of communication and integration management for better project performance and delivering quality project deliverables. The researcher argues that readiness and conscious management to these knowledge areas seems minimal in the context of Ethiopian construction companies, and the study will analyze and validate the problems of this serious issue, whether the output is concrete or does not have that much effect on project success in the context of Ethiopian construction companies. While the thesis work will come up with the integrated and recommended solution after it has identified the list of problems that are acquired through this study.

As Idoko (2008) mentioned several projects in developing countries including Ethiopia face challenges of working behind schedule, cost overrun, fails to meet their intended use and totally terminated before or after the completion of final project. Therefore, those problems may have several factors but investigating the practice of communication and integration management that may severely affect project success is what the researcher striving to fill the gap.

1.3 Research Objectives

1.3.1 General Objective

The general objective of study is to analyze the effect of both integration and communication management on project success in the case of Ayat Share Company.

1.3.2 Specific Objectives

The specific objectives of the research are to:

1. Identify suitable methods and channels of communication that are easily applicable to the project team.
2. Examine the relationship between the challenges that Ayat Share Company faces and the practices of integration and communication management.
3. Analyze how communication management affects project success as a success factor in Ayat Share Company.
4. Analyze how integration management affects project success as a success factor in Ayat Share Company.

1.4 Research Questions

This study had the following research questions.

1. What are the most suitable methods and communication channels for the project team to easily apply?
2. What is the relationship between the challenges faced by Ayat Share Company and the integration and communication management currently being practiced?
3. How does project integration management affect project success as a success factor in Ayat Share Company?
4. How does project communication management affect project success as a success factor in Ayat Share Company?

1.5 Significance of study

The study significantly adds knowledge to the numerous number of project implementers in the Ethiopian construction industry in the aspects of critical parts of project management that are integration and communication management. Project implementers who are contractors are hopefully going to capitalize on the results and findings of the study because the research was genuinely conducted to uncover problems and gaps that exist in the industry; other researchers previously did not strongly strive for that topic or subject. Moreover, the researcher aims to investigate a critical issue and propose an integrated solution to compete against the previously stated problems.

Besides the practitioners of the project, the indirect participants of stakeholders and society around the project will be advantageous because the topic of study is profoundly interrelated with the involvement of stakeholders and meeting their expectations. As the construction industry is at the core of the economic scale of the country that's mentioned in past studies, project success in that industry would be critical to the development of one's country, so the research work will be significant for policy and regulation improvement or modification. Additionally, the thesis work will be used for academic and educational purposes.

1.6 Scope of the Study

In its conceptual scope, the study only focused on the integral parts of project management, which are communication and integration management. As these areas of study sought to foster stakeholder satisfaction through effectively communicating and continuously involving them, managing communication and integration profoundly impacted project success, as mentioned in different past studies.

The thesis work submitted and presented to St. Mary's University within seven months of time has to respect and comply with the timeline of the institute. And the study is geographically limited in Ethiopia, focusing on the construction industry that involves construction projects implemented by Ayat Share Company, particularly HQ's staff located around CMC Michael. The literature side of the study reviews related literature on construction industry practice, and reviewing practices and challenges occurring in construction companies in specific developing countries help the researcher have a better understanding and comprehensive knowledge of the field of study.

1.7 Limitation of the Study

The research is further hindered by lack of previous studies and literature pertaining to this paper. It was challenging to finish the field phase of the research procedure on time due to respondents' unavailability and extensive workload during the survey.

1.8 Organization of the Study

The report of this study consists of five chapters: the first chapter shows the background of the study; the second chapter covers a review of related literature; the third chapter explains how this study was conducted; the fourth chapter involves results and findings; and the last chapter includes a summary, conclusion, recommendation, and suggestions. Chapter one, which is an introductory part of the paper, covers the background of the study, the problem statement, the objectives and research questions, the significance of the study, and the scope and limitations of the study. In Chapter two, related literature is reviewed regarding the topic area of communication and integration management practices in the construction sector, and the

researcher tries to assess the lessons learned in the empirical studies in accordance with the subject matter of the study. This part of the paper also provides extensive information about the concepts and theories of the topic area through theoretical literature. The conceptual framework of the study is also included in this section. The third chapter includes research methodology that shows the road map of the study in order to answer the research questions and reach findings. Specifically, the chapter involves the research approach and design, population and samples, and data collection methods used to find out the needed data. Chapter four covers the analysis, interpretation, and presentation of the collected data and results acquired from KII. The fifth chapter summarizes the key findings, and next to this, the chapter concludes the study. Lastly, recommendations and suggestions for future studies are provided in this chapter based on the findings.

CHAPTER TWO
LITERATURE REVIEW

This section of the study aims to provide a better understanding and lessons learned from past studies for the researcher and the audience, which will be advantageous in terms of gaining a comprehensive understanding of contextual issues. The paper section of the literature review is constructed on the basis of secondary data sources that are available on the internet and in the libraries of academic institutes or other public libraries all over the world. The section of the literature review presented with theoretical literature, which focuses on understanding the integration and communication management practices in construction projects and other broader related issues, and empirical literature will point out the lessons learned from past studies. Moreover, the conceptual framework briefly stated the conceptual issues analyzed and presented in diagram form.

2.1 Theoretical Literature

Project is defined as "a temporary endeavor undertaken to create a unique product or service." On the contrary, an operation refers to the work done by firms to maintain their business. In contrast to operations, projects come to a conclusion when their goals are fulfilled or they stop functioning (PMI, 2013).

According to Nokes and Kelly (2007) managing projects successfully means completing them on schedule, within budget, and according to the quality standard. With the help of The Definitive Guide to Project Management, you can learn the ins and outs of efficient project management and ensure that your projects always provide the results you desire. Furthermore, The Definitive Guide to Project Management is the indispensable tool for anybody wishing to advance their project management abilities, and it is appropriate for both new and senior project managers. Updated to align with the esteemed PMI certification program, its invaluable guidance is ready for immediate application.

Technical proficiency and strong managerial abilities are prerequisites for a project manager in order to successfully oversee the groups of suppliers, subcontractors, and field workers that ensure the efficient supply of labor and supplies needed to complete the work. Also in the

context of the building sector, deciding on the best approach to carry out the building process, taking into account appropriate scheduling as well as the coordination and management of the movement of workers, supplies, and machinery to the project (Levy, 2002).

2.1.1 Project Success

According to Collins and Baccarini (2004), project success is made up of two different elements: the success of project management and the success of the project's deliverables. Here are some ways to identify the two parts. The success of project management is mostly dependent on the management process and the effective completion of the project in terms of scope, time, and money. The degree of efficiency and effectiveness in project execution is indicated by these three dimensions. Deliverable success is mostly determined by how the project's final products and/or services affect the post-project phase.

Collins and Baccarini (2004) also clearly stated factors that influence the success criteria with making the distinction between success criteria and success factors is crucial. Success is measured by criteria, and success is made possible by certain variables. Product success and project management success together constitute the two sections of the project success criteria: Project Management Success is measured using three criteria and focuses on the project process: Fulfilling the demands of project stakeholders in relation to the project management process (namely the project owner and the project team) and meeting time, cost, and quality targets are all important aspects of project management effectiveness. Product success is concerned with the final results of the project and is measured by three factors: meeting the strategic organizational objectives of the project owner, satisfying user needs, and satisfying customer or stakeholder demands as they pertain to the product.

2.1.2 Project Management

Due to integration and communication are the two knowledge areas of project management as facilitator of the other knowledge areas, understanding the meaning and the motive of project management is crucial and it is demonstrated in this section of study as follows. “The application of knowledge, skills, tools and techniques to project activities to meet the project requirements” is what project management is defined by Ibidem (p. 6). Furthermore, in order to satisfy the needs and expectations of the individuals participating in or impacted by project

activities, project managers must not only work to fulfill the specific scope, schedule, cost, and quality criteria of projects, but also facilitate throughout the entire procedure. Activities for initiating, planning, executing, monitoring and controlling, and closing are all covered in the five process groups of project management.

Project managers need to possess key skills in various knowledge areas, including project integration management, project scope management, project time management, project cost management, project quality management, human resource management, project communications management, project risk management, project procurement management, and project stakeholder management. Moreover, the researcher investigates the importance of these skills and knowledge that help coordinate the work of other knowledge areas, define and oversee necessary work, manage time and resources, develop and oversee budgets, ensure project objectives are met, manage communication, assess risks, acquire products and services, and effectively involve stakeholders (Schwalbe, 2009).

The ten primary knowledge areas that are crucial to project management are listed in the Project Management Body of Knowledge Guide (PMBoK), along with four more areas included in the Construction Extension. Project integration management is the first knowledge area among them, encompassing the combination, unification, and coordination of project management processes (PMI, 2013). Furthermore, Integration management is one of the most crucial components of project management, which takes into account all aspects of a project. Therefore, coordination of project activities is successfully ensured by project integration management (Demirkesen and Ozorhon, 2017).

2.1.3 Theories about Integration

Integration is defined by PMI (1996/2000) as the processes necessary to guarantee that the project's various components are appropriately coordinated. It is made up of integrated change control, project execution, and project plan development. This definition may be thought of as the generally accepted definition of project integration at the moment. Although, as Miller et al. (2002) indicates that, in the aspect of products and services, integration refers to when a vendor integrates products and/or services to deliver a particular intended output.

In PMBOK (PMI:PMBOK® guide, 2017) knowledge areas are organized and clearly stated including integration and it's presented as the following: Since integration is the only knowledge field with processes connected to every process group, it is accountable for the coordination of all other knowledge areas. Create a project charter, create a project management plan, oversee and manage project work, manage project knowledge, keep an eye on and regulate project work, carry out integrated change control, and close the project at the end of the phase are the processes in this area.

Integration considered as one of the fundamental organizational skills for managing interdependency, ambiguity, and change in complicated projects (Lawrence & Lorsch, 1967 ; Davies & Mackenzie, 2014). Moreover, according to Ibrahim et al. (2013) , inter-organizational integration is essential for alliance organizations because it fosters a culture of collaboration and the long-lasting relationships necessary to enhance project performance and project alliancing in the context of construction industry anticipates and support integration in project organization. The best practices for alliance team integration have been defined by Ibrahim et al. (2013) using seven key indicators: team leadership, mutual respect and trust, a single team focus on project objectives, group understanding, alliance management team commitment, the establishment of a single and co-located alliance team, and open communication.

2.1.4 Project Integration Management

Project managers are the one group of individuals who ought to employ the knowledge area of project integration management. The procedures and actions required to recognize, characterize, cooperate, unify, and oversee the different processes and project management tasks within the project management process groups are included in the project integration. This includes elements that are vital to the project's effective completion, such as unification, consolidation, articulation, and integrative actions (Jainendrakumar, 2015)

According to Demirkesen and Ozorhon (2017), the performance of construction projects depends on several aspects of project management. Among these, integration management is crucial as it is through the integration of people and processes inside a construction project that efficient project management is initiated. Additionally, the practitioner quantifies the link between those components and integration management as well as looks into how different integration management components affect the effectiveness of construction project management. While the

dimensions of project management performance are time, cost, quality, safety, and client satisfaction, the proposed components of integration management are the development of a project charter, knowledge integration, process integration, staff integration, supply chain integration, and integration of changes.

According to Jørgensen (2006) awareness of the fundamental responsibilities and procedures in the management cycle, such as the plan-do-check-act, and internal coordination and reduction of unforeseen trade-offs are two advantages of such integration. In order to provide external advantages and support sustainable development, an even more ambitious degree of integration focuses on fostering a culture of learning, stakeholder involvement, and continual performance improvement. While the management system should prioritize the synergy between product-oriented environmental management, customer-based quality, and corporate social responsibility in order to achieve this goal. To put it another way, there are three distinct levels of integration: relating to: improved cross-system interoperability with references, Strategic and inherent: an organizational culture of learning, ongoing performance improvements, and stakeholder participation in relation to both internal and external issues. Coordinated and coherent: generic procedures with an emphasis on tasks in the management cycle.

2.1.5 Theories about Communication

Communication defined as "the process by which information is exchanged between individuals through a common system of symbols, signs or behavior" (Merriam-webster, 2002) Furthermore, According to Zulch (2014), communication is the process of collecting all pertinent information, analyzing it, and successfully distributing it to others who might need to know. Therefore, communication is essential for those participating in and all parties affected by projects (Emmitt, 2010).

