AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT

DEPARTMENT OF CONSTRUCTION AND WOOD TECHNOLOGY EDUCATION

A STUDY ON EXPLORING CRITICAL SUCCESS FACTORS OF STAKEHOLDER MANAGEMENT IN CONSTRUCTION PROJECTS IN CAPE COAST

MAWULI SALLAS

2023

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A Dissertation in The Department of Construction and Wood Technology Education, Faculty of Technology Education, Submitted to The School of Graduate Studies, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, In Partial Fulfilment of The Requirements for The Award of Master of Technology Construction Management Degree

OCTOBER, 2023

DECLARATION

STUDENT DECLARATION

I Mawuli Sallas hereby declare that except for reference to other people's work, which has been duly acknowledged, this dissertation consists of my own work produced from research undertaken under supervision and that no part of it has been presented for another degree in this university or elsewhere.

SIGNATURE..... **DATE……**

MAWULI SALLAS

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work were supervised in accordance with the guidelines for supervision of the thesis as laid down by the Akentan Appiah Menken University of skills Training and Entrepreneurial Development.

SIGNATURE..... **DATE……**

ENG. MICHAEL TSORGALI

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DEDICATION

This project work is wholeheartedly dedicated to God Almighty and to my Brother Francis Kofi Koomson, and Mrs. Anglian Koomson Hayibor and my family.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

PSC	Project Success Criteria
PSF	Projects Success Factors
CSF	Critical Success Factors
GDP	Gross Domestic Product
SI	Stakeholder Involvement
HVAC	Heating, Ventilation, and Air Conditioning
SSNIT	Social Security and National Insurance Trust
SNA	Strategic Need Analysis
CSR	Corporate Social Responsibility
PMI	Project Management Institute
PMBOK	Project Management Body of Knowledge
PTM	Primary Team Members
KSP	Key Supporting Participants
NGO	Non-Governmental Organization
SPSS	Statistical Package for Social Sciences
HND	Higher National Diploma
PhD	Doctor of Philosophy
RII	Relative Importance Index

ABSTRACT

Stakeholder's management in construction projects depending on the environment, complication, and procurement method adopted; stakeholders are involved at different phases of the project undertaking different tasks and duties. These stakeholders with variable influence and power, play key roles in the success or failure of the project. Hence, construction projects are normally influenced by success elements that can help parties reach their envisioned goals with greater proficiency. The purpose of this study is to identify the various project stakeholders, examine the roles of project stakeholders, and also examine the impact of stakeholders on construction projects, and finally to determine the critical success factors of stakeholders' management leading to construction project success in Cape Coast. Many critical success factors such as factors related to project manager 's performance, factors related to organization, factors related to the project, and factors related to the external environment which become obvious from this study would be useful to ascertain which factors impact on the success of projects. Stakeholder Management is therefore indispensable if project goals are to be achieved. The research develops on the existing performance area outlined to advance a contingency-based model for evaluating construction projects in Cape Coast. This research also focused on the key elements and best methods that lead to the success of the project in cape coast, the exploration of likely indicators for its evaluation, and the identification of the critical success factors. In an attempt to fill this research gap, a questionnaire survey was carried out in Cape Cost – of Ghana to gather the views of construction practitioners and clients concerning the relative significance of CSFs for stakeholder management. Findings from this report showed that all selected CSFs are regarded as critical by most respondents for the success of stakeholder management in construction projects. The factor concerning Effective Program Time Management is considered most essential for managing stakeholders, Project success criteria; project success factors; leading performance indicators; stakeholders; complexity critical success factors.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Project success is the foundation for managing and controlling current projects, and for planning and orienting future projects (Chovichien & Nguyen, 2013). In a normal construction project management, any or all of the following may be a stakeholder: the client, the principal contractor, designers, subcontractors, people employed in any capacity in the project, local authorities, the end users of the product, professional bodies, residents, local business owners, politicians, environmental groups, and many more. Stakeholder management seems to be one of the major concerns in construction project management in Cape Coast. The prospect of project success is greatly reduced if stakeholders are ineffective in management. The communication and interrelationships among stakeholders mostly determine the total performance of a construction project and have the critical responsibility for bringing a project to a successful completion. A construction project involves processes of planning, scheduling, and controlling. Proper management of all these will lead to the successful completion of the project. However, it seems major projects are not completed due to improper stakeholder management (Newcome, 2013; Smith and Love, 2013). In order to run a successful project, it is necessary to address the needs of the project stakeholders, effectively predicting how the project will affect them and how they can affect the project. Effectively managing project stakeholders is considered an important key to project success (Olomolaiye & Chiniyo, 2010). Ineffective stakeholder management can result in dissatisfaction with the final project and a negative impact on the project's financial plan and schedule (Olomolaiye & Chiniyo, 2010). Stakeholder management in building projects is becoming more and more important, according to studies (El-Gohary et al., 2016). However, due to the complexity and unpredictability of projects, the construction sector has had a poor track record of stakeholder management over the previous few decades (Loosemore 2016). Insufficient

stakeholder engagement, project managers with unclear stakeholder management objectives, difficulty identifying the "invisible" stakeholder, and poor stakeholder communication are just a few of the issues with stakeholder management in construction projects that have been raised by earlier researchers (Pouloudi and Whitley 2017; Loosemore 2016; Bourne and Walker 2016; Rowlinson and Cheung 2018). In order to resolve these problems, project parties need to know what the fundamentals are for managing stakeholders (Olomolaiye & Chiniyo, 2010). The concept of Critical Success Factors is usually credited to (Fortune & White, 2006) who first made mention of it in relation to the management information problem (Fortune & White, 2006) The theory of project success factors was first developed by Rubin and Seeling in 1967, and Rockart first used the term critical success factors (CSFs) in 1982 (Toor, 2008). Rockart (2019) was the first to advocate for this strategy. CSFs are areas in which the organization will operate successfully in the competitive marketplace if the results are satisfactory (Rockart 1879). They are "those critical areas of managerial planning and action that must be practiced in order to achieve effectiveness," according to Saraph et al. (1989). This method has been employed by many academics to enhance the performance of the management process (e.g., Chan et al., 2011; Jefferies et al., 2012; Yu et al., 2016).

1.2 Statement of the Problem

Traditionally, a construction project's success is measured against its original scope, time of delivery, financial plan, and the quality or performance of deliverables. The term' Critical Success Factors for stakeholder management, refers to the specific conditions, events, and conditions that contribute to project results. In developing nations like Ghana, the construction industry is among the ones that generate the most jobs. In the background of construction projects in Cape Coast, real stakeholder management is a complex and critical aspect that faces several challenges. These challenges arise from a combination of factors that influence

stakeholder engagement, communication, and consumption. The primary issues include the Lack of a Stakeholder Engagement Approach, Many construction projects in Cape Coast lack a structured and positive stakeholder engagement strategy, Gray, C. F., & Larson, E. W. (2018)The purpose of this statement of problem is to identify the primary Critical Success Factors (CSF) for stakeholder management in construction projects and to deal with these issues, this includes performing the work on schedule, on budget/ financial plan, risks, communications network, social responsibilities" and uncertainty of projects These shortcomings cause poor communication, and delays construction project or fail. According to Ofori- Kuragu et al., (2016) the Ghanaian construction industry is the pillar of the economy contributing about 8.5% to the overall Gross Domestic Product (GDP) and employing 2.3% of the active population. Addressing their concerns is challenging to involve Ghana (CSFs) construction projects. The Potential problems associated with a construction projects success is greatly reduced if stakeholders are unproductively managed. These include insufficient engagement of stakeholders, project managers having unclear objectives of stakeholder management, difficulty to identify the ―invisible stakeholder, and poor communication with stakeholders (Pouloudi and Whitley, 1997; Loosemore, 2006; Bourne and walker, 2006; Rowlinson and Cheug, 2008). The problems associated with an ineffective management; these challenges affect the financial plan schedules. Therefore, in identifying the fundamentals of stakeholder management, Critical Success Factors (CSFs) approach was used for the study.

1.3 Aim and Objectives of the study.

The Aim of this study was to explore that critical success factors related to stakeholder management in construction projects in Cape Coast.

The Objectives of the Study are to:

1. Examine the roles of project stakeholders in the construction industry;
2. Examine the impact of stakeholders on a construction project
3. Determine the critical success factors of stakeholder management in Project delivery in the Cape Coast Construction industry

1.4 Research Questions:

The research questions are as following:

1. What are the roles, of project stakeholders in the construction industry in Cape Coast?
2. What are the various impacts a stakeholder may have on a construction project?
3. What are the critical success factors of stakeholder management in project delivery in the Cape Coast Construction industry?

