International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 11 | Nov - 2024 SJIF Rating: 8.448 ISSN: 2582-3930

The Impact of Stakeholder Communication and Coordination on Project Outcome

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Abstract - Stakeholder communication and coordination are crucial for project success. Effective communication keeps stakeholders informed about project progress, promoting openness and trust. Coordination allocates tasks and resources, preventing misunderstandings and enhancing decision-making. Poor engagement can lead to misunderstandings, rework, and missed deadlines. The impact of communication on project quality, highlighting that it goes beyond time, money, and quality standards, requiring stakeholder satisfaction. Effective stakeholder communication significantly influences project success in complex construction projects, reducing failure rates due to inadequate communication. Stakeholder conflicts in construction often arise from conflicting interests, leading to reworks, disputes, and cost overruns. Effective involvement of stakeholders during pre-construction stages is crucial, as demonstrated in Malaysia and New Zealand case studies. the importance of clear project scope and effective internal communication in enhancing project success, cost, and schedule performance among stakeholders. A survey of Turkish overseas stakeholders revealed that communication barriers negatively impact stakeholder management (SMP), while communication behaviours and strategies positively correlate with SMP. Effective communication is crucial for successful international project management. The construction failure factors (CFFs) and stakeholder coordination performance in high-rise building projects are linked, with consultants' lack of capability, overlapping construction sequences, and contractors' lack of experience being the most significant CFFs. Stakeholder involvement is crucial for infrastructure project success. Interviews with professionals reveal organizational characteristics, activities, and success factors. A framework model identifies three management levels and project success degrees. Effective communication and stakeholder coordination are crucial for successful construction projects, ensuring efficiency, clarity, and teamwork across all stages, reducing misunderstandings and promoting trust.

Key Words: stakeholder, communication, project, time, qualitative.

I. INTRODUCTION

The methods by which information is exchanged, managed, and coordinated among all project participants in order to accomplish a shared objective are referred to as stakeholder communication and coordination. Stakeholders, including clients, project teams, investors, and regulatory agencies, are kept up to date on the status, advancement, difficulties, and modifications of the project through effective stakeholder communication. This constant communication helps control expectations, promotes openness, and increases trust. To guarantee seamless project operations, coordination, on the other hand, entails allocating tasks, duties, and resources among stakeholders. Good coordination increases the likelihood of a successful project outcome by preventing misunderstandings, reducing disputes, and improving decision-making processes through proactive problem-solving and effort alignment. Coordination and communication among stakeholders are essential elements that have a big impact on

any project's success. The way information is communicated and actions are coordinated has a direct impact on project outcomes in construction projects, which involve several stakeholders with a variety of roles and interests. Contrarily, coordination guarantees that schedules, tasks, and resources are in sync, avoiding conflicts, delays, and cost overruns. Effective management of coordination and communication promotes more efficient workflows, improved decision-making, and increased stakeholder satisfaction, all of which help the project be completed on schedule and successfully. Poor stakeholder engagement, on the other hand, can lead to misunderstandings, rework, and missed deadlines, underscoring the crucial role that these procedures have in attaining successful project outcomes.

A. Important Role in Construction Project

For construction projects to be successful, stakeholder coordination and communication are essential because they guarantee efficiency, clarity, and teamwork across all stages. A wide range of stakeholders, each with specific tasks and expectations, are frequently involved in construction projects, including clients, contractors, architects, engineers, suppliers, and regulatory bodies. In order to reduce misunderstandings and promote trust, effective communication makes sure that everyone involved is aware of the project's objectives, schedule, finances, and possible hazards. In the meantime, coordination brings these stakeholders' efforts into alignment, guaranteeing that activities are carried out in the proper order, resources are distributed effectively, and possible conflicts are resolved early on. Coordination and communication work together to reduce delays, keep expenses under control, and uphold quality standards, all of which contribute to the project's prompt and successful conclusion. Because construction projects frequently entail intricate workflows, constrained schedules, and the cooperation of numerous stakeholders, stakeholder coordination and communication are essential to their success. All stakeholders, including clients, contractors, architects, engineers, suppliers, and regulatory agencies, are guaranteed to be in agreement regarding project goals, schedules, budgets, and deliverables when there is clear and regular communication between them. It promotes openness and trust among stakeholders by managing expectations, outlining roles, and quickly addressing issues or adjustments. By arranging and coordinating the work of multiple teams and stakeholders, coordination enhances communication by guaranteeing that resources are used efficiently and that tasks are completed in the right order. Delays rework, and cost overruns are less likely as a result. By seeing possible problems early and encouraging cooperative problem-solving, effective stakeholder coordination and communication are also essential to risk management. When combined, they improve teamwork, guarantee adherence to legal requirements, uphold quality control, and eventually help the construction project be completed successfully and on schedule.