According to Luiten and Tolman, (1997), communication is essentially the transfer of any information between individuals. Communication process as stated by Kliem, (2007), It is in line with the message, media, sender, and recipient. The message is first created by the sender, transmitted to the recipient after whom the recipient is notified and responds appropriately. The message is the important component of this process as it establishes the link between the sender and the recipient. Additionally, the communication medium can take any form that is appropriate for the project context.

According to the PMBOK communication defined as “Effective communication creates a bridge between diverse stakeholders who may have different culture, organizational backgrounds, different perspective and interests, which impact or have an influence upon the project execution or outcome”. Additionally, communication that is effective is crucial for recognizing problems, hazards, misunderstandings and other obstacles to project completion. It also keeps team members, managers, and stakeholders updated and focused on achieving the project's goals. In both conventional and virtual teams, efficient communication is a vital component of team effectiveness (Pitts et al., 2012).

Many practitioners have referred to communication as the lifeblood of a project since it is so crucial to its success (Awati, 2010). Moreover, PMI (2017) mentioned communication as an aspect of the project; it is responsible for planning and implementing an effective communication strategy with the project stakeholders. The processes in this domain are divided into three stages: the first stage is planning communications management; the second phase is managing communications during implementation; and the final stage is monitoring communications to avoid inconvenience.

In project management, communication might be prompted by an information request, an information send, an inquiry, an instruction, the establishment of teams, or networking (Burke, 2007). However, ineffective communication may lead to misunderstanding in construction projects can also result from ineffective communication. Moreover, construction projects might fail due to poorly defined tasks and critical processes, unclear roles, limited scope, or unclear objectives. Project management involves pitching and reselling ideas all the time, explaining the project's scope and methods to various audiences (the general public, management, functional departments, and other stakeholders), threatening or bargaining with suppliers and service providers, and negotiating to resolve conflicts or disagreements between project team members or other stakeholders (Steyn, 2008).

2.1.6 Project Communication Management

“Project communication is a two-way effort and both parties are responsible for ensuring that their messages are clear and concise. Without that, project failure is inevitable” (Dow & Taylor, 2010). Besides, other author Kliem (2007) stated that “communications is about information rather than data”. In order to ensure effective project communication, project managers usually

interact with team members, stakeholders, and internal or external project resources (Ozguler et al,, 2016), The three processes involved in project communication management are communication plan, manage, communication and control communications (PMBOK, 2013).

Project Communication Management is "the knowledge area that employs the processes required to ensure timely and appropriate generation, collection, distribution, storage, retrieval and ultimate disposition of project information". Every member of the project team is accountable for the communication of the project. The strategy for project communication management needs to be developed by the project manager, nevertheless. The process of identifying the information needs of project stakeholders and developing a communication plan is known as planning communications (Ibidem,4th Ed.).

Effective project communication management guarantees the prompt proper creation, gathering, distributing, archiving, and disposal of information related to the project. For a project to be successful, planners, implementers, and executives at all organizational levels must communicate openly and clearly. It entails having an information sharing system for customers and management, a communication plan, an information distribution method, and progress reporting (Kwak and Ibbs,2002). In addition to promoting positive individual behaviors and unambiguous communication guidelines, project communication management should incorporate tactics and approaches for fostering relationships and trust among team members (Muszynska et al., 2015)

2.2 Empirical Literature

Because of its dynamic, fragmented, and complicated nature which necessitates the engagement of several stakeholders and effective process management, construction is more difficult than other types of enterprises. To compete against uncertainties and threats, well-defined strategies and tactics need to be developed. Variations in costs and schedules may have unintended effects that lower customer satisfaction. Therefore, determining the fundamental factors that must be taken into consideration is essential because project success is critical (Demirkesen & Ozorhon, 2017).

Ethiopian construction industry has grown significantly since 2001. Recent research by (Aregaw and Zewdu , 2015) demonstrated that the GDP contribution of the industry has been raised to 5.6% and approaches to the sub Saharan average (6%). In the meantime, the Gross Domestic

Capital Formation (GDCF) increased from almost 60% in 1996–1997 to almost 75% in 2002–2003. Furthermore, other survey work indicates among African nations, Ethiopia has the fastest-growing economy that is not dependent on oil. Over the last ten years, the nation has seen tremendous progress, with an average annual GDP growth rate of 10.9% (UNDP, 2014). Recently, the contribution of the industry sector (which is 21.2%) and particularly that of the construction sector to the national economy is given significant impact and is principally driven by the energetic performance of the construction sub-sector (ECIDP, 2014; UNDP, 2014). Although the construction sector has great relevance, some flaws are being noticed in the sector that needs quick adjustment (ECIDP, 2014; Nega, 2008).

The top ten important success factors, as determined in empirical study by Tripathi and Jha (2019) through basic statistics and ranking analysis, are as follows: Equipment, labor, and materials available for the project; an efficient cash flow management plan; the ability of project management to improve the construction project's schedule, cost, and quality; the presence of dynamic leadership within the organization; the availability of qualified staff within the organization; client satisfaction with regard to products and services; an efficient supply chain management system; the organization's financial soundness with regard to improved liquidity and working capital; customer satisfaction with regard to products and services; and the timely payment of bills as specified. Nevertheless, Yeung's et al. (2009) empirical study developed an effective assessment model by defining standards using the Delphi Method. Customer satisfaction, cost performance, quality performance, time performance, effective communication, safety performance, trust and respect, and innovation and improvement are the eight indicators used in this technique to assess project success.

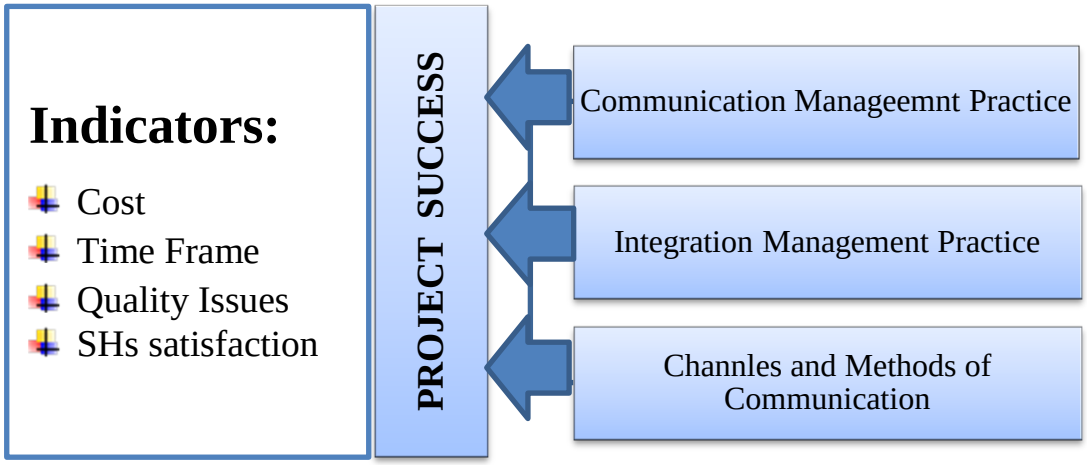
Jaferi et al. (2014) concluded that communication plays an essential role for the success of organizations and projects as well. Without it, tasks cannot be completed on time or with high quality, wasting money, manpower, time, and other resources. Also improper or poor communication can result in work being completed slowly and of low quality.

According to Abebe & Desalegn (2019), integration as an independent variable has been examined from the point of exchange of information showing the integration of the chain participants in communicating trustworthy and essential information, the flow of materials focusing on the satisfactory performance, consistency, and mobility of material flow among the

chain participants, transportation is also the other dimension of integration among the supply chain components of this sector according to the viewpoint of speed, consistency and reliability as well as overall relationship is the additional substantial dimension encompassing further dimensions overall support, trust and care one another with in the network.

2.3 Conceptual Framework

Project completion behind schedule or with delay, dissatisfied stakeholders, cost overruns, and lower-quality project deliverables are some implication of problems that occurred in the construction projects and are considered as key indicators of project success in accordance with achieving organizational goals. Project success is the dependent variable in the study, whereas the independent variables are practice of integration management, practice of communication management, and channels and methods of communication.



Source: developed by the researcher

Figure 1- Diagram of Conceptual Framework

The study examined Ayat Share Company's integration and communication management practices, focusing on specific projects. Project success indicators such as cost, time, quality, and stakeholder satisfaction are considered measurements of project success, which is a dependent variable. As an independent variable, the effectiveness of practicing communication and

integration management affects project success either positively or negatively, and the suitability of communication management also affects the dependent variable.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

A research methodology is a set of techniques for collecting and analyzing data with the goal of discovering new knowledge. To maintain rigor, a researcher may need to employ multiple methods of study if there is barely any data available about a particular topic (Waltz, 2021). This section of the paper covers the study's approach, design, data collection methods and instruments, sampling strategy, data processing and analysis, data source, procedures, and ethical considerations.

3.2 Research Approach and Design

The research employed a mixed approach or combination of quantitative and qualitative approaches in its development, allowing for the acquisition of comprehensive information on the topic area. The quantitative approach is based on a survey study, and the qualitative approach is constructed based on key informant interviews as follows: Semi-structured and closed survey instruments are used to collect data in numbers from various sources pertaining to demographic and socio-economic variables.

The study was conducted by employing mainly the techniques of both explanatory and descriptive research design. The approach is considered compatible with the research, which aims to provide valuable insights and uncover how integration and communication management practices affect project performance in the case of Ayat Share Company.

3.3 Population and Sampling Technique

Leedy and Ormrod (2019) define population in research as the entire group of individuals or items that meet inclusion criteria, including people, animals, plants, or objects under investigation. So that, in research, population should not be misunderstood as only considering people as population. And the researcher refers to the population as the entire group of

individuals who directly participated in the execution of particular construction projects. The contractor, consultants, supervisors, site foreman, and others that in one way or another directly engage in the construction process are dealt with as members of the population. While the other stakeholders who have a stake in the construction project are not part of the population, they are treated as key informants.

3.3.1 Target Population

The target population of this research is the individuals who participated directly in the projects, that is, project team members who work on a number of projects undertaken by Ayat Share Company. The planned census survey would target all of the estimated 30–40 staff members of the company permanently employed with ASC. The survey was conducted by participating project team members such as office engineers, site engineers, resident engineers, supervisors, consultants, and project managers. On the other hand, the qualitative study is employed by interviewing various departments of the company that work at the management level. Such departments are the design office, construction office, consultant office (external), and customer service office, and those representatives are considered key informants of the study, and the interview guided by own developed interview guide.

3.3.2 Sampling Techniques and the Procedure

A census survey approach was applied to the study in order to maintain sufficient data, and primary data collection mainly focused on the population of the study. Although manageability and error theories opposed censuses, the chosen study area is smaller in scope and was not impacted by these issues. 31 respondents who were site engineers, office engineers, resident engineers, consultants and supervisors participated during the survey from various departments of Ayat Share Company.

3.4 Data Sources and Data Collection Methods

3.4.1 Data Sources

Both primary and secondary sources provided data for the intended research project. The sources of primary data are acquired through a survey study and site observation conducted by project

implementers, including the project staff members who are directly involved in carrying out the construction projects and the other external stakeholders or coordination team that participate as supervisors and consultants in the full operating process. Materials from a variety of literature that address related subjects, as well as a set of freely available and unpublished reports produced by the client and contracting agency, were solicited as secondary sources.

3.4.2 Data Collection Methods

Data collection methods for a study involve various techniques, including desk-level reviews of publications and secondary sources, field study surveys of the project team, and key informant interviews (KII) for clients and project coordinators, to gather quantitative and qualitative data. During the field study phase, the project team and other direct project participants are surveyed by distributed questionnaires, and key informants are addressed through semi-structured interviews with interview guides.

The census survey is aimed at project staffs who are actively involved in project activities, and the required quantitative data related to project activities was collected through this process. Key Informant Interviews (KII) utilized by researcher through discussion with project coordinators and clients to gather qualitative data that is acquired by catching the voice of different departments and collecting data using various methods and tools instead of triangulation purpose.

3.5 Data collection Instruments and Procedures of Data Collection

The research used instruments like questionnaires and interviews. Research survey work was conducted by utilizing a questionnaire, which has its own design, and the interview helped the researcher obtain elaborative and valuable information about the topic area. And the document review instrument addresses the subject matter and provides valuable insight to the researcher. In the data collection procedure, the reliability and validity of the data collection instrument were checked right after the preparation of the data collection instrument and before the distribution of the data collection instrument.

3.5.1 Data Collection Instruments

I. Questionnaire

Since questionnaires are so flexible and effective and can collect standardized responses from a large number of people, they are frequently used in research and data collection. According to Johnson and Christensen (2017), questionnaires have the benefit of enabling researchers to obtain a large sample size, gather data from a broad geographical area, and readily conduct quantitative analysis of the responses.