1.5 Significance of the Study

The study is significant for the following reasons:

Effective coordination and general risk management are critical for projects with complex clients, big terms, and numerous other stakeholders. This calls for proactive client management. Here are some of the major benefits of researching CSFs in building projects. Identifying and understanding CSFs helps construction project managers and stakeholders focus their efforts on the most critical aspects of a project. This leads to improved project performance in terms of meeting deadlines, staying within budget, and achieving project objectives (Chan, & Chan, 2014). Risk management: CSFs assist in detecting potential risks and difficulties that may have an impact on the success of a building project. Project teams can create risk mitigation measures and lower the possibility of expensive delays and disagreements by pro-actively addressing these factors Project Management, 8(4), 228-236. Following CSFs can have a noticeable effect on how much money construction projects can make. Achieving better cost control, more profitability, and

greater financial stability can all be facilitated by effective CSF management. Aspects of quality control and assurance are frequently included in CSFs. A higher-quality finished product with fewer flaws and expensive rework is the outcome of making sure these criteria are met. Sustainable construction practices are increasingly becoming critical for both regulatory compliance and environmental responsibility. Studying CSFs helps in integrating sustainability factors into projects, ensuring long-term viability (Aibinu, & Jagboro, 2012). In conclusion, the study of critical success factors for construction projects is significant because it helps construction professionals, firms, and stakeholders optimize their project management practices, minimize risks, and ultimately achieve better project outcomes. It has a profound impact on the construction industry's overall performance, reputation, and sustainability.

1.6 Limitations

One of the key limitations, and an illustration of geographical limitations, was the researcher's failure to gather data on groups throughout Cape Coast. The questionnaire took into account Paapa Badubaa building sites, emphasizing primarily the managerial point of view and disregarding the opinions of other stakeholders. Additionally, the survey's sample was small because only managers employed by construction enterprises in the Central Region were considered by the stakeholders**.**

1.7 Research Methodology

The study was carried out in three phases using a quantitative scientific approach based on deductive reasoning. The pertinent literature on the topic of crucial success elements for stakeholder management in Ghanaian building projects was reviewed in the first section. In order to gather information from the stakeholders under consideration, a structured questionnaire comprising multiple choice and scaled items was created for the second phase. But the study's

conclusion went into more detail on how descriptive and inferential statistical techniques were used to analyze the data that was gathered.

1.8 Scope of Study

The project seeks to examine the critical success factors for stakeholder management in construction project

Since Accra and Kumasi metropolises in Ghana are said to have more construction businesses, this study focuses on the Central Region of Ghana. Due to its nearness to data and the abundance of contractors in the area, this location was picked. The study's scope was limited to D1K1 and D2K2 contractors as well as categories E and G, who were frequently hired as subcontractors by these primary contractors for general building tasks. When the work is specialized, contractors from categories E and G serve as the main contractors. The government, the architect or designer, private clients, consultants, contractors, and project managers were the research's six main target parties.

The various groups were chosen for this study because their viewpoints were respected and they hold various positions in the construction value chain. For managing the demands and expectations of the stakeholders, there are five key groups and forty (40) possibly important standards, which were selected for the respondents to rate in importance. However, the research will be conducted in a selected area in the Cape Coast metropolis in the central as the case study area

1.9 Organization of the Study

There were five chapters in the report. The background of the study, the problem statement, and the objectives of the study, the research questions, and the significance of the study, the research

methodology, and the scope of the study were covered in the first chapter, and the review of the relevant literature was covered in the second chapter.

The specifics of the study technique were then explored in chapter three, the analysis and discussion of the data was the subject of chapter four, and the summary of findings, conclusion, and suggestions were the topics of chapter five.

CHAPTER TWO

LITERATURE REVIEW

2. 1 Introduction

This chapter will review the literature on critical Success Factors for stakeholder management in construction management. First-hand sources, this assessment of the literature, in particular, focuses on the crucial Success Factors for stakeholder management. Different stakeholders have different levels and types of investments and interests in the projects they are involved in (Atkin and Skitmore, 2018). Stakeholders need to be managed because their Power and influence are mapped so that, their potential impact on projects can be better understood. Project management (PM) has traditionally been dominated by a deterministic perspective, which implies the possibility of planning, managing, and controlling the construction project phenomena (Padalkar and Gopinath, 2016). This paper aimed to present literature relevant to project critical success factors with special reference to the construction industry. The argument is that the factors are too external as well and the contractor has minimal/no influence over them.

This approach to PM overlooks how projects exist in an external environment (Kreiner, 2016), Stakeholders can be the key risk-management issue for project managers in construction. Organizations and it is important include them in the project plan. However, despite much study in this area, construction projects have little record of how Stakeholders are managed in their organizations (Newcombe, 2013, Olander and Landin, 2015) El-Gohary et al (2006). Thus, only a few construction project Organizations include stakeholders as an element in their project plan. Scholars have raised A number of reasons as the cause of problems and these include lack of engagement in Stakeholder's Management and the complexity, 1) inadequate engagement of stakeholders, 2) project Managers having unclear objectives of stakeholder management, 3) difficulty in identifying the Invisible stakeholders, 4) inadequate communication with stakeholders, 5) sustainable support, Project Schedule/Planning, and social responsibilities"

assessing the stakeholders' and uncertainty of projects. They find that each Project is a unique undertaking with different stakeholders of different interests and powers. The purpose of this study is to explore critical Success Factors for stakeholder management in construction projects and encourage stakeholders to avoid the negative impact of their actions on construction projects in Cape Coast.

2.2 Definitions of a Stakeholder

According to Fewings (2005), a stakeholder is anyone who has an interest in the progress of a project or its results. The project's stakeholders define its characteristics; the majority of issues are caused by the demands that the project's stakeholders and environment impose on it.

According to Edward Freeman (2010)

any person, group, or organization that is interested in or concerned about a company, a project, or a system is referred to as a stakeholder.

Stakeholders may be internal or external to the business, and they may have an impact on or be i mpacted by the decisions, actions, or results of the organization.

According to Moodley (1999), stakeholders are also people or organizations who have or feel th ey have legal claims against a project's operational element. These can be the groups, families, and people who buy the item or are impacted by the finished product of the neighbourhood at large.

According to Winch (2002), the capacity to create a beneficial alliance between those who will be impacted by the final result and the project's success go hand in hand. Again, Smith et al. (2011) expand the definition of stakeholders to include both direct and indirect representatives who might be interested in and have input into the proposed project. Winch (2012) proposes a more thorough definition of stakeholders as those parties who will directly profit or loss from the project.

2.3 Stakeholders Identification

Researchers who study stakeholder management (Karlsen, 2012; Olander, 2016; Walker et al. Stakeholder management researchers (Project Management Institute. (2017) create a stakeholder map that shows the relationships between the various stakeholder groups and their level of influence over the project. This can help you to identify potential conflicts or areas of alignment between stakeholders. R. Edward Freeman, Alexander Moutchnik. (2013) New stakeholders may emerge, and the needs and expectations of existing stakeholders may change over time Project Management Institute (2017) Analyze each stakeholder group to understand and analyze needs, concerns, and expectations

- Client
- Project Management Team
- Consultant and Designing Team
- Contractor
- Sub-contractor
- Supplier
- Employees
- Local Communities
- Funding Bodies
- Government Authorities

According to a number of researchers (Olander and Landin, 2015; Newcombe, 2013; Atkin and Skitmore, 2018; Yamg, 2010), these people are significant stakeholders in construction projects. According to Atkin and Skitmore (2018), it is essential for the project's proper execution to meet the expectations and wants of those involved, and failing to do so can result in a variety of issues, including project failure. This approach was reiterated by Johnson and Scholes (2019), who said that simply identifying stakeholders is insufficient and that managers and owners must value each

stakeholder's interest in order to communicate expectations regarding project outcomes. Project managers, according to Lander (2017), have a fundamental duty to attend to the demands and requests made by their stakeholders as well as to be able to carry out, administer, and monitor the project policy process. These subjects highlight the necessity of using a logical approach when identifying an important project stakeholder, taking into account their needs, and determining the impact and potential risks they may have on the project.

2.3.1 Client for the Construction Project

The client is the person or organization that plans and funds a building project. Construction Contracts (Scotland) Regulations 2016 state that the client is typically the project's owner or the authority figure in that project. The client is responsible for picking the project team, which may include an architect, an engineer, a contractor, and other consultants, as well as for developing the project's specifications, distributing finances, setting the project's timetable, and other tasks. Contracts Scotland Regulations 2016/pages 2 additionally, it is the client's responsibility to ensure that the project meets its objectives and all relevant rules and regulations. Responsibilities specified by the applicable Act or Regulation.

This will guarantee a reduction in the danger of injuries or fatalities and a reduction in the overall risk to the public. It could be a private or public client. In a private construction project, the client and recipient are the same, whereas, in a public housing project, the government is the primary initiator, and the community in question benefits (Siriwarden et al., 2010). This is the main distinction between a private construction project and a public project.

2.3.2 Project Management Team for Construction

They are in charge of creating project plans, focusing on modifications to production methods, high-tech pursuits, team roles and responsibilities, organizational structures, and the implications of these modifications on resources.

2.3.3 Consultant and Designing Team

They provide advice on project planning services. Expense estimation, and technical issues (Siriwardena et al., 2010). Offer consulting services for the project's design, cost estimation, and technical problems (engineering advice regarding civil, electrical, etc.) (Siriwardena et al, 2010). A consultant is a specialist who offers knowledgeable guidance or advice in a specific area or industry. (Lester, 2017). (2017) Center for Consultants is frequently hired to assist businesses and organizations with improving performance, resolving issues, or locating growth possibilities. They may operate alone or with other consultants, and they frequently have specialized knowledge or abilities that can assist their clients in achieving their objectives. (Lester, 2017). On the other hand, a design team is a collection of experts who collaborate.