B. Challenges during stakeholders' communication & coordination phase

A construction project's stakeholder communication and coordination phase may present a number of difficulties, many of which are brought on by the complexity and diversity of the stakeholders. Due to a variety of factors, including language hurdles, cultural differences, and differing technical expertise, miscommunication is a frequent problem. If updates are not shared promptly or adequately, stakeholders may not be aware of important developments, which could cause delays or poorly informed decisions. Stakeholders' competing interests or agendas can make coordination even more difficult, causing friction and impeding cooperation. It can be difficult to make sure that everyone is on the same page and working toward the same goals when roles and responsibilities are not clearly defined because this frequently leads to overlapping duties or gaps in accountability. Furthermore, ineffective information interchange might be caused by technological shortcomings like old communication equipment or mismatched software. Inadequate record-keeping of conversations and decisions might result in disagreements and make it difficult to monitor project development. Lastly, because important inputs or permissions may be delayed, coordination efforts may be derailed by stakeholder resistance to change or a lack of participation. All of these problems point to the necessity of effective communication plans and proactive coordination systems in order to reduce interruptions and guarantee project success.

C. Solutions to minimize challenges during stakeholders' communication & coordination phase

Setting up transparent and standardized communication procedures is crucial to resolving communication issues in building projects. This entails specifying the manner and timing of information dissemination, utilizing standardized formats to reduce misunderstandings, and making certain that all parties involved have access to the required resources and platforms. Whether in person or virtually, holding frequent meetings promotes alignment and offers a platform for quickly resolving issues. Multilingual communication tools or the use of intermediaries who are conversant in the viewpoints of all parties can help close linguistic and cultural divides. Clarity and comprehension can also be improved by educating stakeholders on project-specific language and technologies. A strong organizational structure with well-defined roles and duties for all stakeholders is necessary for effective coordination. A thorough stakeholder management plan that details workflows, expectations, and escalation protocols can

help achieve this. Real-time progress tracking, streamlined information sharing, and ensuring that everyone is working with the most recent data are all made possible by the implementation of centralized project management tools or collaborative software. Establishing a collaborative culture through stakeholder engagement meetings or conflict resolution workshops can assist in resolving competing priorities by bringing people together and establishing trust. Keeping thorough records of all conversations, choices, and approvals reduces disagreements and guarantees accountability. Proactively implementing these solutions lays the groundwork for improved stakeholder collaboration and communication, which eventually improves project results.

D. Key stakeholders who make a positive impact in the communication and coordination phase

Project managers, clients, and lead contractors are important stakeholders who have a big say in how a construction project is coordinated and communicated. As the main liaison between all parties involved, project managers play a crucial role. They are in charge of setting up and keeping up efficient channels of communication, planning frequent updates, and making sure that information is communicated in a clear and timely manner. Additionally, a skilled project manager foresees any problems, resolves them early, and coordinates stakeholders' efforts to achieve project objectives. To keep a project moving forward, they must be able to encourage teamwork and give clear instructions. Customers also have a big influence since they assist in setting the tone for the project by being involved and communicating expectations clearly. Clients reduce uncertainty and guarantee the project team can work effectively by supplying precise specifications and prompt approvals. Their dedication is demonstrated by their active participation in meetings and decision-making procedures, which inspires other stakeholders to give the project top priority. In order to coordinate on-site activities and match them with the larger project plan, lead contractors are essential. Their active participation guarantees that activities are completed according to schedule and that any issues encountered on the job site are quickly reported to the project manager and fixed. The ability of contractors to communicate with labor teams, suppliers, and subcontractors guarantees that resources are used effectively, reducing delays and cost overruns. These parties work together to build a solid basis for efficient coordination and communication, which propels the project to its completion.