Questionnaire Design

Questionnaires are accessible to a wide range of demographics due to their ability to be administered in a variety of modes, such as online, by email, or in person. In general, because of their usefulness and capacity to collect data from a wide range of participants, questionnaires are a widely used research instrument. The researcher designed a questionnaire categorized into six categories, with the first category focusing on respondent identification and the remaining categories based on research questions, with closed-ended questions and open-ended questions at the end.

Category 1: Respondent's Identification

This category aims to obtain respondents' background information due to the responses filled by individuals with various backgrounds rated differently. The personal information includes demographic information, position in the organization, year of experience, educational level, and departments of the participant. However, mentioning the name of the respondent is forbidden in research work.

Category 2: Communication Management Effect on Project Success

In the second category of questionnaires, questions related to communication management topics such as current communication management practices, relevance of communication, awareness and recognition of communication management, roles of communication to facilitate other elements of a project, and the impact of communication on project success will be included.

These questions are sourced from literature, and respondents are asked to mark their level of agreement on the above-mentioned issues.

Category 3: Integration Management Effect on Project Success

This category of questionnaire includes the practice of integration management, the project staff's motives towards integration management, the impact of integration on project success, stakeholder involvement in the aspect of integration management, and other issues related to integration management. Through literature guidance, the respondent's level of agreement will be obtained. Around 20 questions are closed-ended in Likeret scale format, and at last, there is just one question in open-ended format to get the respondents suggestions in another category.

Category 4: Suitable Method and Channel of Communication that is easily applicable by the Project team

As one of the research objectives is to identify the suitable method and channel of communication, it is important to separate this into different categories and arrange questions acquired from the literature. Like other categories, it has closed-ended questions, around 10 questions, and there are 3 open-ended questions to identify the current communication channel and to obtain anything the respondents want to add. The fourth category includes the method and channel of communication currently employed by the organization, the acceptance rate of project team members on the communication channel, and its effectiveness in terms of stakeholder satisfaction and involvement.

Category 5: The Relationship between Challenges and Issues faced by Ayat Share Company and Integration and Communication Management Practice

Questions categorized in this category help the researchers meet one of the specific objectives stated in Chapter 1. And it includes the synergy of communication and integration management, problems faced by the organization in the aspect of communication and integration management, and the role of both integration and communication management to mitigate and avoid conflicts and discrepancies among the project team and/or external stakeholders. Both closed-ended questions are in Likeret scale format, and lastly, open-ended questions are provided like other categories of questionnaires.

II. Semi Structured Interview

As semi-structured interviews are flexible enough to allow participants to elaborate on their answers while yet providing a balanced set of standardized questions, they are frequently used in research. Semi-structured interviews, according to Bernard (2011), provide researchers with a framework of significant topics or questions to direct a discussion while also permitting the investigation into new themes or insights that may surface throughout the interview process. Semi-structured interviews are frequently employed in qualitative research approaches because of their effectiveness in capturing both breadth and depth of information. The researcher had a discussion with key informants of project participants frame worked by interview guides, and the general and critical issues related to integration and communication in the acquisition of successful project deliverables were investigated through this tool.

3.5.2 Procedures of Data Collection

According to Neuman (2014), maintaining reliability and validity in data collection procedures is crucial for ensuring the credibility and accuracy of research findings. Reliability refers to the consistency and stability of measurements, while validity pertains to the extent to which a study accurately measures what it intends to measure. Prior to distributing and collecting data, validity and reliability employed to ensure the accuracy and trustworthiness of the collected data.

Here is how the researcher tests the data collection instrument's reliability and validity to refine it after preparing the data collection instrument. To enhance reliability, researchers employ standardized data collection methods, conduct pilot testing, and implement quality measures. And to enhance validity, the researcher ensures that the data collection instruments effectively capture relevant variables, employ triangulation techniques, pilot test instruments, consider the context of data collection, and conduct validity checks throughout the research process.

Reliability Test or Cronbach's Alpha Result

Reliability test or Chronbach's Alpha conducted by SPSS software, in which the internal consistency of measurements can be tested through categorizing the variables and compute for chronbach's alpha value using the SPSS software.

Table 1- Cronbach's Alpha Results

Reliability Statistics	
Cronbach's Alpha	Number of Items
.707	4

The above table shows the Cronbach's alpha result that is approximately 0.71 and it indicates the internal consistency is acceptable to conduct the survey.

Table 2-Category of Items for Computing Cronbach' Alpha Result

Item Statistics	N
Communication Management Effect	31
Integration Management Effect	31
Suitable method and channel of communication	31
Relationship between Challenges and issues and communication and integration management practices	31

Table 2 shows that the category of variables used in the survey and for computing reliability test.

3.6 Data Analysis Method

The study utilized both quantitative and qualitative research approach to assess the data that it was acquired. While open-ended information gathered through checklists and interview guides is processed personally, data obtained through questionnaires is subjected to quantitative analysis. The questionnaire used an ordinal ranking approach to prioritize influenced items of the study, allowing quantitative analysis of frequencies, dispersion, and central tendency using a Likeret scale format.

The quantitative analysis is conducted and analyzed utilizing a current version Statistical Package for Social Sciences (SPSS 26). Data was collected, compiled, revised, and programmed, after these processes Bar charts and percentiles as well as frequency are used to describe the ordered data. Data is first verified to ensure consistency and completeness. It is then coded, verified, entered into a computer, and processed. In order to analyze the data, many statistical techniques such as descriptive statistics, additionally correlation coefficient and significant value are used in correlation and ordinal regression respectively, to create explanations based on the tables and figures' results done by SPSS software.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

This section presents a thorough analysis of the gathered data. The data, collected through questionnaires distributed to 31 direct project participants at Ayat Share Company, was analyzed using SPSS 26 software. Additionally, interviews were held with four key informants and staff from various departments. As a result, for clarity, tables, graphs, and charts are utilized in presentation of data.

4.1 Demographic Characteristics of Respondents

Table 3- Respondent's Background Information

Sex of Respondents			
	Frequency	Percent	Cumulative Percent
Male	19	62.1	62.1
Female	12	37.9	100.0
Total	31	100.0	
Age of Respondents			
	Frequency	Percent	Cumulative Percent
25-35 years	30	96.8	96.8
36-45 years	1	3.2	100
Total	31	100.0	
Educational Level of Respondents			
	Frequency	Percent	Cumulative Percent
BA/ BSc Degree	22	71.0	71.0
Master's Degree	9	29.0	100.0
Total	31	100.0	
Respondent's Work Position			
	Frequency	Percent	Cumulative Percent
Project Manager	1	3.2	3.2
Site Engineer	6	19.4	22.6
Office Engineer	17	54.8	77.4
Other (Supervisor, Resident Engineer)	7	22.6	100.0
Total	31	100.0	
Work Experience			
	Frequency	Percent	Cumulative Percent
1-5 years	13	41.9	41.9
6-10 years	15	48.4	90.3
11-15 years	1	3.2	93.5
Above 15 years	2	6.5	100.0
Total	31	100.0	

Source: Own Survey (2024)

Table 3 represents the demographic characteristics of respondents that involve sex or gender, age, level of education, work position, and work experience. During the survey, 31 individuals willingly participated and filled out the questionnaire. From those, the majority of respondents are male, and 37.1% of respondents are female. Almost all of the respondents, around 97% of the total 31 individuals, belong to the age range of 26 to 35 years, and just 1 individual is categorized as being between 36 and 45 years.

The respondents' work experience is illustrated as follows: 41.9% of respondents have experience that ranges from 1 to 5 years. 15 respondents, or nearly half of the total number of respondents, have experience ranging from 6 years to 10 years. The remaining 3 respondents have more than 10 years of work experience. Just 1 of the total respondents has work experience that ranges from 11 to 15 years, and the other 2 respondents have work experience of more than 15 years in the construction industry. The above data shows the respondents are well-versed in their professions.

The overall data indicates that Ayat Share Company is reliant on the human capital of a qualified, well-experienced, and energetic young generation, which could be a good input for better project and organizational performance. However, the number of female respondents is not well proportioned to the number of men.

4.2 Communication Management Effect on Project Success

Table 4-Questions Related to Communication Management Effect on Project Success

Variables	**Strongly Agree**		**Agree**		**Neutral**		**Disagree**		**Strongly Disagree**	
	Frq.	%	Frq.	%	Frq.	%	Frq.	%	Frq.	%
Project team members are well informed about their roles and responsibilities	10	32.3	16	51.6	3	9.7	2	6.5	-	-
Current communication practice covers effective exchange of	6	19.4	20	64.2	3	9.7	2	6.5	-	-

information										
A failure in effective communication can negatively impact the project success	20	64.5	8	25.8	2	6.5	1	3.2	-	-
The goals of a project are clearly communicated to project team	9	29	17	54.8	3	9.7	1	3.2	-	-
Communication practice plays a crucial role in conflict resolution.	20	64.5	8	25.8	2	6.5	1	3.2	-	-
I have noticed the overall positive impact of communication management on project success.	16	51.6	13	41.9	2	6.5	-	-	-	-
I consider communication as important as other key element of project.	19	61.3	9	29	3	9.7	-	-	-	-
Current communication practices foster adaptability and flexibility to changes, challenges and requirements of projects.	6	19.4	21	67.7	3	9.7	1	3.2	-	-
Communication utilized as a crucial tool to effectively manage project activities.	11	35.5	14	45.2	6	19.4	-	-	-	-
Two-way communication positively impacts the project success.	14	45.2	14	45.2	2	6.5	1	3.2	-	-
The willingness of project members to share extensive information positively impact project team's collaboration.	16	51.6	13	41.9	2	6.5	-	-	-	-

Source: Own Survey (2024)

The above table demonstrates the frequency of responses with a percentage that pertains to respondents' acceptance level in the Likeret scale of questions that are related to the effect of communication management on project success. Nearly 84% of respondents perceived that project team members are well informed and assigned to their roles and responsibilities, and the

remaining 10 % and 6% of respondents chose neutral and disagreed with the claim, respectively. This data has the implication that, through well-practiced communication management within ASC, the project activities would be successfully coordinated and employed due to the project team effectively deploying their roles and responsibilities.

With the other variable, respondents asked for their level of acceptance, whether the current communication practice could enhance effective information sharing that fosters timely decision-making, and more than 64% of respondents agreed and around 20% strongly agreed. The remaining 10% and 6% of respondents chose neutral and disagreed with the claim, respectively. The above result indicates that the current communication methods should be retained in terms of avoiding inconvenience during the decision-making process. In another case, 90.3% of respondents claimed that if the project participants failed to effectively communicate, the project's success would be negatively affected. This data shows a failure in effective communication management that surely causes challenges in achieving project success. .

The organizational goals and objectives of ASC, in particular the projects, were clearly communicated to the project team, according to 84% of the respondents. And around 90% of respondents believe that communication management plays a vital role in addressing and resolving conflicts, and they consider communication important as one of the one of the other key elements of the project. Also, 93.5% of respondents noticed the overall impact of communication management on project success. In the case of ASC, the results stated above indicate that practicing communication management was well employed, and their overall impacts on project success were notified by the project team members. These results indicate that the project team's attitude towards communication management in terms of addressing conflicts is well-practiced, and their responses ensure the impact of communication management on project success.

More than 90% of respondents perceived that the willingness to share important and extensive information impacts team collaboration, and two-way communication impacts project success. However, the other around 6% of respondents chose to be neutral in their level of acceptance. 80.4% of respondents mentioned the management team utilized communication to facilitate project activities, and the remaining respondents decided to be neutral in this case. The majority and minority of respondents agreed and strongly agreed, respectively, in the case of

communication management, which fosters adaptability and flexibility to changes, challenges, and requirements of the project, although 9.7% of respondents stay in a neutral position and just 1 individual disagrees with this claim. The above result indicates that not only is communication practice significant to project success, but the individual who participates in communication practices is also mandatory. So that collaboration of team members with effective communication management delivers a successful project and impacts the project positively..