2.3.4 Contractor for a Construction Project

The contractor is in charge of carrying out the actual physical building work in a construction project. Typically, the customer appoints the contractor through a written contract or agreement. According to Construction Contracts (Scotland) Regulations 2016 the contractor is in charge of organizing and managing the building process to make sure that the project is finished on schedule, on budget, and in accordance with the necessary quality standards. The contractor may also be in charge of gathering supplies, employing and managing subcontractors, managing the job site, ensuring health and safety compliance, and giving the customer regular updates on the project's development Construction Contracts (Scotland) Regulations 2016. The contractor is

typically chosen based on their track record of completing similar construction projects and their experience, expertise, and knowledge.

2.3.5 Subcontractors for a Project in Construction

Subcontractors labour for the primary contractors and carry out simple, discrete tasks like ceiling contracting, wallpapering, and floor tiling as well as HVAC (Heating, ventilation, and air condition). Actual construction must be done in accordance with the design's specifications, and contracts papers shared by the appropriate parties (Siriwardena et al, 2010).

Subcontractors are people or businesses that contractor hires to carry out a particular duty or offer a specific service as part of a bigger project. The contractor is usually in charge of supervising and managing the entire project, and the subcontractor is in charge of finishing the work for which they have been hired. Subcontractors are frequently chosen for their expertise or specialized abilities in a given field.

2.3.6 Supplier for Construction Project

A provider is a person or thing that provides goods or services to another person or thing, typically in exchange for cash. Suppliers can be individuals, companies, or organizations that produce or offer resources, products, or services that are needed by clients or other enterprises. Because they agree that there are necessary goods and services to meet demand, they are essential to the supply system. Suppliers may be native or foreign, based in the same country or in other parts of the world. They can range in size from small independent businesses to massive international conglomerates Stephen Pryke and Paul W. Chan (2016)

2.3.7 Employees for Construction Project

Contribute voluntarily to the removal of remains and the provision of labour throughout the housing construction phase (Siriwardena et al., 2010). They are in charge of carrying out the building's construction as well as the ideas and plans put forth by engineers and architects (GineersNow). These are a few of the crucial tasks that workers carry out during a building project Nevertheless, skilled workers are those (SurePods) personnel who have specific knowledge and experience in carrying out different construction operations, such as carpentry, masonry, plumbing, and electrical work. Employees who perform everyday tasks including hauling goods, sweeping and maintaining the job site, and assisting expert employees are known as general labourers (SurePods). Managers are responsible for keeping an eye on how the construction is planned, scheduled, and carried out, claims Project (by Construction World). Managers of general labourers are in responsible of keeping an eye on how the construction project is planned, scheduled, and carried out.

2.3.8 Local Communities for Construction Project

Their responsibility to inform the appropriate parties involved in carrying out housing projects of any needs or demands. Designing the home and providing skilled and unskilled labour for building (Siriwardena et al., 2010). Local communities are groups of individuals who share common interests, values, and concerns and reside in the same geographic area. Gittell, (2003). Geographical borders, cultural or ethnic identity, similar economic or social conditions, or a shared purpose or objective are just a few examples of the many different characteristics that can be used to define these communities. Local communities are crucial because they give their members a feeling of support, identity, and belonging. Additionally, they also play a vital role in promoting social cohesion, fostering social capital, and creating a sense of shared responsibility and commitment to the well-being of the community as a whole (Putnam, 2010).

2.3.9 Funding Bodies for Construction Project

Some Funding bodies are organizations that provide financial support to individuals or groups for a variety of purposes, such as research, education, social welfare, or other types of projects and more. These organizations can include government agencies, non-profit organizations, charitable foundations, corporations, and private donors.

Funding bodies frequently have specific aims or objectives that they hope to accomplish with th eir funding. For instance, a funding organization that prioritizes funding scientific research migh t demand that applicants possess a particular degree of training or expertise in a given field or th at they submit a research project that is consistent with the organization's goals.

While some financing organizations may offer loans or other forms of financial assistance, other s may offer grants or scholarships. Depending on the goals and objectives of the funding Organization, funding may also be given as one-time help or ongoing assistance.

2.3.10 Government Authorities for Construction Project

The government is in charge of establishing and maintaining relationships, as well as setting rules and ensuring that they are followed. Establishing requirements for the execution of housing reconstruction projects (Harris, 2010). The organizations or personnel involved in stakeholder management in construction projects are referred to by government authorities. The police, the military, tax authorities, immigration authorities, environmental agencies, and regulatory bodies are a few examples of government authority. The authorities are in charge of upholding the laws and rules that apply to their land, while they may have the authority to look into and prosecute any people or organizations who break these rules Project (Lester, 2017). In reality, local government decision-making is a stakeholder-based process, with workers in stakeholder management in planning construction projects.

- Building Regulations
- Environmental health.
- Licensing.

2.4 Construction Industry in Cape Coast

Ghana's capital, Cape Coast, is a city that may be found there. The construction industry in Cape Coast is a significant part of the local economy because it creates jobs and helps the city's infrastructure grow. The industry is diverse in Cape Coast and includes everything from residential and commercial buildings to infrastructure projects like roads, bridges, and water supply systems. The industry is dominated by small and medium-sized organizations (SMEs), with a few large companies operating in the region, according to Osei-Tutu, Ampratwum, & Appiah, (2019). In recent years, the Ghanaian government has made large expenditures in infrastructure growth, especially at Cape Coast.

This has led to an increase in construction activity in the city, with several major projects currently underway. Owusu, (2014) the construction of a new regional hospital, the expansion of the Cape Coast sports stadium, and the construction of new housing developments. In Cape Coast, the building business is expanding, but there are obstacles the sector must overcome. These include concerns with safety, environmental sustainability, and challenges with quality control. Quansah, Osei-Tutu, and others (2020). By creating rules and standards, promoting best practices, and providing workers with training, the government and other industry players are attempting to solve these issues Fugar, & Agyekum (2013). Overall, Cape Coast's construction industry contributes significantly to the local economy and is anticipated to expand as the city grows.

Figure 2. 1 : Clients' perspective of project performance (Based on Mbachu, 2003) source> field survey, 2016.

A key component of the Ghanaian government's plan to support the private sector as the country's growth engine between 2000 and 2008 was its recognition of the construction sector as a critical area for both foreign and domestic investment. As a result, the industry is recognized as Ghana's economic backbone and a major contributor to GDP growth. For instance, it increased from 8.3% of GDP to 11.8% of GDP from 2010 to 2013, which is a reflection of its growing importance in the national development. The construction industry is a vital one in every rising economy, claim Fugar and Agyakwa-Baah (2010). Since the economy raises a country's GDP by an average of 8.9%, Ghana has concluded that it is one of the main variables influencing GDP (Ghana Statistical Service, 2010). The industry also offers employment possibilities for a larger spectrum of people and is essential to the development of small towns and rural areas. 2011 (Amoah et al.).

Clearyld Bank's estimation from 2003 that the yearly cost of federal procurement for goods, services, and consultant perks is US$600 million is cited by Anvuur & Kumaraswamy (2006). 10% of the country's GDP is roughly equivalent to this. This sum is a portion of the total expenditures made by all governmental entities, including ministries, assemblies, departments, institutes, and other organizations. The majority of projects are funded by "internal and external borrowing, grants from bilateral and multilateral sources, and public-private partnerships" (Mustapand ha, 2013), taking into account the historical context of Ghana's economic

architects' struggles with limited financial resources, similar to those in other countries. Ghana's condition industry is rapidly growing since infrared development accounts for the majority of new construction projects. 2013's Mustapand ha. Ren, Kwaw, and Yang (2012) claim that domestic and foreign investments made in the public and private sectors contributed 9.73% of the country's GDP to the construction sector in 2008.

2.5 Stakeholder Types for the Construction Industry

According to numerous criteria, project stakeholders are categorized into distinct categories. Once these stakeholders are clearly recognized, they can be organized and managed (Calvert, 2015; Winch and Bonke, 2012). As a result, the project's stakeholders can be classified into:

- **Internal stakeholders** are those who have a legal contract with the client and those gathered around the client on the demand side (employees, customers, end-users, and financiers), as well as those assembled on the supply side (architects, engineers, contractors, trade contractors, and material suppliers). Internal stakeholders are the team members of the project or those who provide the project with financing.
- **External Stakeholders** are those who will be significantly impacted by the project. Private and public actors were included among the external stakeholders. Local citizens, landowners, conservationists, and archaeologists make up the private actors, whilst regulatory bodies, regional governments, and the federal government make up the public actors.

2.6 Stakeholder Classification

2.6.1 Stakeholders in the Construction Project Directly

Direct stakeholders include, for example, clients, team members, sponsors of the project, technical and financial service providers, internal or external consultants, project managers, suppliers of

supplies and equipment, site workers, contractors and subcontractors, and end users (Lester, 2017). Those with a direct and immediate interest in a project, initiative, or endeavour are referred to as direct stakeholders. According to Freeman, R. E., since they are immediately impacted by the choices made during the project's design, implementation, and conclusion, these stakeholders' perspectives and contributions are crucial for the project's success. (2010). However, according to Mitchell, Agle, & Wood (2017), customers or clients are the people or organizations who buy or use the products the initiative creates.