E. Why Stakeholder Communication & Coordination are needed for outcome of the project

In construction projects, stakeholder coordination and communication are crucial because they guarantee that everyone is working towards the same objective, reducing risks and increasing efficiency. Numerous parties, each having specific duties and expectations, are frequently involved in construction projects, including clients, contractors, designers, suppliers, and regulators. Ineffective communication can lead to miscommunications, hold-ups, and disputes, endangering the project's development and result. By keeping stakeholders informed about the project's objectives, developments, adjustments, and difficulties, communication promotes openness and confidence. Because it unifies the efforts of all parties involved and guarantees that activities are carried out in the proper order and resources are distributed effectively, coordination is equally crucial. It lessens the possibility of delays and rework by managing interdependencies between different teams and activities. Additionally, coordination is essential to problem-solving because it enables stakeholders to work together to address problems as they emerge. Coordination and communication work together to create an organised, cooperative atmosphere that helps the project achieve its goals on schedule, within budget, and to the required quality standards.

F. How to Select Right Stakeholders for Right Activity of Construction Project in Paragraph

In order to guarantee that each stakeholder's knowledge, duties, and influence match the requirements of the project, choosing the appropriate stakeholders for the appropriate activities in a construction project requires a strategic approach. Finding all possible stakeholders, including clients, contractors, engineers, architects, suppliers, and regulatory bodies, is the first step in the process. After being located, their roles, abilities, and interests ought to be examined to ascertain how pertinent they are to particular project tasks. Clear roles and responsibilities can be assigned with the aid of a stakeholder mapping approach, such as the use of a responsibility matrix or instruments such as the RACI (Responsible, Accountable, Consulted, Informed) model. For example, architects and engineers should handle technical activities like design and planning, while contractors and suppliers should handle resource allocation and on-site execution. Authorities or consultants with knowledge of legal and environmental standards should be involved in regulatory compliance efforts. The project team may maximize efficiency, guarantee accountability, and accomplish improved coordination throughout the project lifecycle by matching stakeholders with activities that correspond with their knowledge, clout, and ability to make decisions. In addition to minimizing role overlap and conflicts, this systematic selection procedure improves project performance.

Project success evaluation has historically frequently been technically driven by concentrating only on important aspects like time, money, and quality standards. For instance, some projects fail because they compromise the demands of clients or other project beneficiaries, even when they are finished on schedule and within budget. Quality entails satisfying the

stakeholders and customer's stated and implicit needs and expectations. This endeavor may have a beneficial or negative impact on the group of people and the organization involved. In its most basic form, communication is the interpersonal exchange of messages. The glue that keeps a distribution channel together is communication. Although project managers spent 90% of their time communicating in some capacity, it was unclear if his data implied that communication had an impact on project quality. Interviews and personal communications related to the research are two important primary sources that the researcher used to understand the effect of communication on the FM project quality. Two significant primary sources that the researcher employed to comprehend the impact of communication on the quality of the FM project were interviews and personal communications pertaining to the study. Data collected from participant-completed surveys was analyzed using the SPSS software. It is important to remember that communication channels are established by the organizations or projects' stakeholders and are required for the interchange of material resources, including human capital, for the project to succeed. It is evident that stakeholders frequently start and maintain communication during a project in order to achieve the intended outcome or outcomes. The response to the aforementioned question reveals that every stakeholder group of structural engineers claimed that they begin their involvement in the project during the defining phase, as shown in Figure 1 [1].

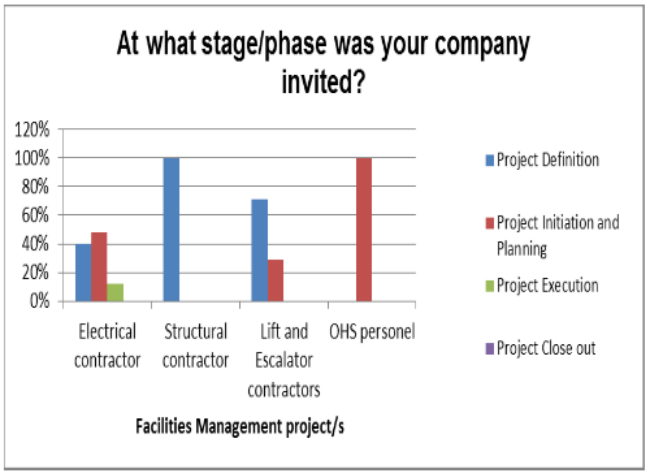

Fig. 1. The stage(s) or phase(s) at which companies were invited to participate in the FM project.