4.3 Integration Management Effect on Project Success

Table 5-Questions related to Integration Management Effect

Variables	**Strongly Agree**		**Agree**		**Neutral**		**Disagree**		**Strongly Disagree**	
	Frq.	%	Frq.	%	Frq.	%	Frq.	%	Frq.	%
Integration of different departments internally helps the project team for better performance.	14	45.2	15	48.4	2	6.5	-	-	-	-
The attention given to integration and collaboration of work is good enough.	4	12.9	19	61.3	7	22.6	1	3.2	-	-
Project managers effectively facilitate collaboration and coordination.	9	29	16	51.6	6	19.4	-	-	-	-
I have noticed the positive impact of integration and collaboration on project.	11	35.5	16	51.6	3	9.7	1	3.2	-	-
Collaboration within project team members is satisfactory.	7	22.6	11	35.5	11	35.5	2	6.5	-	-
Project team members achieve high performance through effective integration management.	7	22.6	10	32.3	11	35.5	3	9.7	-	-

Project activities are properly coordinated through integration management.	7	22.6	17	54.8	7	22.6	-	-	-	-
Integration management practices allow stakeholders to have a clear understanding of project progress	6	19.4	21	67.7	3	9.7	1	3.2	-	-
Integration management helps to align the project objectives with organizational strategic goals	11	35.5	15	48.4	3	9.7	2	6.5	-	-
The integration management practices enhance harmony among project team members	8	25.8	16	51.6	6	19.4	1	3.2	-	-
I believe the integration process could create a good work environment.	15	48.4	14	45.2	2	6.5	-	-	-	-

Source: Own Source (2024)

Table 5 illustrates the analysis of collected data acquired by means of a questionnaire and is categorized in the 3rd category. It includes specific questions related to the integration management effect on project success. Around 93.7% of respondents stated their level of acceptance; around 45% of respondents agreed, and the other nearly 48% strongly agreed with the claim that the integrated work of different departments helps the project team achieve better performance. The previously stated result indicates that the majority of respondents believed that collaboration could maximize the performance of the project team.

In the case of ASC, the attention and effectiveness of facilitating collaboration and integration practices are satisfactory for 74%, or the majority of respondents, and the other 23% of respondents have chosen to stay silent, and the remaining 3% disagree with the claim. The researcher asked the respondents if they noticed the positive impact of integration and collaboration work, and 87.1% of respondents accepted the claim, and the other minorities of respondents chose neutral and disagreed with the claim. The data shows that the management team and project team seem committed to integration and collaboration work, and the

respondents ensure that it has a big impact. i.e., the audience of this paper and project implementers should consider integration management as a significant figure.

Only 58 % of respondents were happy with the claim that collaboration among project team members is satisfactory, but the other 35.5% and 6.5% of respondents were fine with the alternatives, neutral and disagreeing, respectively. This data shows that the respondent's level of acceptance was greater than 50% of the total population size, but it was not good enough to fully accept the claim that indicates staff or employees of ASC have no confidence in the implementation of integration management in particular project teams and foster collaboration within project team members.

The majority of respondents, around 77%, strongly agreed and agreed with the claim that project activities are properly coordinated by means of integration management, and the remaining 23% stay neutral. And almost 87 % of respondents agreed that the integration practice allows stakeholders to have a clear understanding of what is going on with the progress. Only 9.7% of respondents said neutral and just 1 respondent stood against the claim. The above result indicates that stakeholders' involvement and proper coordination of activities in the integration process are well practiced, according to the majority of respondents employed within Ayat Share Company.

Nearly half of respondents agreed and nearly a quarter strongly disagreed with the claim that integration management could enhance harmony among the project team; the remaining 19% stayed in a neutral position, and 3% of respondents disagreed. While 93.5% of respondents accept the claim that the integration process could create a good work environment, the other 6.5% of respondents stand in a neutral position. The implication of these data is that integration management would help the company of ASC gain maximized work performance due to the creation of harmony and a good work environment.

4.4 Suitable Method and Channel of Communication

4.4.1 Current Communication Channel employed by ASC

The respondents were asked to reflect on the current communication channel, which is mostly utilized as the main communication channel. And the respondents stated their level of acceptance as presented in the Bi-chart as follows:

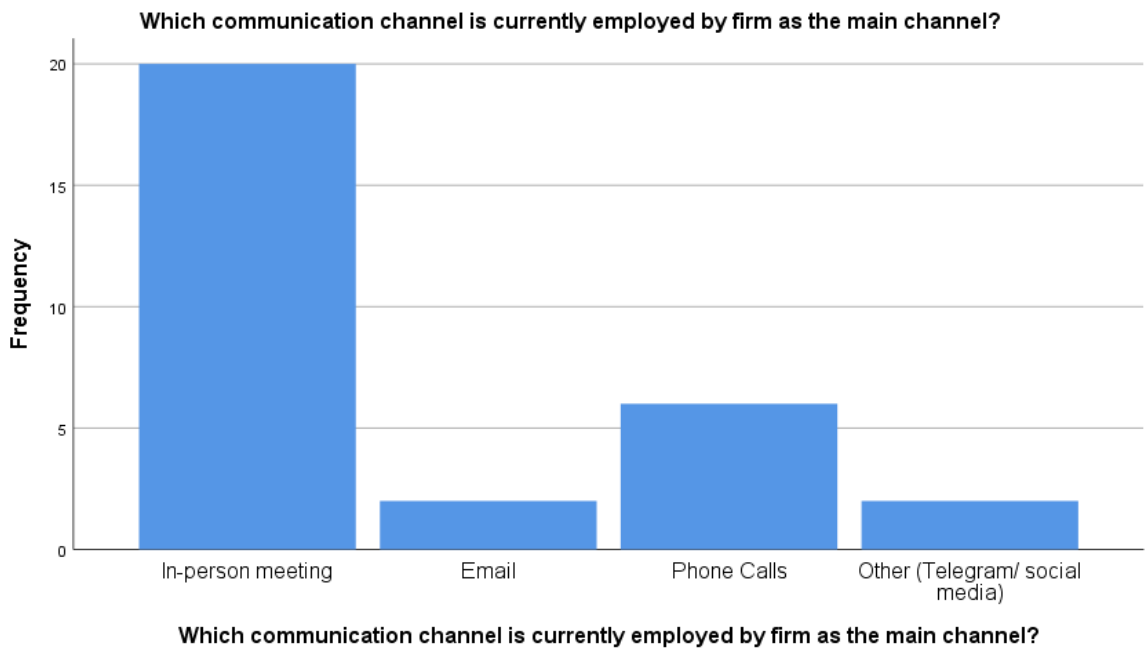


Figure 2- Current Communication Channel

The data shows that out of 31 respondents, 20 or 64.5% of them witnessed in-person meetings as the main channel of communication. However, around 20% of respondents witnessed phone calls as the main channel. This data shows that in-person meetings and phone calls are the most utilized channels of communication currently practiced within Ayat Share Company.

4.4.2 Suitable Channel of Communication that easily applicable by project team

The purpose of this question or variable is to acquire data on the most compatible and suitable channel of communication and to be aware of the preferences of project team members who participate in the communication process and project activities. This analysis helps the project implementers modify and adjust their method and channel of communication, aligning with the flexibility of the structure and the preferences of the project team. .

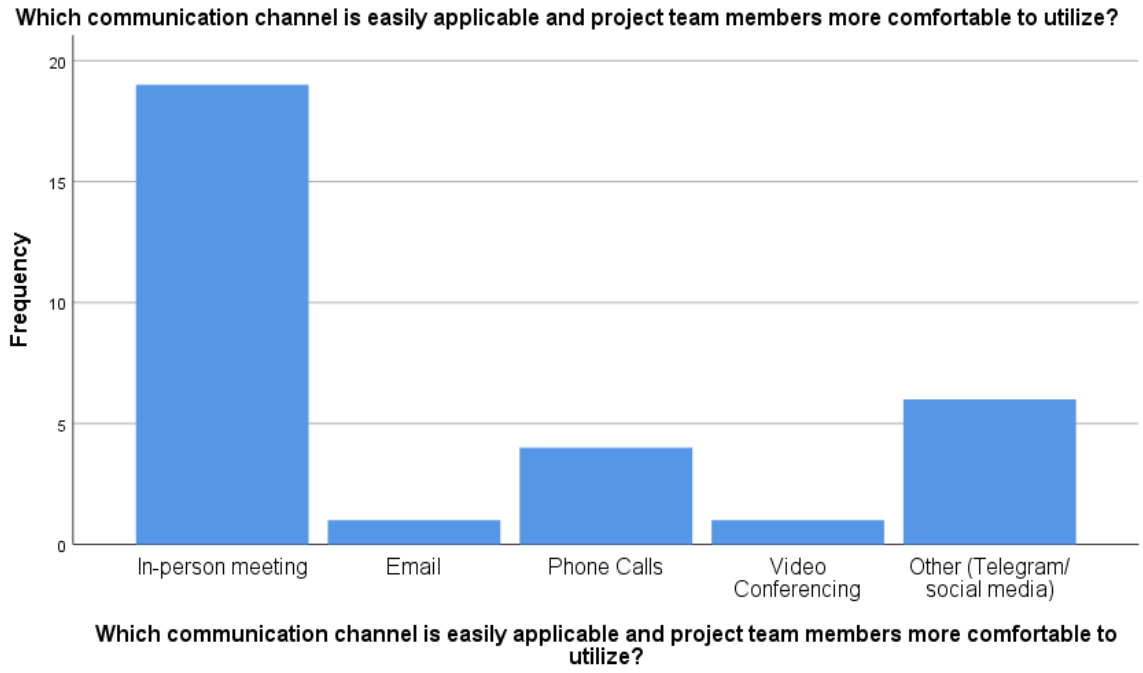


Figure 3- Suitable Channel of Communication

As the above chart shows, the majority of respondents, like 19 employees involved in projects and in the communication process, are comfortable with in-person meetings. The other 10 respondents preferred phone calls and telegram channels collectively, and the remaining 2 respondents preferred email and video conferencing collectively. A suitable communication channel is nearly the same aspect of an in-person meeting as it is compared to the current communication channel, so keeping the current communication channel is the best alternative to effectively practice communication in order to align with the project team's preference for effective communication and foster project success through this process. .

4.4.3 Effectiveness of Current Communication Channel

Table 6- Questions related to Effectiveness of Current Communication Channel

Variables	**Strongly Agree**		**Agree**		**Neutral**		**Disagree**		**Strongly Disagree**	
	Frq.	%	Frq.	%	Frq.	%	Frq.	%	Frq.	%
The current communication channel	5	16.1	16	51.6	7	22.6	3	9.7	-	-

is effective to anticipate the project work activities										
Communication strategies are formulated to facilitate project collaboration in order to have timely decision making	6	19.4	15	48.4	7	22.6	3	9.7	-	-
Guidance of top management facilitated through current communication channel	4	12.9	17	54.8	8	25.8	2	6.5	-	-
The current communication channel facilitates clear and concise communication	4	12.9	21	67.7	4	12.9	2	6.5	-	-
The project team members satisfied with the current communication channel	6	19.4	14	45.2	8	25.8	3	9.7	-	-
There is a feedback mechanism in the communication process	2	6.5	14	45.2	10	32.3	4	12.9	1	3.2
There is documentation and reporting mechanisms for project related information	7	22.6	15	48.4	3	9.7	5	16.1	1	3.2
The current communication method is cost-effective in terms of its impact on project budget and resources	6	19.4	18	58.1	5	16.1	1	3.2	1	3.2
The communication channel adapt to different project requirements and team preference	6	19.4	15	48.4	8	25.8	2	6.5	-	-
The communication channel allow for collaboration among team members	8	25.8	14	45.2	7	22.6	-	-	-	-
The current communication channels can integrate with existing project management tools	3	9.7	16	51.6	9	29	3	9.7	-	-

Source: Own Source (2024)

Table 6 presents the analyzed data related to the effectiveness and suitability of communication channels in different domains of communication management, and the respondents were asked to reflect on those cases and assess their level of agreement.

Almost 70% of respondents witnessed, around 23% of respondents were neutral, and nearly 7% of respondents stood against the claims that the communication process could effectively anticipate project activities and the guidance of the management team could be enhanced through the current communication practice being employed by Ayat Share Company. While nearly 80% of respondents believed, 13% were neutral, and 7% of respondents did not believe that the current communication channel is clear and concise in terms of exchanging information. In the other case, around 65% of the respondents were satisfied, and the other 25% and 10% were neutral and dissatisfied with the current communication channel. The above stated data indicates that more or less the current communication channel is compatible and adaptable to the project team and enhances effective information exchange with fewer discrepancies.

In the communication process with the current communication channel, around 50% of respondents agreed and strongly agreed collectively to the claim. There is a feedback mechanism, and 32% of respondents remain neutral, while the other 18% of respondents collectively disagreed and strongly disagreed with the claim. This data implies the application of two way communications is doubtful within ASC and needs some adjustment in the aspect of modifying the current communication channel to gain feedback and comments, which would be very important.