2.6.2 Indirect Stakeholders

People who are not directly involved in the project are referred to as indirect stakeholders. Examples include internal company managers, auxiliary workers who are not directly involved in the project, national and local government, technical institutions, public utilities, professional bodies, and private interest groups like stockholders, licensing and inspection agencies, labour unions, and pressure groups (Lester, 2017). They are also referred to as outside stakeholders.

2.6.3 Positive Stakeholders

People who can positively impact a project are considered positive stakeholders. These parties are frequently project direct stakeholders and stand to gain from the project's success. The organizations that participate in the labour itself and stand to profit financially are examples.

2.6.4 Negative Stakeholders

People who could negatively affect a project are considered negative stakeholders. They usually consist of individuals or groups that are indirectly impacted by a project but are not directly participating in it. An illustration would be locals who are worried about losing public spaces to new projects.

2.7 Stakeholders in the Construction Industry

The stakeholder idea was first developed through an academic study conducted in the US in the 1960s, which defined stakeholders as those groups having a significant impact on an organization to the point that it would cease to exist without their support (Li et al., 2013; Stoney and Winstanley, 2011) Describes a stakeholder in an organization as "Any group or individual who can affect or is affected by the achievement of the organization's objectives" to further this explanation. Stakeholders in the construction industry can be divided into primary and secondary stakeholders. Stakeholders in the construction sector come in a wide variety. Clients/Owners: These are the individuals or companies who commission building projects and are ultimately in responsible of providing funds and project management. (2016). Zou, Zhang, Wang, and Li, the companies or individuals responsible for carrying out the work outlined in the contract, including managing the job site, coordinating with subcontractors, and ensuring the work's quality and safety, are known as contractors. In 2021, the National Institute of Building Sciences Architects and engineers are the professionals in charge of designing the project and guaranteeing that it conforms with all legal requirements and standards, including building rules, zoning restrictions, and environmental laws.

These are the companies that offer the machinery, steel, concrete, and timber needed for constructon projects Suppliers: These are the businesses that provide the tools, steel, concrete, and wood required for building projects. Construction companies now operate in a globalized market with large project teams and joint ventures with foreign companies where they exhibit cultural variations, varying professional ethics, and other business philosophies. Conducting a successful project requires addressing the concerns of the project's stakeholders and precisely predicting how they will affect and be affected by the project.

2.8 Construction Stakeholder Management

The successful management of project stakeholders is thought to be extremely important (Olomolaiye and Chiniyo, 2010). However, Olomolaiye and Chiniyo (2010) point out that inadequate stakeholder management leads to dissatisfaction with the finished product and unfavourable consequences on the project's schedule and budget. But in order to achieve a more successful project's desired outcome, the project executive must be skilled in managing the various stakeholders throughout the course of the project's development. Regular communication with diverse stakeholders would alert their management to numerous hazard factors. According to Love et al. (2019), a project's success depends on a variety of factors that are influenced by the choices made by different people, organizations, and groups.

Figure 2.2 showed that project managers have to deal with people externally to the organization as well as the internal environment, indeed more complex than what a manager in an internal environment faces. Olomolaiye and Chiniyo (2010) for instance, suppliers who are not on time in supplying important quantities of materials could delay the project program. Normally, when project managers have little or no direct control over any of these persons, it compounds the problem. Problems with any of these members can disorganize the project.

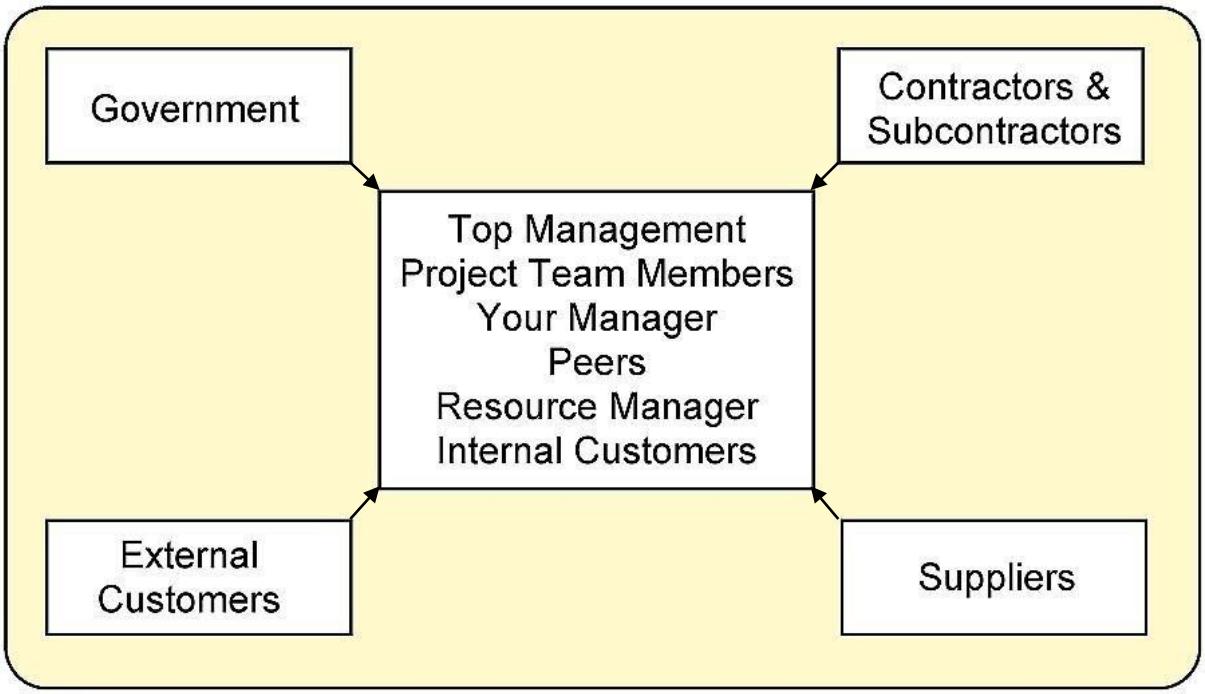

Figure 2. 2 : Project Stakeholders. Illustrations from Barron and Barron Management for Scientists and Engineers.
Source. http//cnx .org / content /co111120/1.4/

2.9 Effective Stakeholder Management

It is clear that there is a theory consensus, put together by Olomolaiye and Chiniyo (2010), which states that "when the different expectations of stakeholders cannot be achieved at the same time, negotiations become valuable." This is in light of the expanding number of stakeholders and their numerous unpredictable expectations. There is a need to manage the constantly shifting balance between the interests of stakeholders since hazards are not static but rather dynamic (Walker, & Hampson, 2018). In order to support their goals, stakeholders' relationships with the project and the organization should be managed as part of stakeholder management. In this sense, a favourable environment should be created in order to foster strong interpersonal trust. Organizations have a choice of three strategies or three sorts of relationships with the stakeholders in order to manage expectations, stakeholders, and business requirements (Goodpaster, 2011):

Strategic Approach– this is the approach that gives more priority to the shareholder and the stakeholder's management.

- **Multi –Fiduciary Approach**–this undertake a fiduciary responsibility to stakeholders; they are given comparable stakes to shareholders.
- **Stakeholder Synthesis Approach**– This approach deals with stakeholders in an ethical manner, but it is not required to do so.

2.10 Stakeholder Management Processes in Construction

In the construction sector, managing stakeholders is a crucial procedure because projects frequently involve a broad range of stakeholders with different demands, expectations, and interests. Hillson, Murray-Webster, (2017). Identifying and evaluating stakeholders finding every stakeholder who might be interested in or have influence over the project is the first stage in stakeholder management. This can include customers, business partners, employees, suppliers, government agencies, regional communities, and others. Stakeholders should be identified and then evaluated to ascertain their amount of influence, level of interest, and potential impact on the project. According to this viewpoint, Love et al. (2019) stress the importance of decisions made during the formative and initial design stages of a project's existence as crucial elements that must be taken into consideration if a project is to be executed on schedule, within budget, and with the required level of quality (Walker, and Hampson, 2018).

To make sure the methods for managing stakeholder interaction are efficient, monitoring and evaluation are crucial. This may entail conducting continuing stakeholder engagements, monitoring social media and other channels, and conducting frequent feedback polls (Atkinson et al., 2017; Wateridge, 2018) concur that when stakeholders meet their needs either jointly or separately, successful construction project performance results. Jergeas et al., 2000 also suggest a stakeholder management model for construction projects. According to them, the key to

enhancing stakeholder management, communication, shared goals, and the project's primary priority is to have a complete strategy in place before beginning the project.

However, it offers certain guiding principles for crucial aspects of managing the projects of construction stakeholders (Walker, and Hampson, 2018). Processes for managing stakeholders are essential to the accomplishment of construction projects because they help to make sure that stakeholders are involved, informed, and pleased with the results. As a result, there may be less chance of disagreements, delays, and cost overruns, and the project team and stakeholders may develop stronger bonds of trust.