In order to evaluate the issues and decide if the technical team should handle them, the FM call center manager prepares a call analysis report each month. Tenants and the rest of the project team maintain a communication pattern once the project begins, with the team members sending out regular emails to tenants informing them of the most recent project advancements. The FM manager sets up a meeting if a tenant brings up a significant issue with the project, according to the National Technical Manager. According to one respondent, communication makes it possible to share resources, knowledge, and information all of which are essential for the project's success. The essential elements of project quality are stakeholder needs and project success. As seen in this section, good stakeholder communication regarding the allocation and sharing of resources, time, and other project components is essential to achieving the project's intended results [1].

An analysis of 258 transportation projects revealed that 90% of them were over budget, with rail projects experiencing an average cost overrun of 45%. There are three definitions of project success. First, project efficiency based on the iron triangle or triple restrictions. The second is project effectiveness, which includes organizational, customer, and product aspects. The third is project complexity success, which includes both project success and project management success. According to the Project Management Institute (PMI), an organization's capacity to endure and thrive is greatly impacted by its capacity to fulfill project objectives, budget, and schedule. A key component of complicated construction projects' success is effective stakeholder management. When used properly, communication is a crucial project management skill, and all members of the project team are connected to the overarching goals, activities, and strategies. Effective communication with all stakeholders is the most crucial component of project management success, according to PMI surveys. Effective communication techniques help save projects from going over budget and behind time. Project success requires an understanding of effective communication approaches and abilities. Railway construction projects are large-scale, include several stakeholders, have a lengthy implementation period, are very complex, have challenging site circumstances, and require a significant financial commitment. As a result, these kinds of projects are linked to high risk, which affects project objectives in terms of schedule delays, cost overruns, safety concerns, and noncompliance with quality standards. Coordination in building projects necessitates extensive information sharing between the project team and stakeholders. For a project to be completed successfully, communication is therefore crucial. One of the primary causes of project cost overruns, redoing work, and disagreements is poor communication amongst project stakeholders. An important factor in the success of a project is communication. To enhance communication management, communication theories, including diffusion theory and accommodation theory, are applied. The development, gathering, sharing, storing, and final organization of project information are all included in project communication management. In a team-based setting, excellent performance can be attained by coordinating the team learning process with efficient communication. According to PMI, ineffective stakeholder communications account for half of complex project failures [2].

Including important project stakeholders in the planning, evaluation, and completion phases of an infrastructure project is essential. To guarantee a successful project implementation, the project team should identify and involve all stakeholders and observe their activities. Instead of focusing on poor project execution, the project team should examine weak stakeholder participation and consultation while observing any failed project. To ensure project success, both internal and external stakeholders contributed to the planning and execution of initiatives. Coordination of the project's goals and interests with the local community and stakeholders through openness and accountability in decision-making helps accomplish this. As a result, doing this could increase project performance and foster a common understanding of the project's goals. Early planning, stakeholder identification, stakeholder analysis, regular communication, action taken, and follow-up are the first six steps in the engagement process. Email, media, newsletters, and phone calls were the means currently employed to communicate with the stakeholders throughout the early stages of the project. These approaches, which rely on the flow of information, address one-sided or possibly two-sided communication. Focus groups, community workshops, social media, and public forums could all be utilized to help create a platform for stakeholders interested in the project and active in it to interact with one another. The project team used alternative methods, such as town hall meetings, newsletters, and going door-to-door with community members, to "meet and greet" the stakeholders and community for better interaction. The findings from the in-depth interviews with the stakeholders and documentation studies of CS1 showed that fewer external stakeholders were involved during the initial phase of the project. The findings of these two case studies showed how important it is to include as many stakeholders as possible in the early stages of the process. Issues will occur if project stakeholders are not taken into account. The community and external stakeholders were pleased and wanted to be involved in the project, according to the findings, and it is important that their opinions be heard. be listened to and concepts produced for the design of infrastructure projects. Therefore, to ensure project success, engagement strategies must be improved [3].