In the other case, 71 % of respondents witnessed the existence of documentation and reporting mechanisms in the process of exchanging project related information. The above written method of communication is well practiced for exchanging information that aims to announce the progress of project work activities to concerned bodies. In terms of cost effectiveness, the current communication channel is effective based on its impact on project budget and resources, and 77.5% of respondents collectively agreed and strongly agreed to this motion. The above statement indicates that much effort in budget and resources is not required with the current communication channel.

The current communication channel in the case of adaptability to the various requirements of the project and team preference is good based on the responses of nearly 68% of respondents. And

the flexibility of the communication channel to collaborate with team members is effectively based on 70% of the respondents' responses. In the case of compatibility verification of the current communication channel with any project management tool, only 61% of respondents are confident in the communication channel, and 29% of respondents and 10% of them stand against this claim. More or less, the adaptability, flexibility, and compatibility of the current communication channel, which is in-person meetings inclusive of phone calls, are effective and acceptable based on the majority of respondents' responses.

4.5 Relationship between Challenges faced by ASC and Integration and Communication Management Practice

Table 7- Relationship between Challenges and Integration and Communication Management Practice

Variables	**Strongly Agree**		**Agree**		**Neutral**		**Disagree**		**Strongly Disagree**	
	Frq.	%	Frq.	%	Frq.	%	Frq.	%	Frq.	%
Integration management plays its role in addressing project challenges and issues	5	16.1	12	38.7	13	41.9	1	3.2	-	-
Project issues and challenges effectively addressed through communication management	6	19.4	16	51.6	8	25.8	1	3.2	-	-
There are barriers to effectively practice integration during project execution	4	12.9	16	51.6	9	29	2	6.5	-	-
Inconvenience occurs due to lack of proper management of integration and communication management	4	12.9	21	67.7	4	12.9	2	6.5	-	-
Project team members face challenges because the integration practices are minimal	4	12.9	9	29	14	45.2	3	9.7	1	3.2

Inappropriate work load exists due to inadequate integration and communication practice	7	22.6	11	35.5	7	22.6	5	16.1	1	3.2
Cost overrun has become inventible for the reason communication and integration not managed effectively	4	12.9	15	48.4	9	29	1	3.2	2	6.5
Quality issues are a problem due to improper communication and integration management	9	29	4	12.9	9	29	7	22.6	2	6.5
Organizational culture exists in align to effective communication and integration management	5	16.1	13	41.9	10	32.3	3	9.7	-	-
Poor communication and integration management could be a cause of delay	8	25.8	10	32.3	9	29	3	9.7	1	3.2

Source: Own Source (2024)

The above table presents the analysis of data related to the questions categorized under the relationship between challenges and issues faced by the company and communication and integration management. This section of the study analyzes the effect of proper communication and integration management in addressing the challenges and issues faced by ASC. Also, respondents were asked about the claim that challenges are caused by improper or poor communication and integration management.

Nearly 55% of staff who participated in projects believes that integration management plays a role in addressing challenges faced by the company, and the other 42% and 2% of respondents stay neutral and stand against the claim, respectively. While 71% of respondents witnessed the claim challenges and issues addressed through effective management of communication, 26% and 3% of respondents stayed in a neutral position and stand against the claim, respectively. This statement indicates that communication management and, less influentially, integration management impact the company's efforts to address challenges and issues based on the majority of respondents' responses.

In the other cases, the respondents were asked if there are barriers to effectively practicing communication and integration management and if inconvenience occurs due to improper management of communication and integration management. And 64.5% of respondents collectively agreed and strongly agreed with the claim that barriers exist; 29% of respondents are neutral; the other 6.5% do not believe barriers exist; and around 81% of respondents believe that inconveniences occur due to poor communication and integration management. The implication of this data is that barriers should be addressed that could potentially hinder the communication and integration process, and poor communication and integration management will create inconveniences that cause frustration for project team members.

Due to improper and inadequate practices in communication and integration management, nearly 61% and 58% of respondents believed that cost overruns were inventible and inappropriate workloads existed, respectively. However, the claim on inadequacy practices in communication and integration management could create an inappropriate work load, with nearly 23% and 19% of respondents being neutral and standing against the claim, respectively. Also, 29% and 10% of respondents chose to be neutral and against the claim that state cost overruns are caused by improper communication and integration management. As a factor, improper integration and communication management could be a causal factor for delay in project output delivery, according to 58% of respondent's responses, and 42% of respondents stand on the other side, particularly 29% who ticked neutral, 10% who ticked disagree, and 3% who ticked strongly disagree with the claim. And 58% of respondents believed, 32% stayed neutral, and 10% did not believe that there is an organizational culture for practicing effective integration and communication management within Ayat Share Company to face challenges and issues.

The above paragraph indicates that the company is in a good position, particularly in the cultural aspect of exercising effective communication and integration. Although the majority of respondents believed problems were still occurring like cost overruns, delays, and inappropriate workloads because of inadequacy and a lack of both communication and integration management, However, there are still individuals who do not accept and are neutral to the previously stated claims in the above paragraph. This implies that there may be other factors to cause those problems than improper and inadequate management of communication and integration, and that needs to be examined. Unlikely majority, or 58% of respondents,

collectively stands in a neutral position and against the claims that state the project team members face challenges because integration practices are minimal within the company and quality issues become a problem due to improper communication and integration management. These statements indicate the project team was not challenged by the integration process, and quality problems are not considered the effects of improper communication and integration management practices.

4.6 Relationship among Communication Management Effect, Integration Management Effect and Suitable Channel of Communication

Analyzing the effect of communication management and integration management and identifying the suitable channel of communication are the core areas that need to be investigated and stated as specific objectives of the research. However, in this section of the paper, the relationship is analyzed in terms of how strongly they are related to each other. By computing the correlation of these independent variables, the strength of the linear relationship between the independent variables is what the researcher aimed to identify..

Correlation measures how two variables strongly relate to each other. A correlation matrix is used to check the pattern of relationships in the Pearson correlation coefficient. The most widely used methods of measuring the degree of relationship between two variables are simple correlation or Karl Pearson's coefficient. Using SPSS 26 software correlation, these variables were easily computed, and the interpretation was done based on the calculated values of correlation coefficients ranging from -1 to 1, where -1 indicates a perfect negative relation, the relationship is perfectly linear, and 1 indicates a perfect positive relationship. A correlation coefficient of 0 indicates that there is no correlation (Mooi and Sarstedt ,2011).

Based on the rule of thumb of correlation coefficient size, a correlation coefficient ranging from 0.7 to 1 is considered to have a high positive relationship between variables, and a correlation coefficient ranging from -0.7 to -1 is considered to have a high negative relationship between variables. While the correlation coefficient ranges from 0.41 to 7, it is considered moderate, and from 0.21 to 0.4, it is considered small. Also, coefficient size ranges from 0.01 to 0.2, which is defined as slight or negligible.

Table 8- Correlation between Three Categorical Variables

Correlations				
		CME	IME	SCC
Communication Management Effect	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	31		
Integration Management Effect	Pearson Correlation	.825**	1	
	Sig. (2-tailed)	.000		
	N	31	31	
Suitable channel of communication	Pearson Correlation	.609**	.669**	1
	Sig. (2-tailed)	.000	.000	
	N	31	31	31
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: Own Source (2024)

Correlation between Communication Management and Integration Management Effect: as Pearson Correlation study conducted between independent variables of Communication and Integration Management Effect, the correlation coefficient is 0.825 and significant value 0.000. It implies the two variables have high positive relation.

Correlation between Communication Management Effect and Suitable Channel of Communication: in the above table, calculated value of Pearson correlation coefficient between communication management and suitable channel of communication is 0.609 and the significant value of 0.000 which is blow 0.005, so that the relations between these two variables are moderate.

Correlation between Integration Management Effect and Suitable Channel of Communication: Pearson correlation test also conducted for relationship between Integration Management and suitable channel of communication and the correlation coefficient scores 0.669 and the significant value is 0.000. Therefore, the relation of these two variables considered as moderate.

4.7 Relationship between Project Success Indicators and other Independent Variables

Communication management and integration management were considered independent variables in this study. While project success is considered an independent variable coded with project success factor indicators such as cost, time, and quality, the regression analysis was selected to analyze the effect of independent variables on the dependent variable of project success due to the data used. Likeret scale or ordinal variable valued with 1 for' strongly agree', 2 for 'agree', 3 for 'neutral, 4 for 'disagree', 5 for 'strongly disagree' and measure.

The assumptions are formulated based on how the previously stated two independent variables affect the independent variable, which is project success, by using the variables with statements of indicators of project success like cost overruns, time overruns, and quality problems.

4.7.1 Pseudo R-square Testing

Table 9-Pseudo R-Square

Pseudo R-Square	
Cox and Snell	.988
Nagelkerke	1.000
McFadden	1.000
Link function: Logit.	

Nagelkerke scores 1, it indicates the independent variables highly or 100% explains the dependents variables. So that it's tasted as good enough to proceed.

4.7.2 Parameter Estimates of Ordinal Regression Analysis

Table 10- Ordinal Regression Analysis result

Parameter Estimates								
		Estimate	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[PRJSUCC = 1]	-25.366	8.224	9.514	1	.002	-41.484	-9.247
	[PRJSUCC = 1]	-18.028	6.881	6.865	1	.009	-31.513	-4.542
	[PRJSUCC = 2]	-12.934	6.200	4.353	1	.037	-25.085	-.783
	[PRJSUCC = 2]	-8.367	5.623	2.214	1	.137	-19.387	2.654
	[PRJSUCC = 2]	-3.678	4.930	.557	1	.456	-13.342	5.985
	[PRJSUCC = 3]	3.689	4.936	.558	1	.455	-5.986	13.364
	[PRJSUCC = 3]	8.744	5.756	2.308	1	.129	-2.538	20.025
	[PRJSUCC = 3]	12.894	6.437	4.012	1	.045	.277	25.511
	[PRJSUCC = 4]	18.409	7.613	5.846	1	.016	3.487	33.331
Location	[CME=1]	33.505	19.578	2.929	1	.087	-4.867	71.877
	[CME=1]	-6.099	5.766	1.119	1	.290	-17.399	5.202
	[CME=1]	10.301	16.172	.406	1	.524	-21.395	41.998
	[CME=1]	-21.533	8.475	6.455	1	.011	-38.144	-4.922
	[CME=1]	-19.906	8.108	6.027	1	.014	-35.797	-4.014
	[CME=1]	-11.232	14.903	.568	1	.451	-40.440	17.977
	[CME=2]	25.805	16.011	2.598	1	.107	-5.575	57.185
	[CME=2]	6.301	5.897	1.142	1	.285	-5.257	17.860
	[CME=2]	-6.099	5.766	1.119	1	.290	-17.399	5.202
	[CME=2]	41.309	18.442	5.017	1	.025	5.163	77.456
	[CME=2]	1.762	7.172	.060	1	.806	-12.294	15.818
	[CME=2]	7.901	9.321	.719	1	.397	-10.367	26.170
	[CME=2]	12.400	8.592	2.083	1	.149	-4.440	29.240
	[CME=2]	-30.207	14.010	4.649	1	.031	-57.665	-2.749

	[CME=2]	-2.522E-15	6.548	.000	1	1.000	-12.833	12.833
	[CME=2]	-10.638	6.311	2.841	1	.092	-23.008	1.732
	[CME=2]	-10.638	6.311	2.841	1	.092	-23.008	1.732
	[CME=3]	6.301	5.897	1.142	1	.285	-5.257	17.860
	[IME=1]	-48.912	19.975	5.996	1	.014	-88.062	-9.761
	[IME=1]	-10.301	13.299	.600	1	.439	-36.367	15.764
	[IME=2]	-10.301	14.787	.485	1	.486	-39.284	18.681
	[IME=2]	16.902	12.548	1.814	1	.178	-7.691	41.495
	[IME=2]	4.499	4.171	1.163	1	.281	-3.677	12.674
	[IME=2]	-15.434	6.975	4.897	1	.027	-29.105	-1.764
	[IME=2]	14.800	12.628	1.374	1	.241	-9.950	39.550
	[IME=2]	-1.600	7.116	.051	1	.822	-15.548	12.348
	[IME=2]	-12.400	8.592	2.083	1	.149	-29.240	4.440
	[IME=2]	-12.400	5.564	4.967	1	.026	-23.305	-1.496
	[IME=2]	-12.400	8.592	2.083	1	.149	-29.240	4.440
	[IME=2]	-25.805	16.011	2.598	1	.107	-57.185	5.575
Link function: Logit.								