2.11 Managing stakeholders Need and Expectations

Allowing stakeholders to communicate their wants, opinions, and expectations in a suitable setting is crucial for incorporating their needs into the project's early planning stages. To assist clients, participants, and their design teams in identifying their strategic needs for a specific project, Smith et al. (2011) propose the use of a technique called Strategic Need Analysis (SNA). The SNA technique is focused on the participation of numerous significant stakeholders. Client, managers/executives, facility managers, project managers, staff, end users, consultants, and other design team members make up the group. The output of SNA is the creation of a thorough performance brief to direct project team members in moving the project forward within acceptable bounds. According to Freeman et al. (2017), analyzing stakeholders' areas of interest and compiling a complete list of their concerns is the goal of examining stakeholders' requirements and expectations in initiatives. All stakeholders' needs should be evaluated during project development in order to find an appropriate and workable solution to the issue (Kocak, 2013).

2.12 Impact of Stakeholders on Projects

Possible issues related to inefficient management include inadequate job scope, problems with resources allocated to the project, supervisory changes that have an impact on the project, and unfavourable community reactions to the project. All of these concerns, along with the stakeholders' absence from the project, have an impact on the project's budget and schedule.

Company Social Responsibility (CSR), which is sometimes characterized as an optional social-environmental concern in company transactions and relationships with the stakeholders (Enquist, 2016), is closely tied to stakeholder management. In addition to their obligations to their shareholders, the businesses consider themselves to have social obligations as well (Dohy Guay, 2016). According to their level of influence and likely to have an impact on the project, project stakeholders are categorized in figure 2.3 below by Olander (2017). The subsequent queries were used to analyze these: How eagerly does each set of stakeholders express their interest in, hopes for, or contributions to the project?

- Do they have enough influence (effect) to make a difference?

The matrix indicates the types of relationships that project management might usually establish with stakeholders in the different quadrants.

According to their level of influence and likely to have an impact on the project, project stakeholders are categorized in figure 2.3 below by Olander (2017). The subsequent queries were used to analyze these: How eagerly does each set of stakeholders express their interest in, hopes for, or contributions to the project?

2.12.1 Keep Satisfied

Stakeholders are often. national governments, authorities, or other similar organizations that have requirements and even the authority to discontinue the project, but then do not usually have a particular interest

2.12.2 Key players

A stakeholder management method called "Keep Satisfied" entails keeping open lines of contact with those who have a lot of interest in the project but little ability to influence it. These stakeholders are thought to be crucial to the project's success, and their happiness may influence the success of the project as a whole. The "keep satisfied" technique entails maintaining regular contact with key stakeholders, giving them updates on the project's status, and soliciting their opinions and suggestions.

Customers, users, community organizations, and project team members are a few examples of stakeholders that may come under the "keep satisfied" concept. These stakeholders might be interested in the project's success, but they might not have the power to decide how to allocate money or make choices. Project managers can foster goodwill and win these stakeholders' support for the project by keeping them happy. Additionally, if these stakeholders feel ignored or unsatisfied, it may help to lessen any negative effects they may have on the project. In order to effectively engage and manage all stakeholders throughout the project's lifecycle, it is crucial for project managers to strike a balance between the "keep satisfied" strategy and other stakeholder management techniques.

2.12.3 Minimal Effort

The project management does not view the stakeholders as significant or important, but this does not indicate that they are being disregarded. If these stakeholders have specific goals for the

project, they may strive to advance salience through other stakeholders. Keeping stakeholders informed with little effort and resources is the goal of the stakeholder management method known as "Minimum Effort." This tactic is generally employed by stakeholders with low levels of power and interest, which means they are not overly invested in the project and have little influence over it. The minimal effort approach might merely communicate with these stakeholders infrequently and give them the information they need.

2.12.4 Keep Informed

The "Keep Informed" technique for managing stakeholders include informing them of any pertinent information that could have an impact on them as well as the project's development (Kocak, 2013, This tactic is frequently employed for stakeholders with little power but a great deal of interest in the project, including regulatory bodies, trade associations, or stockholders. (PMI). (2017) Even if these parties may not directly affect the project, their impact on its results is possible. The "keep informed" approach usually entails giving stakeholders' regular information on the project's status, milestones, and any changes that might have an impact on them. Depending on the stakeholders' preferences and level of involvement, the communication may take the form of newsletters, emails, briefings, or meetings. According to (PMI 2017). Project managers can establish credibility and confidence with stakeholders by keeping them updated on the project's status and any potential problems.

2.13 Stakeholder Salience and Position

Stakeholder salience is the degree to which managers give importance to challenging stakeholder privileges. In further words, the model recognizes the stakeholders which managers must pay attention to. It is divided into three features – power, legitimacy and urgency. Salience depends normally on the amount of characteristics that a stakeholder owns. Salience can vary during a

project, which means that some stakeholders may try to shape their salience attributes in order to make their voices heard.

2.13.1 Stakeholders Power

Power is the chance that one party in a social connection implement his or her own preferences in the face of opposition. In other words, some stakeholders may be able to influence another stakeholder to do an action they otherwise would not. Olomolaiye and Chiniyo, (2010), Stakeholders' influence may result from their ability to gather social and political force or to withhold funding from the project. According to Olomolaiye and Chiniyo (2010), power refers to a stakeholder's capacity to exert pressure on a project and the parties involved by financial, legal, or other means. Governmental bodies and courts have a unique kind of formal power, despite the fact that they typically do not take the initiative. The extent of a stakeholder's power is determined by their level of project-related knowledge and skill, the legal or contractual authority granted to them, and their ownership status. Stakeholders may have high or low power depending on how involved they are in the project and what they are expected to provide.

2.13.2 Stakeholders Legitimacy

It is a belief or a thought that an activity is legitimate if it fits within a set of socially constructed norms, values, theories, and descriptions. Project managers are frequently more receptive to paying attention to stakeholders whose rights they perceive as legitimate. People, groups, and society at large can all hold legitimate positions. The project manager will not consider a stakeholders claim to be relevant even if it is justified if the stakeholder lacks the authority to make it happen for example, contractual connections to the project increase a stakeholder's authority; hence, external stakeholders without such connections can be disregarded.

2.13.3 Stakeholders' Urgency

How seriously stakeholder rights should be regarded depends on the need. It is based on the criticality and temporal sensitivity of information. Time sensitivity refers to how long it takes management to respond to a claim or connection that a stakeholder feels inadequate. Additionally, criticality denotes how pertinent the claim is to the stakeholder. One way to interpret urgency is as a stakeholder concern. The urgency of the claim is increased in the construction business by the potential of unfavourable project objectives and execution results. Even though authority and legitimacy are more attractive qualities than urgency, their importance is unaffected

As a result, stakeholders are categorized into eight classes based on factors such as power, legitimacy, and urgency. The stakeholder cannot be considered a project stakeholder without the three qualifications.

1. Demanding parties have an urgent clam but no legal authority or connection. Management may ignore them because they are not harmful but may be inconvenient.
2. Dormant stakeholders have the ability to enforce their will, but because they have no urgent demand or genuine relationship, their power is inactive.
3. Dependent stakeholders possess urgent and legitimate claims, but no power.

2.14 Stakeholders' Interests

Due to the complexity of construction projects, there are many stakeholders' interests that need to be considered (Cleland, 2019). Similarly, Freeman et al., (2007) believe that identifying stakeholders' interests is a key task to evaluate stakeholders, and the listed stakeholders' interests include product safety, the accuracy of fiscal reporting for new products, services, and financial proceeds. Several Even the stakeholder definitions of McElroy and Mill (2000) and Bourne (2005) by scholars use the interest phrase. Additionally, the power/interest matrix Johnson et al., (2005) created includes the concern of project stakeholders. This matrix aids project managers in

determining which approach should be used in the communiqué and management of project stakeholders as shown in figure 2.4 below.

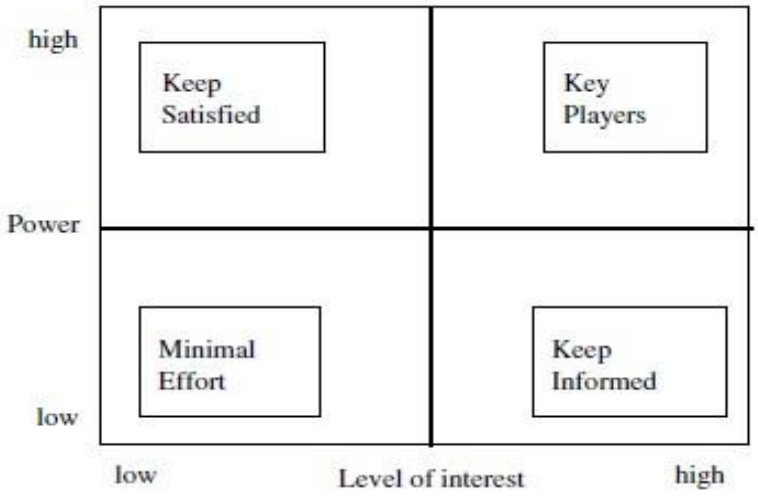

Figure 2. 3 : Power/Interest Matrix
Source: Johnson Et Al., 2005

During the stakeholder management process, it is important to assess stakeholders' willingness and ability to collaborate or threaten project teams (Savage et al., 2011). The necessity to identify opponents and supporters arises from the possibility that participation may have either positive or negative effects on projects. According to McElroy and Mills (2000), stakeholder attitude describes whether a stakeholder supports or opposes a project.