In the project-based engineering and construction sector, communication for effective knowledge exchange inside an organization is a key and difficult field of research. In a construction project, effective communication improves team performance. Nonetheless, in certain projects, the design and construction organizations do not fully integrate, which affects the quality of the project's ultimate product. One of the main reasons why most projects fail is poor communication. Using a widely utilized medium, communication is a two-way process between the sender and the recipient. Both the sender and the recipient are project stakeholders, and communication components in the field of construction management are tied to the project and its features. Communication issues are frequently brought on by the construction industry's disjointed supply chain and intricate organizational structures. It should be mentioned that construction projects are deemed successful when there is less than a 10% overrun or under-run in the final cost and schedule performance. Major reworks and poor final product delivery are the results of inefficient communication among construction stakeholders, which can lead to hostile relationships and significant conflict amongst project participants. Figure 2 shows a visual representation of the procedure [4].

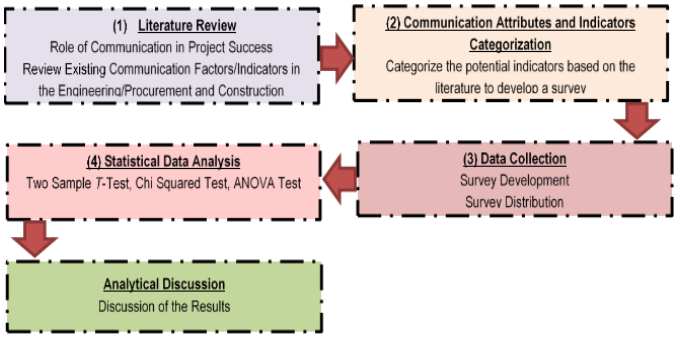

Fig. 2. Research Framework.

Two groups of projects with effective and poor communications among the main stakeholders in complicated projects were created from the collected data. ANOVA (Likert scale data), Chi-squared (binary), and the two-sample T-test (continuous data) were used to determine whether there was a significant difference between the effective and ineffective prospective communications indicators for each of the parties listed. Both 0.05 and 0.1 significance levels (p-value<0.05 and P-value<0.1) were used in this study to make sure that all important communication indicators among the main stakeholders were found. The findings showed that among the three main stakeholders, 20 project-based CIs were important in distinguishing between effective and ineffective communication. Initially, the 20 major CIs were divided into the eight groups shown below: Coordination of bureaucracy, interface (number and caliber of stakeholder interactions), and location, quality of material resources, project targets (cost and schedule targets in relation to industry standards), project economic difficulties, technology, and scope definition are the first eight factors [4].

One of the most important aspects of the stakeholder management process in international construction projects is the owner organization design (cross-functional and cross-professional coordination). In order to integrate project objectives with a strategic perspective, managers should build the project organization based on each element of the project, create a culture of cooperation and unity throughout the project process, and establish effective communication and cross-functional coordination mechanisms. This engagement encompasses the manner in which the project decides to structure the exchange of information and resources among

various stakeholders. Stakeholder relationships in construction projects can take many different shapes and exhibit a wide range of traits. Since it is the most effective way to alter behavior, bring about change, share and acquire knowledge, and accomplishes objectives, effective communication is essential. Stakeholders are people and organizations that actively participate in the project or whose interests may be impacted by its execution or completion, according to the Project Management Institute (PMI). Four deficiencies were found in the areas of crucial success factors, stakeholder management process, stakeholder management techniques, and stakeholder relationship management. Stakeholder management has gained more respect in recent years as the construction industry has come to understand the importance of stakeholder involvement in project results. Project managers must evaluate stakeholder influence in order to increase the chances of project success since stakeholders can have a positive or negative impact on projects [5].