Source: Own Source (2024)

The above table shows the parameter estimates with a significant correlation that were done by ordinal logistic regression analysis of Likeret scale data. The independent variables named with the abbreviation “CME stand for communication management effect and IME stand for integration management effect, while “PRJSUCC” stands for project success as a dependent variable. However, numerical values stated with these names demonstrated in the above paragraph indicate ordinal variable values.

The estimate with a high positive value indicates that the particular independent variable highly and positively affects the dependent variable. However, the significance value with the lowest value, which is near zero, is considered highly significant, and the value with the highest value, with the highest value, which is nearing 1, is considered slightly significant. For example, in

some cases, CME highly affects the dependent variable by scoring 41.3 and 33.5 estimate values with a significant value of 0.087 and 0.25. These two variables indicate that CME highly and significantly affects the independent variable.

Although the estimate with a high numeric value and a negative taken as a highly impactful variable,. Also, the estimate values with small and positive numeric values have a slight effect, and the same for the negative estimate values. While the small estimates and the less significant values have a direct proportionality, For example, the case of IME with an estimated value of -1.6 has a significant value of 0.822, and this independent variable affects the independent variable very slightly and negatively as well as less significantly.

4.8 Result of Key Informant Interview Analysis

A key informant interview provides the deepest insight, perspectives, opinions, and experiences of individuals with expertise and specialization in a particular area of project-related work. This KII aims to gain comprehensive and profound information from different departments and sector representatives with better knowledge and understanding of the projects undertaken by Ayat Share Company. The interview was conducted primarily by requesting and assuring consent with the help support letter issued from the Student Support Office, and ethical considerations or legal requirements were fulfilled through this process. After the consent, the interviewer scheduled the program, where and when to interview the key informants, and conducted the interview, which was guided by their own developed interview guide.

A total of four key informants participated from the Design and Supervision Office, the Construction Office, the External Consultant and Supervision Office, and the Customer Service Office. The design and supervision office, construction office, and customer service office represent the Ayat Share Company, and external consultants are considered stakeholders. The customer service office is targeted to gain the customer's perspective and claim because the office is closest to the customer or clients of the company. The analysis of the key informant’s response is done thematically, and a detailed summary of all responses is found in appendix III (refer to Table 11). However, the selected themes were summarized and presented as follows:

:

Theme 1- The Overall Impact of Communication and Integration Management on Project Success within Ayat Share Company: the overview of key informants insights and opinions presented rather than details information about the overall impact of integration and communication management. For the purpose of avoiding redundancy and bulky representation of data, the nearly similar responses and common perceptions acquired from different key informants were stated in one statement collectively.

"Because there is good integration of departments and good communication among several departments of the project team, the impact is big and positive." -KI1, KI2, KI3

"Most construction companies, including Ayat Share Company, use the DBB method, which is the very traditional method due to the gap in early stakeholder involvement, to avoid discrepancies and minimize errors. Therefore, the informant recommends a digital method of construction that involves communication processes with SHs and beneficiaries during the design period and preliminary stages of the project life cycle." -KI2

"The communication process is initiated at the director level (board members and CEOs), with decisions and policies formulated and communicated to the management level (department heads and management team), and then the communication process is down to the construction level (site engineers and formans). The communication and integration process impacts the project work activities to be done as per the plan and direction to guide the project team, which have been addressed through this process." -KI3

Based on the aforementioned issues, the practice of integration and communication is well implemented, on the other hand, the early involvement of stakeholders in the integration process is traditional, and that sheds light on the area for improvement. As KI3 indicated, there is a method of top-down communication process.

Theme 2: Barriers and Obstacles that Hinder Effective Communication and Integration within Ayat Share Company: According to a key informant from the design office, this issue is reflected in the fact that there are no major barriers that hinder the effort to effectively integrate and communicate externally with stakeholders and internally with the project team. And the other key informant's perceptions from the construction office and consultants' office were stated and illustrated as follows:

"Employee's carelessness and resistance, absence and unavailability of project team members at the workplace, even via phone calls, and the minimal attention given to the integration and communication process are some common obstacles to effectively practicing integration and communication process."-KI3

"Resistance of staff, fear of innovative ideas and change, lack of skilled labor, finding comfort with routine, and looking for advantage in delayed projects are the common barriers and obstacles that hinder effectively practicing communication and integration, and the informant mentioned that the barriers and obstacles are inventible in the construction of projects, but there are ways to challenge the obstacles." -KI2

Based on the above KII data, the personality and behavioral performance of the project team impact effective communication and integration process. This information indicates that there is a need for improvement in the area of providing training to the project team in the communication and integration process.

Theme 3- Communication Channels Utilized to Facilitate Interaction and Collaboration both internally and externally by Ayat Share Company: For triangulation purposes, the question was included in the interview question as it was already included in the survey study. And the informants commonly mentioned a telegram group and an in-person meeting to communicate internally. While externally written methods of communication and email are utilized to communicate online with SHs.

"Telegram is used as the main channel to communicate internally and email externally." -KI1

"Within project team members, all channels and external verbal and written communication are utilized." -KI2

"Recently, Ayat Share Company established a department called Customer Service Office to address shareholder's demand and interest by providing service with one desired office that fosters effective communication. After this office establishment, discrepancies have been minimized, and the company has also benefited from diverting the unnecessary work load of the project team and capitalizing on customer satisfaction." –KI3, KI4

Theme 4: Definition and Measurement of Success Factors Regarding the Role of Integration and Communication Management: the two informants reflected their perception, but the other two informants claimed that this question directly related to the company's project team.

"*The measurement of success is whether the project was delivered within budget and time frame and whether the project has been implemented as per plan so that the effectiveness of the integration and communication process is evaluated based on these success factors."* –KI3, KI1

The key informants admitted that they do not have any information if there is a mechanism to rate success. However, the key informants mentioned that the board members of the company may have information on how to rate and weigh success in communication and integration management.

Theme 5: Project Team Understanding and Awareness in the Significant Role of Communication and Integration on Project Success: The key informants unanimously reflected that the staff of the project has a well understanding and awareness of the significance of communication and integration management on project success.

"Carelessness and unwillingness may lead to miscommunication or improper communication process which causes unfavorable situations in the work environment, and sometimes accidents happen during project execution." -KI3

Theme 6: Collaboration across Different Departments and Project Teams: Perceptions of this interview question have positive and negative results. Collaboration involves project team members from different departments, and the interview tried to catch the sound of various departments.

"In my guess, 95% of collaboration is done through effective communication and integration." – KI1

"Very collaborative team with smooth interaction and good and positive responses observed within the company." KI2, KI4

"*The work by itself leads to collaboration, but some members only focus on their duties, and there is a gap in the management team to facilitate and enhance collaboration between project team members."* -KI3

Theme 7: Identifying Potential Stakeholders and Ensuring the Active Involvement of Stakeholders in the Integration Process: Early involvement of SHs occurred during the design phase to participate in the decision-making process that helped catch their perceptions and interests, according to informants from the design office (KI1).

"The strategies used to actively engage SHs include providing incentives to clients with huge investments and having long term relationships with suppliers." -KI3

The key informant from the Customer Service Office seems idle in this particular theme; however, issues from stakeholders, especially customers, are organized and submitted to the top management through this department, and the feedback question is directly related to the contractor and client sides.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

The thesis attempted to analyze the effect of integration management and communication management on project success with Ayat Share Company. It also aims to identify the suitable method and channel of communication to be employed by primarily examining the current communication channel. Furthermore, the paper tried to look at the relationship between challenges and issues faced by the company and communication and integration management practices. The study employed both interviews and questionnaires to collect primary data. The interview was held with four office heads of different departments to triangulate the data collected using the survey. The study utilized a combination of qualitative and quantitative methods, and descriptive analysis was performed on the collected data by comparing it with the theoretical, conceptual, and empirical frameworks from the literature review.

5.1 Summary

The research titled THE EFFECT OF COMMUNICATION AND INTEGRATION MANAGEMENT ON PROJECT SUCCESS: THE CASE OF AYAT SHARE COMPANY delves into the influence of communication and integration management on project success specifically within the context of Ayat Share Company. The study underscores the pivotal role of the construction industry in Ethiopia's economic development and emphasizes the significance of effective project management practices in achieving desirable project outcomes. By investigating how communication and integration management impact project success at Ayat Share Company, the research aims to shed light on the importance of enhancing strategies in these areas to boost overall project performance and success.

The paper begins by highlighting the construction industry's crucial role in Ethiopia's economic and social development, emphasizing the sector's contribution to infrastructure development and overall growth. Furthermore, the study discusses the significance of effective project management in the construction industry, stressing the importance of understanding project contexts and management practices. It delves into the theoretical and empirical literature related to communication, integration management, and project success, providing a conceptual framework for the study.

The paper also includes a detailed literature review, research methodology and a work plan for the study. By focusing on communication and integration management within the construction sector, the research seeks to contribute valuable insights into optimizing project success within Ayat Share Company. The research methodology section outlines the approach, design, population, sampling technique, data collection methods, instruments, and analysis procedures. The paper emphasizes the need to analyze the relationship between communication, integration management, and project success indicators such as cost, time, and quality.

The study analyzed data using SPSS software that was collected through a survey, and interview was conducted with key informants of the company guided by its own developed interview guide. During the survey, the questionnaires were distributed to 31 respondents, and all questionnaires were responded to and get back to the researcher. The interview was also conducted with the key informants who work as the head of the office, and they provided valuable insights and experiences that aligned with the research topic. Data were entered and verified with the software tools, and the analysis employed was based on the data and variable type.

In conclusion, the paper underscores the critical role of communication and integration management in achieving successful project outcomes. It recommends enhancing communication strategies, improving integration management practices, and investing in project management skills to optimize project success at Ayat Share Company. Overall, the paper aims to provide insights into the factors influencing project success in the construction industry, particularly within the context of Ayat Share Company, contributing to the existing knowledge on project management practices in Ethiopia.

5.2 Conclusion

By utilizing both qualitative and quantitative research methods, this study aimed to explore the inner workings of Ayat Share Company in order to uncover valuable insights that can guide strategic decision-making and drive organizational growth. Through the identification of areas for improvement and best practices, this research has the potential to revolutionize project management practices, in particular integration and communication management practices within

the company, that aim to foster project success through effectively managing integration and communication process.

Through a detailed examination of how communication and integration management practices impact crucial project success indicators such as cost, time, and quality, the study sheds light on the pivotal role these elements play in determining the overall success of construction projects. It underscores that effective communication strategies and integration management practices are fundamental in optimizing project outcomes and achieving success in the construction industry. Hence, failure in effective communication and integration management severely affects project success in terms of indicators such as delivering project outputs behind schedule, behind budget, and with quality problems.

Depending on the perception of the project team and the results regarding the current communication channel, retention of the current communication channel is the best alternative to enhance effective information sharing and timely decision making due to the fact that the current communication channel is well practiced in terms of flexibility and adaptability to the project team, compatibility with the project management tools, and cost-effectiveness. However, the feedback mechanism in the communication process requires modification and refinement regarding two way communications.

Based on the findings presented in the analysis of the collected data related to the integration management effect on project success at Ayat Share Company, it is evident that there is a strong positive perception among respondents regarding the impact of integration and collaboration on project performance. The majority of respondents expressed agreement with the notion that integrated work among different departments can enhance the project team's effectiveness and ultimately lead to better project outcomes. The high acceptance rate of the positive impact of integration and collaboration efforts indicates a commitment from both the management team and project team towards fostering collaboration and coordination within the organization. These results underscore the importance of prioritizing integration management practices to maximize project success in the construction industry.

The findings suggest that effective communication management plays a crucial role in project success at Ayat Share Company. The majority of respondents perceived that well-informed and appropriately assigned project team members lead to successful project coordination. Moreover,

a significant percentage agreed that current communication practices enhance information sharing and timely decision-making. The data underscores the importance of maintaining effective communication methods to prevent disruptions in decision-making processes. Additionally, a high percentage of respondents highlighted the negative impact on project success if participants fail to communicate effectively, emphasizing the critical role of communication in project outcomes.

Effective communication management and integration practices are vital for project success at Ayat Share Company. The Key Informant Interviews (KIIs) conducted with experts from various departments provided valuable insights and perspectives on project-related work, highlighting the importance of well-informed team members and efficient communication channels. By focusing on enhancing communication strategies and integration management, Ayat Share Company can improve project coordination, information sharing, and decision-making processes, ultimately leading to successful project outcomes. Although, a skill gap, problems in early involvement of SHs and a gap in the top management to enhance collaboration within project team are areas of improvement according to a number of informants. Hence, maintaining effective communication practices and fostering collaboration among stakeholders are essential for optimizing project performance and achieving success in the construction projects.