2.15 Stakeholders Attitude

In other words, this aspect gives a _clue ‘for managers to be alert that stakeholder have positive or negative impacts on project outcomes. Freeman *et al*., (2017) also state that stakeholders ‘viewpoints can be arranged into three groups – perceived behaviour, supportive potential, and competitive threat, a project manager needs to openly comprehend the range of stakeholder responses and behaviours. According to McElroy and Mills (2010), participant attitude consists of five levels – energetic opposition, inactive opposition, no assurance, passive support, and active support.

2.16 Stakeholders' Influence

Project stakeholders have an impact on the project management process, claims Olander (2017). He created "the stakeholder impact index" and believed that evaluating the prospective impact of stakeholders would reveal the type and extent of their influence, the chance that they would use that influence, and the relative importance of each stakeholder to the project. Therefore, recognizing the stakeholders' influence as an important factor too ―plan and execute a sufficiently rigorous stakeholder management process (Olander and Landin, 2015). Stakeholders' influence refers to the extent to which stakeholders can affect or impact a project or organization's decisions, actions, and outcomes. Stakeholders can be individuals, groups, or organizations that have a vested interest or stake in a project, decision, or outcome Academy of Management Review, 22(4), 853-886. This refers to the power that stakeholders have due to their specialized knowledge or expertise. They may use their technical expertise to influence decisions or outcomes. Project management (2017)

Understanding the influence of stakeholders is important in managing stakeholders effectively and ensuring that their needs and concerns are addressed. Stakeholder analysis is a useful tool for identifying and assessing the influence of stakeholders and developing strategies to manage their involvement in a project or organization.

2.17 Stakeholders Knowledge

According to Yang et al. (2017), participants can now look for a wider variety of information from many sources as a result of technology advancement. In fact, a stakeholder's ability to influence a project increases with their level of project intelligence. Walker et al. (2018) once more emphasize the importance of the interest and knowledge that each stakeholder can acquire about the project. According to McElroy and Mills (2010), stakeholders' knowledge can range from complete ignorance to full awareness The former relates to the purpose of stakeholders

to learn about the project by gathering information to help them achieve their unique goals. The latter, on the other hand, relates to the reality that stakeholders are more likely to know about the project through rumours and assumptions than through actual information. The awareness of the stakeholders is a motivating factor that may have a favourable or negative impact on the jobs.

2.18 Stakeholders Involvement

Additionally, according to Atkin and Skitmore (2018), increased stakeholder involvement can help manage their requests, lower unforeseen risks, and cut back on pointless actions or replies that could harm the project's success. This may be connected to the Government of Ghana's and the Government of China's reconstruction of the Cape Coast Kotokuraba Market Station, which was met with vehement criticism from the stakeholders. Consequently, for a project to succeed, stakeholders should improve the effectiveness and productivity of decisions made throughout the lifecycle of a construction project, project managers must develop complete stakeholder participation methodologies (Saghatforoush et al., 2010). As shown by past research in the construction sector by several academics (Bal et al., 2013; Bosher et al., 2007; Olander and Landin, 2015a) (Yang, 2010), stakeholder involvement is crucial for boosting the efficacy of project outcomes. The performance management techniques used by various stakeholders have a big impact on how well a building project turns out. In order for a project to be successful, according to PMI (2013), a project manager must promote stakeholders' involvement at all project stages. Participation is extremely important in boosting the effectiveness of project outputs.

2.19 Predicting Stakeholders' Reactions

This is an important factor to consider by project managers. Contemporary projects are implemented in highly demanding and complex-built environments. They are executed by coalitions of multiple stakeholders that have divergent interests, objectives and socio- cultural backgrounds. Bourne (2006) defines project stakeholder as an ―individual or a group who has an interest or some aspect of rights or ownership in the project, and can contribute in the form of knowledge, support, can impact on or be impacted on by the project‖. Moreover,
34projects always interrelate with their location and environment which may necessitate the consideration of special features (e.g. specific rules, norms or stakeholders).

2.20 Evaluating Stakeholders' Satisfaction

The golden triangle (time, money, and quality) and the satisfaction of the project's important stakeholders are the project success criteria, according to a thorough statement by the Project Management Body of Knowledge (PMBOK). According to several research, project success criteria have been expanded to include new factors like stakeholder participation and satisfaction, consumer benefit, and emerging prospective organizations. The important thing to remember is that, in cases where there is a connection between stakeholders' interests and these components, both success components must satisfy them (Baccarini, 2019). More significantly, it has been stressed that the project team will be required to adjust scope, time, and cost in order to meet the stakeholders' expectations on quality issues if the project's stakeholders are dissatisfied with the quality of the ongoing project management or project outcomes (PMI, 2013).

2.20.1 Ensuring Effective Stakeholders Communications

To successfully lead a team, integrate its members, and make decisions, communication is crucial. The project manager must establish a shared project vision and make sure that all essential

stakeholders are on board with the project (Yang, Shen, and Ho 2019:166). As soon as the project's goals are determined and its scope is defined, according to Zwikael (2019:385), there must be regular updates. In order to accomplish the overall goals, progress on the tasks assigned to individuals or groups must be tracked. The appropriate persons must be informed of these revisions. According to Newton (2015:38), effective information transmission requires a carefully thought-out communication strategy

2.2.2. Stakeholders Valuation

The impact/probability matrix updated by Olander (2017) can be used to perform the valuation using the matrix illustrated in Figure 2.5 below. Because the level of impact increases with stakeholder salience, the impact level in this matrix has been altered from impact level to salience (Y-axis). Therefore, these two concepts can be regarded parallel. The Y-axis lists the stakeholder groups according to importance, while the X-axis lists each stakeholder’s likelihood of having an impact on or capacity to contribute to the project.

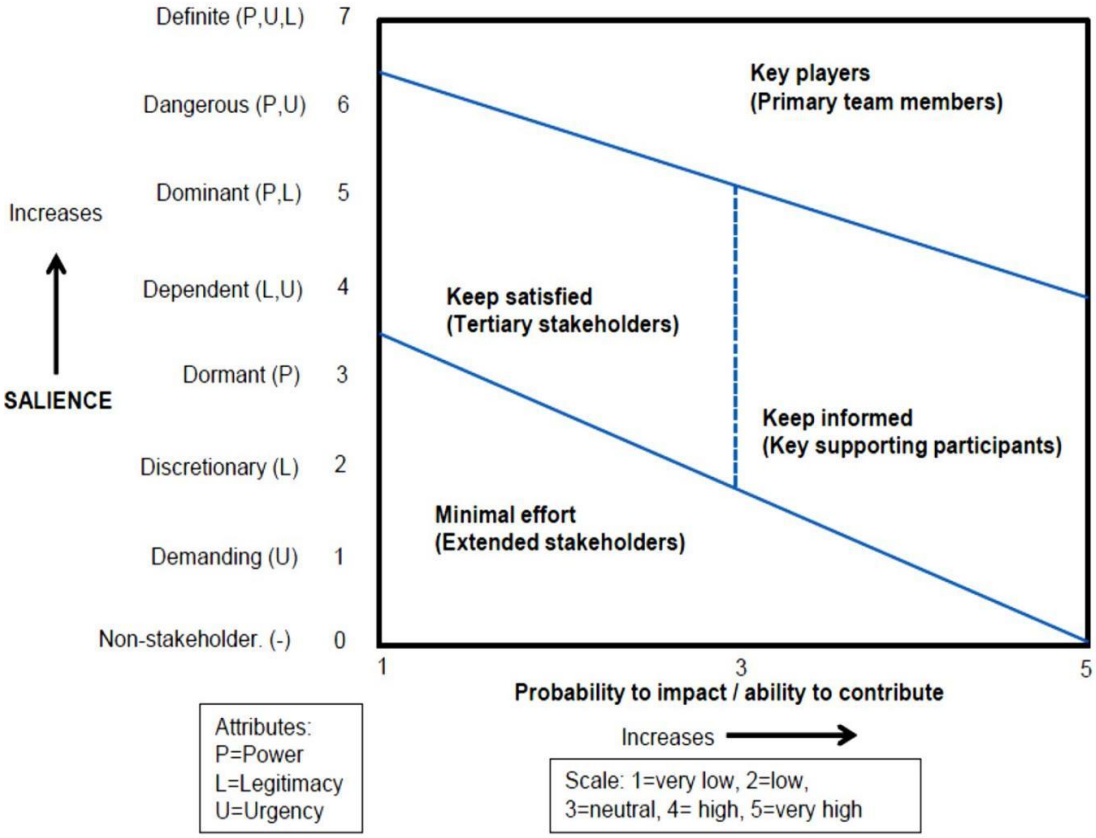

Figure 2. 4 : Stakeholder valuation matrix, the impact/probability. matrix-modified by olander(2007)

To improve the discussion of stakeholder prominence, Olander's matrix is examined and the order of stakeholder roles is modified. If the shareholder lacks at least two of the required qualities, they cannot be a major participant. Due to their high salience, the project's principal team members can also be viewed as essential players. A stakeholder who simply possesses one attribute is referred to be a low-effort or extended stakeholder.

2.22.1 Definitive Stakeholders

These people possess all the characteristics. They already belong to a group that governs a company. When a claim is urgent, managers have a clear and immediate obligation to look into it and give it priority. They are individuals or groups whose activities have a direct impact on a project or organization and whose interests must be considered while making decisions. People who utilize or purchase goods or services from a business are considered customers.