One of the most complicated projects is a high-rise structure, which requires the involvement of numerous stakeholders over an extended period of time. Numerous problems with quality, progress, expense, and safety plague high-rise construction projects. Numerous studies have identified failure causes that impact the overall objectives of high-rise building projects, including unsolved spatial problems, poor contractor performance, incorrect planning, severe design modifications, and a lack of stakeholder commitment. Many parties, including governmental agencies, owners, project management units, consultants, contractors, suppliers, and users, must coordinate smoothly and synchronously throughout the project's implementation to prevent issues with project failures. The primary cause might be the earlier contractors' inability to finish on schedule or their subpar work, which they then passed on to the later contractors. Furthermore, near the end of the project, the point where the two primary phases, the execution phase and the handover phase, intersect is the one that has the highest potential to affect the project's progress and cost. Found a group of possible CFFs for SCPs (stakeholder coordinating performance) in high-rise development projects' final stages. The collection of possible CFFs served as the foundation for creating the study's initial questionnaire. In Figure 3, the research framework is displayed [6].

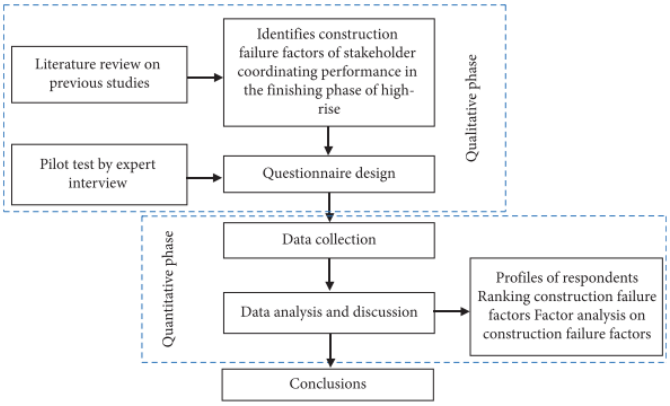

Fig. 3. Research Framework.

They conducted data analysis during the quantitative phase, which included factor analysis on CFFs, rating CFFs, and responding profile analysis. Analysis findings were also discussed. Five specialists with at least ten years of experience developing high-rise buildings three project managers from contractors, one project director from a consultant, and one owner representative were invited to review the preliminary questionnaire's concepts throughout the pilot test procedure. Additionally, they were requested to add or remove any CFFs that they felt were suitable for issues with stakeholder coordination of performance during the high-rise development projects' final phase. The questionnaire return rate is displayed in figure 4 [6].

Stakeholder	Questionnaire distributed	Response received	Response rate (%)	Proportion (%)
Owners/consultants	100	69	69.0	54.8
Contractors*	88	57	64.8	45.2
Total	188	126	67.0	100.0

*The contractors include the main contractors and subcontractors.

Fig. 3. Research Framework.

Time and expense overruns may result from the high complexity of stakeholders with competing interests. Approximately 70% of businesses launch projects that fall short of their intended goals and fail to satisfy stakeholders. Projects are effective when they consider stakeholders' needs and requirements through the stakeholder management process, claims stakeholder management theory. To encourage cooperation among stakeholders, the project management methodology is changing from a "predict and control" strategy to a "prepare and commit" strategy. A qualitative method by conducting in-depth interviews with seasoned professionals investigating different methods of engaging stakeholders and contextual elements. This will be accomplished by responding to a few enquiries: 1. What role does stakeholder engagement play in project management and/or governance, according to practitioners? 2. What procedures and strategies are used to include stakeholders in infrastructure projects? 3. Who engages stakeholders, and what factors affect their

involvement and the outcome of a project? 4. How are infrastructure projects viewed and accomplished? [7].

II. LITERATURE SURVEY

A. Stakeholder Management

Zungu et al. (2014) studied Survey questionnaires were utilized alongside a qualitative methodology research design to examine the impact of communication on the quality of Facility Management (FM) projects. The Statistical Package for the Social Sciences (SPSS) was used for quantitative analysis of the survey data obtained from survey questionnaires. It was found that one of the most important factors influencing the quality of FM programs is stakeholder communication. According to the findings, communication is employed at every stage of the project, from conception to handover. Without communication of some kind, no project can start. Only with effective communication that outlines a thorough strategy that specifies what needs to be done, when, by whom, and how can the project's scope be met. Should this information not be conveyed in an understandable manner, the project's quality will suffer. It is noteworthy that the scope, technical drawings, phone calls, emails, and faxes were all mentioned as crucial channels or means of involving different project stakeholders [1].