5.3 Recommendations

On the basis of the summary and conclusions discussed above, the following recommendations have been given:

- Implement Integrated Communication Strategies: Develop comprehensive communication strategies that integrate various channels to enhance information flow and collaboration among different departments within the organization.
- Address Challenges Proactively: Identify and address challenges faced by the company by aligning communication and integration management practices with the specific project requirements and organizational goals.
- Enhance Cross-Department Collaboration: Foster a culture of collaboration and teamwork among different departments through effective integration management practices, aiming to improve project team performance and overall project success.

- Continuous Improvement: Continuously evaluate and refine communication and integration management strategies based on feedback from stakeholders, ensuring they are aligned with project objectives and industry best practices.
- Training and Development: Provide training programs for staff members to enhance their communication skills and understanding of integration management principles, enabling them to contribute effectively to project success.
- Stakeholder Engagement Strategy: Utilize diverse communication methods such as email updates, project status reports, and virtual meetings to cater to the preferences of different stakeholders. Foster a collaborative environment where team members feel comfortable sharing feedback, ideas, and concerns to drive continuous improvement efforts.
- Performance Metrics Implementation: Define key performance indicators (KPIs) related to communication effectiveness, integration management efficiency, and project success criteria to measure project performance. Moreover utilize benchmarking studies and industry comparisons to gauge the effectiveness of communication and integration practices relative to industry standards.
- Technology Integration Assessment: Conduct a technology needs assessment to identify gaps, challenges, and opportunities for integrating digital tools that support communication, collaboration, and integration management.

These detailed insights aim to provide a comprehensive framework for Ayat Share Company to enhance communication and integration management practices and drive project success within the construction context.

5.4 Suggestion for Future Research

Suggestions for future research based on the recommendations include:

- Longitudinal Studies: Conduct longitudinal studies to track the impact of the implemented communication and integration strategies on project success over time. This can provide insights into the sustainability and long-term effectiveness of the proposed interventions.
- Comparative Analysis: Compare the communication and integration practices of Ayat Share Company with industry peers or competitors to identify best practices, challenges, and

opportunities for improvement. This comparative analysis can offer valuable benchmarks for performance enhancement.

- Technology Adoption Studies: Explore the adoption and utilization of emerging technologies, such as project management software, collaboration platforms, and communication tools, within the construction industry. Investigate the barriers, enablers, and outcomes of technology integration on project success.
- Cross-Sector Research: Extend the research scope beyond the construction industry to examine communication and integration practices in other sectors, such as healthcare, information technology, or manufacturing. This cross-sector analysis can provide insights into transferable best practices and lessons learned.
- Qualitative Investigations: Conduct qualitative studies, such as interviews, focus groups, or case studies, to gain in-depth insights into the human factors influencing communication, collaboration, and integration management within project teams. Understanding the socio-cultural dynamics can enhance the effectiveness of communication strategies.

These suggestions for future research aim to have a comprehensive understanding of communication and integration management in project settings, explore new avenues for improvement, and contribute to the advancement of project success practices across industries.

REFERENCES

Abebe, T. F. (2019). Integration as tool of supply chain management and its effect on performance of private road construction firms in Ethiopia. *Journal of logistics management, 8*(2), 45-50.

Alberto, P. G.-F. (2017). *Communication problems between actors in construction projects,*. Aalto University, Helsinki: master's programme in the field of Building technology.

Aregaw, Z. T. (2015). Causes of Contractor Cost Overrun in Construction Projects : The Case of Ethiopian Construction Sector. *Int. J. Bus. Econ. Res., 4*(4), 180-191.

Awati, K. (2010). *Obstacles to project communication*. Retrieved from Retreied from http://www. projectsmart. co. uk/obstacles-to-projectcommunication. html.

Ayat, S. C. (n.d). *Ethiorealestate.net*. Retrieved June 06, 2024, from Ayat Real Estate : https://www.ayatrealestate.com.Ayat-Real- Estate History,Backgroun and Profile.

Baker, B. (2007). Viewpoints-ASK PM NETWORK-Power Points. *PM Network , 21*(3), 18.

Burke, R. (2007). *Introduction to project management: one small step for the project manager. [S.l.]*. Burke Pub.

Caltrans. (2007). *Project Communication Handbook.* 1120 N Street, Mail Station 28 Sacramento, CA 95814: Office of Project Management Process Improvement.

Chou, J.-S. a.-G. (2012). Project management knowledge and effects on construction project outcomes: An empirical study. *Project Management Journal, 43*(5), 47-67.

Collins, A. &. (2004). Project success - A survey. *Journal of Construction Research, 5*(2), 211-231.

Committee, P. S. ((1996/2000)). *A guide to the project management body of knowledge (PMBOK guide).*

Davies A., M. I. (2014). project complexity and systems integration : constructing the London Olympics and paralymics Games. *international journal of project management, 32*(5).

Demirkesen, S. &. (2017). Impact of integration management on construction project management performance. *International journal of project management, 35*(8), 1639-1654.

Desta, S. S. (2015). *The Management of Construction Processes in Developing Countries: A Case Study of the Ethiopian Roads Authority.* South Africa: University of Cape Town .

Dow, W. &. (2010). *Project Management Communications Bible. .* John Wiley & Sons.

ECIDP. (December 2014). Approved by Ministry mikir bet,.

Emmitt, S. (2010). Managing interdisciplinary projects: a primer for architecture, engineering and construction. London: Spon Press.

Hussin, J. M. (2013). The way forward in sustainable construction: issues and challenges. *International Journal of Advances in Applied Sciences, 2*(1), 15-24.

Ibidem. (n.d.). *"Project Management Book of Knowledge"* (4th edition ed.).

Ibrahim C.K.L.C., C. S. (2013a). Development of conceptual team integration performance index for alliance projects. *Construction Management and Economics, 31*(11), 1128-1143.

Idoko, L. (2008). Developing local capacity of project management- key to social and business transformation in developing countries. *PMI Global Congress 2008. Vol. 262*. Project Management Institute.

Jaferi, F. S. (2014). Investigationof project communication managementin project-basedorganizations using the PMBOK guideline. *Journal of applied research on industrial engineering, 1*(3), 130-135.

Jainendrakumar, T. D. (2015). Project Integration Management The knowledge area exclusively for the Project Manager. *PM World J, 4*(3), 1-12.

Johnson, B. C. (2017). Educational research: Quantitative ,qualitative, and mixed approaches . (6. ed., Ed.)

Jones, L. B. (2019). Addressing communication and integration management challenges in developing country firms: Lessons learned and best practices. *journal of Global Business Management,, 7*(2), 123-136.

Jørgensen, T. H. (2006). Integrated management systems–three different levels of integration. *Journal of cleaner production, 14*(8), 713-722.

Kliem, R. L. (2007). Effective Communications for Project Management. *CRC Press.* New York : Auerbach Publications.

Kwak, Y. H. (2002). Project management process maturity (PM) 2 model. *Journal of Management in Engineering, 18*(3), 150-155.

Lawrence, P. a. (1967). Differentiation and integration in complex organization. *Administrative Science Quarterly, 12*(1), 1-47.

Leedy, P. D. (2019). Practical research: Planning and design. (12th ed., Ed.)

Levy, S. M. (2002). *Project management in construction.* Sydney: McGraw-Hill.

Love, P. D. ((2008, January)). Causal modeling of construction disputes. *Twenty-fourth annual ARCOM conference 2008* (pp. 869-878). Newcastle : Cooperative Research Center for Construction Innovation .

Luiten, G. T. (1997). "Automating communication in civilengineering." . *Journal of construction engineering and management , 123*(2), 113-120.

Malik MA Khalfan, P. M. (2007). Building trust in construction projects, supply chain management. *an international journal, 12*(6), 385-391.

Meng, X. (2012). The effect of relationship management on project performance in construction. *international journal of project management, 30*(2), 188-189.

Merriam-Webster. (2002, 8 2). *The Merriam-Webster Dictionary* (11 ed., Vol. 8). United States of America: Library of Congress Cataloging.

Miller D, H. Q. (2002). The problem of solutions: balancing clients and capabilities. . *Bus Horizons, 45*(2), 3–12.

Mooi, E. a. (2011). *"A Concise Guide to Market Research the Process, Data, and Methods Using IBM SPSS Statistics".* Heidelberg, Germany.

MUDC. (2012). *Construction industry policy (first draft).* Ethiopia, Addis Abeba: Ministry of Urban Development and Construction.

Muszynska, K. D. (2015). Communication management in project teams–practices and patterns. *Management, Knowledge and Learning in Joint International Conference 2015* (pp. pp. 1359-1366). Bari,Italy: Managing Intellectual Capital and Innovation for Sustainable and Inclusive Society.

Nega, F. (Causes and effects of cost overrun on public building construction projects in Ethiopia. Master thesis). *2008.* Addis Ababa, Ethiopia: Addis Ababa University.

Neuman, W. L. (2014). Social research methods : Qualitative and quantitative approaches . (7. ed, Ed.)

Nokes, S. K. (2007). *The Definitive Guide to Project Management: The Fast Track to Getting the Job Done on Time and on Budget.* Germany: Pearson Education: Prentice Hall Financial Times.

Nyandongo, K. M. (2020). *The impact of communication on project performance: an empirical study* . Johannesberg,South Africa: University of Johannesberg.

Ozguler, I. S. (2016). The impact of personal characteristics on project management. *In Conference: Fifth International Scientific Conference on Project ManagementThe impact of personal characteristics on project management.* Baltic Countries at Riga, University of Latvia.

Ozorhon, S. D. (2017). Impact of Integration Management on Construction Project Management Performance. *International Journal of Project Management, 35*(8), 1639-1654.

Pitts, V. E. (2012). Communication in Virtual Teams: The Role of Emotional Intelligence. *Journal of Organizational Psychology, 12*(3/4), 21-34.

PMI. (2013). *A guide to the Project Management Body of Knowledge.* Newtown Square, PA.: Project Management Institute.

PMI. (2017). *A guide to the project management body of knowledge :(PMBOK® guide)* (6th ed. ed.). Newtown Square, Pa: Project Management Institute.

Pocock J., H. C. (1996). Relationship between project interaction and performance indicators. *Journal of Construction Engineering and Management, 122*(2), 165-176.

Schwalbe, K. (. (2009). *Introduction to project management,Course Technology Cengage Learning.* Boston: Schwalbe Publishing in Minneapolis.

Smith, J. &. (2018). Challenges in communication and integration management: A case study of developing country firms. *International Journal of Project Management, 36*(5), 731-743.

Steyn H. (2008). (2008). *Project management: a multi-disciplinary approach.* . Pretoria: FPM Pub.

Thewodros, B. T. (2016). OCCUPATIONAL HAZARDS IN CONSTRUCTION INDUSTRY: THE CASE OF STUDIES FROM HOUSING AND CONSTRUCTION WORKERS AT ADDIS ABABA, ETHIOPIA. *International Journal of Research, 4*(9), 84-96.

Tripathi, K. K. (2019). An empirical study on factors leading to the success of construction organizations in India. *International Journal of Construction Management, 19*(3), 222-239.

UNDP. (2014). *Ethiopia: quarterly economic brief.* Retrieved from http://www.et.undp.org/content/dam/ethiopia/docs/Economic %20Brief-%20Third%20Quarter-2014.pdf

Waltz, T. (2021). *Understand the definition of research methodology, as well as various research approaches.* Learn the use of research techniques with research methodology examples.

Wan, M. a. (2017). An Overview of Project Communication Managementin Construction Industry Projects. *Journal of Civil Engineering & Management, 24*(1), 31-42.

Yeung, J. F. (2009). Developing a performance index for relationship-based construction projects in Australia: Delphi study. *Journal of Management in Engineering,, 25*(2), 59–68.

Zewdu, Z. T. (2014). Construction projects delay and their antidotes: The case of Ethiopian construction sector. International Journal of Business and Economics Research. *International Journal of Business and Economics Research, 5*(4), 113-122.

Zulch, B. G. (2014). Communication: The foundation of project management. *Procedia Technology, 16*, 1000-1009.

APPENDICES

Appendix I

QUESTIONNAIRE

ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

Questionnaire to be filled by project team or staff of Ayat Share Company

Dear respondents,

Let me begin by sincerely thanking you for your valuable time and for your quick and genuine responses in advance. The objective of this questionnaire is to collect data about how communication and integration management affect project success.