2.22.2 Dangerous Shareholders

Individuals with a financial stake in the business who have the power to influence policy through their investments. Suppliers and vendors are those who offer the company with goods or services, whereas employees are those who work for the organization and contribute to its success.

2.22.3 Dependent Stakeholders

They possess urgent and legitimate claims but no power. These stakeholders depend on others for the power to carry out their will.

2.22.4 non-Stakeholders

Due to the fact that they don't possess any of the three characteristics, these people cannot be regarded as project stakeholders (Carroll and Buchholtz, 2014). Non-stakeholders are individuals or groups that have no ties to, interests in, or connections to a business, project, or organization. These individuals or groups are unaffected by the organization's decisions or actions and have no influence on the organization's success or failure. Engage Learning upholds the concept of stakeholder management. Anyone who is not a customer, an employee, a shareholder, or a member of the neighbourhood who these people might not be familiar with the organization or how it operates. Non-stakeholders might not directly impact a firm, but they might have some kind of influence or impact on the environment in which the business operates. Non-stakeholders, for instance, can be potential clients or staff members or might be impacted by the organization's actions on the community or the environment (Buchholtz and others 2014), Carroll, (2014), is not directly impacted by the organization's operations is considered a non-stakeholder.

2.22.5 Primary, Team Members (PTM)

2.22. 6 Extended Stakeholders

External stakeholders are those who do not directly work with a company but are affected somehow by the actions and outcomes of the business. Extended stakeholders like the media, NGOs, and locals may be interested in the project but have no direct control over the resources. In 1997, Mitchell, Agle, and Wood, (1997) Extended stakeholders are more diverse than primary, secondary, and tertiary stakeholders and can consist of a variety of people or organizations, including suppliers, authorities, rival companies, trade groups, and other companies operating in the market or industry. Howe While primary and extended stakeholders are considered external stakeholders, Primary Team Members (PTM) and Key Supporting Participants (KSP) represent internal stakeholders. To ensure that the project's objectives are met, it is necessary to consider the interests of PTMs, significant supporting participants, and tertiary stakeholders. The primary team members are heavily involved with and responsible for various aspects of the project. PTMs typically involve the client, architect, and prime contractor, but they may also involve other parties. Additionally, PTMs make up the project's core group, which decides unanimously and settles disputes. Academy of Management Review, 22(4), 853–886. The effectiveness and viability of the company over the long term may depend greatly on extended stakeholders, even though they may not have an immediate or obvious impact.

2.2.3 Change in Stakeholders

The concept of change and the dynamics of stakeholders was acknowledged by Freeman (1984). According to him, in reality, stakeholders and their influence change over time, and this depends on the strategic issue under consideration. The dynamics of stakeholders is a very interesting and important aspect of the stakeholder concept (Elias *et al*., 2012). The uncertainty caused by stakeholders includes who the stakeholders are, their influence, their needs and the implications

of relationships among stakeholders (Ward and Chapman, 2018) change in stakeholders refers to the shifts or modifications that occur in the group of individuals or groups who have a direct or indirect interest or involvement in an organization or project. Stakeholder change can occur for various reasons, such as changes in organizational structure, changes in market or industry conditions, or changes in the social or political environment. Carroll, & Buchholtz, (2014). Stakeholder change can have significant implications for an organization, as it can affect the organization's goals, strategies, and operations.

2.24 Promoting Good Relationships with Stakeholders

Successful relationships between the project and its stakeholders are vital for the successful delivery of projects and meeting stakeholders' expectations (Cleland, 2016; Savage *et al*., 2011; Jergeas *et al*., 2010; Hartmann, 2012). Trust and commitment among stakeholders can be built and maintained through efficient relationship management (Pinto, 2018; Bourne, 2015 Karlsen *et al*., 2018). Promoting good relationships with stakeholders is essential for the long-term success and sustainability of an organization. These are some key strategies that organizations can use to promote positive relationships with their stakeholders (Carroll, & Buchholtz, 2014).

Organizations should actively listen to their stakeholders to understand their needs, concerns, and expectations. This involves soliciting feedback through surveys, focus groups, or other channels, and responding to stakeholder concerns in a timely and transparent manner. Carroll, & Buchholtz, (2014) this involves communicating openly and honestly about the organization's performance, challenges, and successes, and disclosing relevant information to stakeholders. Organizations should build collaborative partnerships with their stakeholders to achieve common goals. This involves working closely with stakeholders to develop shared solutions and initiatives that benefit both the organization and its stakeholders.

2.25 Critical Success Factors (CSFs) of Construction Projects

Critical success factors are a set of project variables or factors that are strongly correlated to project success and whose maximization or minimization depending on whether they are favourable or unfavourable will lead to project success. The term critical Success factors in the context of management of projects was first used by Rockart (2011), and it is defined as those factors predicting success on projects. According to him, critical success factors are the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department, or organization. Kerzner (2017) there are a few key areas where things must go right for the business to flourish. If results in these areas are not adequate, the organization ‘s effort for the period will be less than desired.

Frese and Sauter (2013) conclude that good planning, clear responsibility and accountability, and schedule control as well as project leadership governance and communications are key areas of successful projects. This implies that a clear project plan, a plan for risk management, and the commitment and support from stakeholders are the critical success factors for construction project management. Kerzner (2017) also defines critical success factors as those components that are required to establish an environment where projects are managed consistently with excellence. Usually, the satisfaction of clients is identified as the main factor of project success. Rockart (2011) Construction projects are frequently influenced by success factors that can help project parties reach their intended goals with greater efficiency in Ghana. Many critical success factors such as factors related to the project manager ‘s performance, factors related to organization, factors related to the project, and factors related to the external environment influence project’s success.

Then, project success can be defined as meeting the required expectations of the stakeholders and achieving its intended purpose. This can be attained by understanding what the end result would be, and then stating the deliverables of the project. Certain factors are more critical to a project ‘s

success than others. These factors are called critical project success factors. Various project success factors have been identified by different researchers in different projects around the world. Furthermore, Lim and Mohamed (2019) suggest that construction success can be related to customer stakeholders by macro evaluation of the building ‘s social acceptance and performance and to practitioner stakeholders by micro evaluation of functional, physical, or financial objectives.

Both stakeholder types judge success in response to the project ‘s fulfilment of agreed criteria, articulated as success factors. Success has been the ultimate goal of every business activity. For a project to be successful, it is important to understand the project requirements right from the start and go for project planning which provides the right direction to project managers and their teams and execute the project accordingly. A successful project is one that is delivered on time and managed within the budget, time, cost, and quality that have been reorganized as triple constraints ‘or important elements of project success.

2.26 Project Success Classifications

Project success-related factors are put into two groups: project Success Criteria ‘(PSCs) and Project Success Factors ‘(PSFs). It is important to differentiate between these two groups. Success criteria are used to measure success whilst success factors facilitate the achievement of success. Kerzner, (2017). Project success can be classified in various ways, depending on the criteria used to evaluate the project's performance. Here are some common classifications of project success:

Technical success refers to the extent to which a project meets its technical requirements, specifications, and standards. This involves evaluating the project's design, development, and implementation processes and ensuring that they meet the required technical criteria. Schedule success refers to the extent to which a project is completed within the scheduled timeframe. This

involves evaluating the project's planning, scheduling, and monitoring processes and ensuring that they are effective in keeping the project on track

Cost success refers to the extent to which a project is completed within the allocated budget. This involves evaluating the project's cost estimation, budgeting, and cost control processes and ensuring that they are effective in managing project costs.

2.27 General Project Success Criteria (PSCs) and General Project Success Factors (PSFs)

These criteria and factors are generic and can influence most forms of construction projects which are given below. Project Success Criteria (PSCs) are the specific measurable goals and objectives that define what success looks like for a project Slevin, (2018) provide a clear scope, The project meets the specified requirements and objectives Schedule, the project is completed within the defined schedule, Budget, Quality, Stakeholder, satisfaction and Risk management. Project Success Factors (PSFs) are the key factors that contribute to the success of a project. They are the underlying conditions and practices that enable the project team to achieve the PSCs. Effective project management processes, such as planning, scheduling, monitoring, and control, are critical to project success. Acceding to Project Management (PM 2017) Effective stakeholder management helps to identify and address stakeholder needs and concerns, which can contribute to project success. Effective communication is critical to project success, as it helps to ensure that everyone involved in the project is informed and aligned. Organizations can contribute to project success, PSCs and PSFs are essential components of project success. By defining clear PSCs and focusing on key PSFs, project teams can work towards achieving their goals and delivering successful projects.

2.27.1 Project Management Success against Product Success

Project Success Criteria consist of Project Management Success and Product Success. Project Management Success covers meeting time, cost, and quality objectives. On the other hand, Product Success deals with the ability of the project ‘s final product to meet the product owner ‘s strategic organizational objectives; satisfaction of users ‘needs, and satisfaction of stakeholders’ needs where they relate to the product. Project management success and product success are two different concepts, but they are closely related. Kerzner, (2017) Project management success refers to the success of the project management process, which includes planning, executing, monitoring, and controlling the project to meet its objectives within the defined constraints of scope, time, cost, and quality. Product success, on the other hand, refers to the success of the final product or deliverable that the project produces (Project management, 2017).