Yitmen (2015) investigated a survey of Turkish overseas stakeholders, including financial advisors, insurance brokers, consulting engineers, and contractors. Data pertaining to Turkish stakeholders has been utilized to illustrate the applicability of structural equation modeling (SEM), which is suggested as an efficient technique to examine the relationships between different aspects of cross-cultural communication and the stakeholder management process. The findings show that while "communication barriers" had a considerably detrimental impact on SMP, "communication behaviors" and "communication strategies" were shown to be very significant and positively correlated with SMP. All hypotheses that examine the validity and reliability of CCC constructs as well as their positive and negative effects on SMP are validated. Where SMP is severely harmed by hurdles to communication. Projects serve as a temporary means of bringing stakeholders together, and they use a range of media and communication platforms to engage both individually and collectively. One of the most difficult tasks in international project management is cross-cultural communication. Cross-cultural communication can be challenging at times. In a global company, misinterpreting colleagues will undoubtedly have a detrimental impact on project outcomes. Effective communication, which includes using a variety of channels to provide pertinent information, is a key component of stakeholder management [5].

B. Stakeholder Performance

Kamalirad et al. (2017) explored One factor that can contribute to the success of a project is effective internal communication. A total of 44 survey replies were gathered. Researchers identified important project parameters influencing the efficacy of communication among owners, designers, and contractor stakeholders using a variety of statistical analyses, such as the two-sample t-test, chi squared test, and analysis of variance (ANOVA). The main project stakeholders' internal communication is greatly impacted by the project scope's clarity. The research's conclusions will assist construction managers in enhancing internal communication among key stakeholders, which will lower the possibility of misunderstandings leading to failure, particularly in intricate projects. Additionally, by addressing communication problems and obstacles before significant conflicts emerge, this study enables owner, consultant, and contractor executives to forecast the quality of communication efficacy early in the project and raise the likelihood of project success. The conclusions may assist project managers and key stakeholders in recognizing the problems that could lead to poor internal communications and in implementing appropriate measures to prevent subpar project performance and failures brought on by disputes and antagonistic relationships among stakeholders. The effectiveness of communication between project entities can also be a determining element in the overall success of construction projects, even though the quality of communication within the three main stakeholders may have a major impact on project cost and schedule performance [4].

Nguyen et al. (2020) studied a high-rise building project's performance may suffer from a lack of coordination between stakeholders throughout the completion phase. Therefore, in order to understand the underlying linkages between construction failure factors (CFFs) and stakeholder coordinating performance (SCP) in the final phase of high-rise building projects, it is required to examine them. Additionally, the factor analysis method was used to extract four variables of the CFFs: typical antagonistic relationships, poor project planning and organization, incompetent parties, and delays of parties toward construction works. The three most important CFFs to stakeholder coordination performance, according to all respondents, were "consultants' lack of capability," "overlapping construction sequences," and "contractors' lack of experience and competence." Consequently, the performance of stakeholder coordination will also be enhanced. It is also implied that owners should avoid choosing consultants and contractors based solely on price, as this may lead to the selection of unqualified experts and contractors. As a result, during project execution, issues such as design flaws and omissions, inadequate planning and scheduling, and inappropriate construction techniques may surface. As a result, stakeholders will not be able to coordinate well [6].

C. Infrastructure Project

Ghaleb et al. (2021) researched the most crucial element, effect communications, can have a big impact on how complexity and project success are related. By empirically investigating the relationships between construction project complexity and project success, along with the moderating effect of good communications to all stakeholders, the primary contribution is filling this knowledge gap. The main contribution is the introduction of effective stakeholder communications as a moderating variable in the link between project success and complexity. The primary cause of project failure in complicated building projects is inadequate communication. In complicated projects, good communication with all stakeholders increases project success [2].