The data will be used as the primary information for the research I am undertaking as part of my Master's degree program in Project Management (PM) requirements at St. Mary's University. Also, I would like to assure you that your responses will be kept confidential, this research is approved by St. Mary's University, and it will only be used for academic purposes.

Please use the following address to get in touch with me if you have any questions or need further assistance*: Name: Yared Yisru; Tel.: +251913123103*

General Instructions

- Writing your name **is not appropriate**.
- In the closed-ended questions, make sure that you **tick (√)** the corresponding box indicating **your level of acceptance**.
- For questions that are open-ended, please freely **reflect your opinion and perspective** in the space provided.

Category 1: Respondent's identification

1. Gender
   Male ☐ Female ☐
2. Age
   a) Below 25 years ☐
   b) 25-35 years ☐
   c) 36-45 years ☐
   d) 46-55 years ☐
   e) Above 55 years ☐
3. Level of Education
   a) High school graduate ☐
   b) Technical school graduate ☐
   c) College Diploma ☐
   d) BA/ BSc Degree ☐
   e) Master's Degree ☐
   f) Other (please state)_____
4. Your position in the company.
   a) Project Manager ☐
   b) Site Engineer ☐
   c) Office Engineer ☐
   d) Forman ☐
   e) other (please specify) _____
5. For how long have you been working on the construction industry?
   a) 1-5 years ☐
   b) 6-10 years ☐
   c) 11-15 years ☐
   d) >15 years ☐

   In closed-ended questions, indicate your acceptance level by ticking the corresponding box, while open-ended questions allow you to express your opinion and perspective in the provided space.

Category 2: Communication Management Effect on Project Success

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Project team members are well informed about their roles and responsibilities through effective communication.					
2. Current communication practice covers effective exchange information between project participants.					
3. Project team members are able to connect each other through effective communication currently practicing.					
4. A failure in effective communication can negatively impact the project success					
5. The goals of a project alongside the organization are clearly communicated to project team					
6. The timely information sharing is currently practicing well through effective communication.					
7. The relevant information sharing during project execution is done through effective communication.					
8. Communication practice plays a crucial role in conflict resolution.					
9. Language discrepancy in cultural differences is managed through communication management.					
10. I have noticed the overall positive impact of communication management on project success.					
11. I consider communication as important as other key element of project.					
12. Current communication practices foster adaptability and flexibility to changes, challenges and requirements through the project.					
13. Project managers utilize communication as a crucial tool to effectively manage project activities.					
14. Two-way communication positively impacts the project success.					

15. The willingness of project members to share extensive information positively impact project team's collaboration.					
16. Anything you want to add related to this category?					

Category 3: Integration Management Effect on Project Success

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Integration of different departments internally helps the project team for better performance.					
2. The attention given to integration and collaboration of work is good enough.					
3. Project managers effectively facilitate collaboration and coordination.					
4. There is a well-defined process for integrating project plans and objectives across different project team members.					
5. I have noticed the positive impact of integration and collaboration on project.					
6. I believe stakeholders are satisfied with the current integration process.					
7. Collaboration within project team members is satisfactory.					
8. Project team members achieve high performance through effective integration management.					
9. Project activities are properly coordinated through integration management.					
10. Integration management helps to align the project objectives with organizational strategic goals and priorities.					
11. There is support and resources to enable effective integration management practices within the organization.					

12. The integration management practices enhance the visibility of project's contribution to the society and other beneficiaries.					
13. The current integration management practices allow stakeholders to have a clear understanding of project progress and status.					
14. The integration management practices enhance harmony among project team members.					
15. I believe the integration process could create a good work environment.					
16. Anything you want to add related to this category?					

Category 4: Suitable method and channel of communication that is easily applicable by project team

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. The current communication channel is effective to anticipate the project work activities.					
2. The project team members are comfortable with current communication channel.					
3. Communication strategies are formulated to facilitate project collaboration in order to have timely decision making.					
4. Guidance of top management facilitated through current communication channel.					
5. The current communication channel facilitates clear and concise communication.					
6. The involved stakeholders are satisfied with the current communication channel.					

7. The project team members satisfied with the current communication channel.					
8. There is a feedback mechanism in the communication process.					
9. There is documentation and reporting mechanisms for project related information					
10. The current communication method is cost-effective in terms of its impact on project budget and resources.					
11. The communication channel adapt to different project requirements and team preferences.					
12. The current communication channel is secured in terms of protecting sensitive project information.					
13. The communication channel allow for collaboration among team members.					
14. The current communication channels can integrate with existing project management software or tool.					

15. Which communication channel is currently employed by firm as the main channel?

In-person meeting ☐ Email ☐ Phone Calls ☐ Video Conferencing ☐

Other _____

16. Which communication channel is easily applicable and project team members more comfortable to utilize?

In-person meeting ☐ Email ☐ Phone Calls ☐ Video Conferencing ☐

Other _____

17. Anything you want to add related to this category?

Category 5: Relationship between challenges and issues faced by Ayat Share Company and integration and communication management practice.

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1. Integration management practice of the company is effective in addressing project challenges and issues.					
2. Project issues and challenges effectively addressed through communication within the company.					
3. There are barriers to effectively practice integration during project execution.					
4. I have noticed inconvenience due to lack of proper management of integration and communication management.					
5. Project team members face challenges because the integration practices are minimal.					
6. Project staff members exposed to inappropriate work load due to inadequate integration and communication practice.					
7. Cost overrun has become inventible for the reason communication and integration not managed effectively.					
8. Quality issues are a problem due to improper communication and integration management.					
9. There is organizational culture that aligns with effective communication and integration management to mitigate emerging issues & challenges.					
10. Delivering project outputs with delay is caused by poor communication and integration management.					
11. Any idea or opinion you want to add related to this category?					

Appendix II

INTERVIEW

ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

The semi structured interview is conducted for the purpose of gathering general information and gaining the profound perspective of key informants involved in projects constructed by Ayat Share Company. The information used as the primary data for the research I am conducting at St. Mary's University for the requirement of completing my Masters degree in project management (PM) and the research entitled The Effect of Integration and Communication Management on Project Success in the Case of Ayat Share Company.

The research is only for academic purposes authorized by St. Mary's University and will not reveal any identifiable respondent information. Thank you for your cooperation in advance.

INTERVIEW QUESTIONS

1. Can you give me a general overview of your role and responsibilities within Ayat Share Company and how long have you been involved with projects?
2. Can you give me a general explanation and some insights about the project undertaken by Ayat Share Company?
3. How do you explain the overall impact of communication and integration management currently being practiced within Ayat Share Company on project's success?
4. What strategies does Ayat Share Company employ to integrate project activities and facilitate communication among project stakeholders?

5. Are there any barriers or obstacles that hinder effective integration and communication within projects at Ayat Share Company? If yes, how does the company address these obstacles?
6. What communication channels are utilized to facilitate interaction and collaboration both internally within project team members and externally with stakeholders?
7. How does the communication channel or method have been identified and selected? Is there any mechanism to check the suitability of channel and take corrective action progressively? If yes, who is responsible for that and ensuring effective communication management?
8. What are some common challenges or issues encountered during project execution, particularly in relation to integration and communication management at Ayat Share Company? How do this challenges impact the project success?
9. How does Ayat Share Company define and measure success for its projects regarding the role of integration and communication management? Does the company have a mechanism to weight and rate success factor? If yes, what is the rate of both communication and integration impact?
10. How well do the project team members have an understanding and awareness of the significant role of integration and communication in project success?
11. How does the company foster collaboration across different departments and project teams?
12. Can you explain how the management team identify potential stakeholders and ensure the actively involvement of stakeholders in integration process? What strategies does Ayat Share Company employ to actively engage and foster long term relationships with key stakeholders?

INTERVIEW GUIDELINE

Preparation

- Defining the purpose of conducting interview: gaining detail information and perspective of key informant in the general issues.
- Developing a list of open ended questions that contribute in anticipating research objectives and helps to answer research questions.
- Familiarize the researcher with the background of the key informant and their role in the research context.

- Ensure confidentiality and obtain informed consent from the informant.

Setting up the Interview

- Identifying the key informants from different departments or sector involved in the projects.
- Scheduling the convenient time and place for the interview.
- Preparing and testing recording equipment that helps to store specific interview data.

Building Rapport

- Starting the interview by introducing yourself and explaining the purpose of interview.
- Build rapport with the informant by showing interest and empathy.
- Encouraging the informant to share their thoughts and experiences openly.

Conducting the Interview

- Begin with broad questions to allow the informant to express themselves freely.
- Use follow up questions to explore specific topics in more depth.
- Listen actively and take notes to capture key points.
- Maintain a balance between guiding the conversation and allowing the informant to lead it.
- Be flexible to deviate from original list of questions and allow the informant to elaborate on topics the find important, even if they are not a part of your initial questions.

Closing the Interview

- Summarize the main points discussed during the interview.
- Give the informants an opportunity to add any final comments or insights.
- Thank the informant for their time and participation.

Post Interview

- Review your note or transcribe the interview.
- Analyze the data collected and identify themes or patterns.

Appendix III

Response of Key Informant Interviews

Table 11: The all Detailed Data Collected on Thematic Summary of KII's Response

Questions	Summary of Responses	Number of Respondents
Roles and responsibilities of respondents	Structural engineer & office engineer	KI1
	Project Coordinator and project manager	KI2
	Office head and department coordinator	KI3
	Office head	KI4
Projects undertaken by Ayat Share Company	68 blocks in CMC Michael sites , Sector: Real estates, Hotels, Mossholds and so on.	KI1
	27 blocks with the involvement of consultants of the external company in CMC Michael site	KI2
	Projects: Apartments, Mixed use Buildings 62 buildings from G+7 up to B+2G+20	KI3
	Wide and huge company ,84 blocks in tafo site	KI4
Overall impact of communication and integration management on project success	Well integration and good communication among several departments, the impact is big and positive.	KI1, KI3, KI4
	Like other construction company ASC use the DBB method which is the very traditional method and the informant recommends digital method of construction that involve SHs early.	KI2
Strategies ASC employ to integrate project activities and facilitate	Group discussion & inspection during concrete filling	KI1
	Its directly related to ASC(Internal), minimal participation in this regard	KI2

communication	Face to face meetings, Office letter , Telegram group	KI3
	Follow up, take care of bills for Electric and water supply behalf of customers	KI4
Barriers that hinder effective integration and communication and how the company address these obstacles	There are no major barriers and obstacles	KI1
	Shortage of materials ,lack of skilled man power, resistance of staff, fear to innovation & change	KI2
	Unavailability of project team members ,minimal attention to integration and communication process	KI3
	Political issues, shortage of materials, delay	KI4
Communication Channel utilized to facilitate interaction and collaboration both internally & externally	Email externally and Telegram group Internally	KI1
	Internally – All communication channels Externally –verbal, written , online	KI2
	Internally-In person meeting, Phone calls Externally-through customer service office	KI3
	Internally -Telegram group, Phone calls Externally-Phone calls, office letter	KI4
How does communication or methods have been identified , any mechanism to check suitability	Department's Head and it will be checked	KI1
	Evident, efficient , not time consuming and as it appropriate to employ and verbal is not advisable for valuable information sharing	KI2
	Randomly selected , No suitability check	KI3
	As it is and easy method will be selected	KI4
Common challenges encountered during project execution in relation to integration and communication	Safety issues and minor challenges	KI1
	Skill gap and resistance to change and innovation	KI2
	Negligence and being uncooperative so it may causes safety issues	KI3

practice	Dishonesty and lies of some staff(sales) when they have conversation with customers Not delivering the project outcome as planned so it makes the customer dissatisfied	KI4
Define and measure success for its project regarding integration and communication practices	Directly related to ASC(Internal)	KI2
	Cost wise and achievement as per time frame	KI1,KI3
	Concerned with the board members and directorate	KI4
Project team's understanding and awareness towards significant role of communication and integration practice	Good level of understanding and awareness	KI1,KI2,KI3,
	Have an understanding but there is a gap during implementation	KI4
	Carelessness lead to miss-communication and that cause unfavorable situation and sometimes accidents in the work environment during project execution	KI3
Collaboration across different departments and project team members	95% of collaboration is done through effective communication and integration process	KI1
	Very collaborative team with positive responses	KI2, KI4
	Some staff only focus on their duty and there is a gap in management team to facilitates collaboration	KI3
Identifying potential SHs and ensure the actively involvement of SHs in integration process	Customers involve in design process to comments	KI1
	Top level management Identify key SHs and strategies like incentives employed to actively involve them in long term relationship	KI3
	Issues from customers gathered and submitted to top management so that the company address them	KI4