Baharuddin et al. (2022) researched stakeholder conflicts during construction were frequently caused by conflicting interests among project parties. Reworks, disputes, cost overruns, and poor communication are examples of these issues. Infrastructure project stakeholders must be effectively involved and require early direct or indirect involvement during the pre-construction stage. Through a comparative qualitative analysis and observations, two case studies from Malaysia and New Zealand are used. Information for this came from interviews and project documentation. These documents include project paperwork, public engagement reports, and engagement reports. The comparison analysis's outcome displays the characteristics gleaned from two case studies during the preliminary planning stages of major infrastructure projects. It involves the interests and perceptions of numerous stakeholders who have expectations, demands, and values for the project. This includes the beginning planning of the engagement and demonstrates the approaches of two distinct countries, namely Malaysia and New Zealand. These findings demonstrate what the project owner could do in the early stages of the engagement process [3].

Prebanic et al. (2023) explored it is often acknowledged that stakeholder involvement is crucial to the success of infrastructure projects. The questions aim to find out how practitioners understand stakeholder engagement, who conducts activities and procedures connected to stakeholder engagement and in what ways, what organisational characteristics influence the process, and how success is accomplished in infrastructure projects. Eight seasoned professionals with extensive experience in a variety of intricate infrastructure projects were first interviewed, and four more interviews were subsequently carried out for confirmation. Every facet of stakeholder interaction was thoroughly covered in the interviews, and a thematic analysis was carried out. Stakeholder engagement process success and failure factors were identified based on the analysis. Consequently, three levels of management and three degrees of project success are used to create a framework model for stakeholder involvement and infrastructure project success [7].

III. Conclusion

1. Effective stakeholder communication and coordination are vital for project success, promoting openness, trust, and efficient decision-making.
2. Poor engagement can lead to misunderstandings, rework, and missed deadlines. In complex construction projects, communication significantly reduces failure rates due to inadequate communication.
3. Conflicts in construction often arise from conflicting interests, leading to reworks, disputes, and cost overruns. Stakeholder involvement during pre-construction stages is crucial, as demonstrated in Malaysia and New Zealand case studies.
4. Communication barriers negatively impact stakeholder management (SMP), while communication behaviours and strategies positively correlate with SMP.
5. Construction failure factors (CFFs) and stakeholder coordination performance in high-rise building projects are linked.
6. Stakeholder involvement is essential for infrastructure project success.

REFERENCES

[1] M. Zungu and S. Fore, “The Impact of Stakeholder Communication on Quality of Facilities Management Projects,” *African J. Bus. Mnagement*, vol. 5, no. 14, pp. 5824–5833, 2014.

[2] H. Ghaleb and A. A. Abdullah, “A Conceptual Framework for Impact of Project Complexity on Success of Railway Construction Projects: The Moderating Role of Effective Communications to All Stakeholders,” *J. Manag. Theory Pract.*, vol. 2, no. 1, pp. 62–69, 2021, doi: 10.37231/jmtp.2021.2.1.85.

[3] H. E. A. Baharuddin, N. A. A. Ismail, H. Adnan, W. N. W. Ismail, and I. Piri, “Cross case analysis on internal early preparation of stakeholder engagement for infrastructure projects,” *IOP Conf. Ser. Earth Environ. Sci.*, vol. 1067, no. 1, 2022, doi: 10.1088/1755-1315/1067/1/012072.

[4] S. Kamalirad, S. Kermanshachi, J. Shane, and S. Anderson, “ASSESSMENT OF CONSTRUCTION PROJECTS’ IMPACT ON INTERNAL COMMUNICATION OF PRIMARY STAKEHOLDERS IN COMPLEX PROJECTS,” *Leadersh. Sustain. Infrastruct.*, no. 1998, pp. 1–10, 2017.

[5] I. Yitmen, “The influence of cross-cultural communication on stakeholder management process in international construction projects: turkish stakeholders’ perpective,” *Int. J. Civ. Engeneering*, vol. 13, no. 2, 2015.

[6] V. T. Nguyen, S. T. Do, N. M. Vo, T. A. Nguyen, and S. V. H. Pham, “An Analysis of Construction Failure Factors to Stakeholder Coordinating Performance in the Finishing Phase of High-Rise Building Projects,” *Adv. Civ. Eng.*, vol. 2020, no. 1, 2020, doi: 10.1155/2020/6633958.

[7] K. R. Prebanić and M. Vukomanović, “Exploring Stakeholder Engagement Process as the Success Factor for Infrastructure Projects,” *Buildings*, vol. 13, no. 7, 2023, doi: 10.3390/buildings13071785.