Project management success does not guarantee product success, but it is a necessary condition for it. A project that is completed on time, within budget, and with high quality is more likely to produce a successful product than a project that fails to meet these criteria (Kerzner, 2017). However, even if the project is managed successfully, the final product may not be successful if it does not meet the needs and expectations of its users or fails to provide value to its stakeholders. To ensure product success, project managers must focus on delivering a product that meets the needs and expectations of its users and provides value to its stakeholders. According to Project Management (2017), this involves identifying and understanding the needs of the users and stakeholders, designing a product that meets these needs, and testing and validating the product to ensure that it delivers the intended value.

2.27.2 Project Success and Project Management Success

Project Success is measured against the overall objectives of the project while Project Management Success is measured mostly against cost, time, and quality (so-called performance)

(PMI). (2017). Delivering project success is necessarily more difficult than delivering project management success since it involves second-order control. Project success and project management success are two related but distinct concepts in the field of project management. (PMI, 2017). Project success refers to the extent to which a project achieves its objectives and goals, within its budget, timeframe, and other constraints, and meets the stakeholders' expectations (PMI 2017. Project management success, on the other hand, refers to the effectiveness of the project management process itself. Kerzner, (2013) it involves the ability of project managers to plan, organize, and control resources, activities, and risks, to deliver the project on time, within budget, and with the desired level of quality (PMI 2017). A project may be successful in achieving its objectives, but its project management process may have been ineffective or inefficient. Conversely, a project may have been managed effectively, but it may have failed to meet its objectives or deliver the desired outcomes.

2.28 Project Success Criteria

Success Criteria often change from project to project depending on participants, the scope of service, project size, the complexity of the owner related to the design of facilities, technological implications, and a variety of other factors. On the other hand, common trends relating to success criteria often develop not only with an individual project but across the industry as we relate success to the perceptions and expectations of the owner, designer, or contractor. These success criteria according to owners, designers, and contractors are as follows.

Project success criteria are the standards or measures used to evaluate the success or effectiveness of a project. They are typically defined at the outset of a project and used to guide project planning, execution, and monitoring. Project success criteria help ensure that project objectives are met, and they provide a basis for assessing the project's impact on stakeholders and the organization. The project should be completed within the specified timeframe or before the deadline, the project

should be completed within the approved budget or cost constraints, and the project should meet or exceed the quality standards set for the project.

2.29 Project Success Factors

Project success factors are the elements of a project that can be influenced to increase the likelihood of success; these are dependent variable that makes success more likely. Project success is considered by stakeholder views of the scope to which the goals they seek have been realized (Cooke-Davies, 2017; Liu and Walker, 2018). Success factors are those inputs to the management system that lead deadly or indirectly to the success of the project or business. According to Turner and Zolin (2012), project success is measured not just by completion of the scope of work to time, cost, and quality, but also by the performance of the project ‘s output, outcomes, and impacts, and thereby the achievement of the desired business objectives as assessed by different stakeholders over different timescales.

Baker, Murphy, and Fisher (2013) note that what is really important is whether project stakeholders are fully satisfied with its results. Good schedules and correctly utilized budgets will not matter if the final project outcomes do not meet the expectations and goals. Project success and project management success are two related but distinct concepts in project management (Pinto, & Slevin, 2018). Project success refers to the achievement of project objectives and goals, which could include delivering a product or service on time, within budget, and meeting or exceeding quality expectations Pinto, & Slevin, 2018).

Project management success, on the other hand, is focused on the success of the project management process, including the planning, execution, monitoring, and control of the project. Project management success is measured based on whether the project was completed on time, within budget, and according to the planned scope and quality (Pinto, & Slevin, 2018). While project management success is important, it does not guarantee project success. Pinto, (2018) in

summary, project success and project management success are two complementary concepts that are critical to project management. By focusing on both aspects, project managers can increase the likelihood of achieving project success and delivering value to stakeholders

2.28.1 Owner's Criteria

Owner 's criteria for measuring success are: on schedule, budget, function for intended use (satisfied users and customers), end result as envisioned, quality (workmanship, products), aesthetically pleasing, returns on investment (responsiveness to audience), building must be marketable (image and financial) and minimize aggravation in producing a building.

2.28.2 Designer's Criteria

Designer's criteria for measuring success are: satisfied client (obtain or develop the potential to obtain repeat work), quality architectural product, met design fee and profit goal, professional staff fulfilment (gain experience, learn new skills), met project budget and schedule, marketable product/process (selling tool, reputation with peers and clients), minimal construction problems (easy to operate, constructible design), no liability, claims (building functions as intended), socially accepted (community response), client pays (reliability), and well defined scope of work (contract, scope and compensation match).

2.28.3 Contractor's Criteria

Contractor 's criteria for measuring success are: meet schedule (pre-construction, construction and design), profit, under budget (savings obtained for owner and/or contractor), quality specification met or exceeded, no claims (owners, subcontractors), safety, client satisfaction (personal relationships), good subcontractor buy out, good direct communication (expectations of all parties clearly defined) and minimal or no surprises during the project.

2.28.3 Project Success Factors

Project success factors are the elements of a project that can be influenced to increase the likelihood of success; these are dependent variable that makes success more likely. Project success is characterized by stakeholder views of the extent to which the goals they seek have been realized (Cooke-Davies, 2007; Liu and Walker, 1998). Success factors are those inputs to the management system that lead directly or indirectly to the success of the project or business. So, project factors are not universal for all projects since different projects and different people prioritize different sets of success factors.

2.30 Stakeholders' Satisfaction

Project success factors are the aspects of a project that can be changed to raise the success rate; they are dependent variables that improve the likelihood of success. Stakeholder perceptions of the degree to which the goals they seek have been achieved help to define project success. (Cooke-Davies, 2017; Liu and Walker, 2018). Success factors are management system inputs that directly or indirectly contribute to a project's or business's success. Turner and Zolin (2012) claim that the performance of the project team is also considered when determining if a project is successful. Stakeholders whether they are directly or indirectly involved in projects and have different views about success, play crucial roles in every project.

The performance of the project team is also considered when determining if a project is successf ul, according to Turner and Zolin (2012).

Stakeholders 'satisfaction, both internally and externally (including clients, customers, contractors, managers, etc.) with the final product as a project success criterion is given special importance. Stakeholder satisfaction is the most important success criterion in projects. Satisfying the needs of the client, users, and other stakeholders is one of the criteria for project success, and failure to manage their needs and expectations may contribute to project failure (Turner, 2019;

Smith *et al*., 2011). Customer satisfaction can be seen either as a goal or as a measurement tool in the development of construction quality. Stakeholders 'satisfaction describes the level of _happiness 'of people affected by a project (Chan *et al*., 2012). According to Bititici (2014), a client is satisfied when the project is delivered with quality, reliability, on-time deliveries, high service levels, and minimum cost of ownership (Atkinson, 2019).

2.30.1 Time

One of the most critical project success factors for any project is time or timeline. Kerzner (2017) Time has been mentioned as a factor to consider when assessing a project's level of success. It has also been mentioned as a fact that can assist in meeting the other requirements. Time is a notion that is used to quantify the length of an event or its sequence. Wiley & Sons, this dimension, which is measured in terms of seconds, minutes, hours, days, weeks, months, and years, is the one in which events take place. Projects are often time-bound and have particular deadlines that must be reached, so time management is a crucial component. By developing and maintaining project schedules, time is handled in project management. Kerzner, (2017). Project managers use methods for time management in addition to project schedules to increase productivity and efficiency. Wiley & Sons work-setting goals, deadline set, work division into smaller components, and task delegation to team members are some of these strategies.

Project success depends on the efficient use of time, which is a crucial resource in project management. Effective time management enables project managers to meet the needs and expectations of project stakeholders by ensuring that the project is finished on schedule and within budget project depending on its budget or expense. An intelligent budget plan and accurate cost estimation have been cited as key success criteria in several research, and the cost has been identified as a highly essential success criterion. Cost is the sum of money, materials, or labor needed to finish a project, according to Kerzner (2017). In order to finish the project within the

allocated budget, cost management in project management entails estimating, budgeting, and controlling project expenses. Wiley & Sons, Inc. (Wiley & Sons)

The project manager develops a budget that specifies how the project's resources will be distributed when the project cost is estimated. Projects are often confined by budgets and scarce resources, so cost management is a crucial component of project management. Kerzner (2017) Project managers need to make sure they have enough money and resources to finish the project properly and in accordance with objectives. The estimated cost of a project is determined by project managers using a variety of methodologies, such as bottom-up or top-down estimating.In conclusion, cost management is a crucial component of project management that entails estimating, budgeting, and controlling project expenses in order to make sure that the project is finished within the constraints of the available resources and that it satisfies the expectations of project stakeholders.

2.30.2 Cost

Each project depends on its budget or expense. An intelligent budget plan and accurate cost estimation have been cited as key success criteria in various research, where cost has been identified as a very critical success criterion. Wiley & Sons, Inc. (Wiley & Sons) The project manager develops a budget that specifies how the project's resources will be distributed when the project cost is estimated. Cost is the sum of money, materials, or labor needed to finish a project, according to Kerzner (2017).

2.30.3 Quality

Quality has been taken into account as both a criterion and element for project success. Some academics identified it as a crucial project success criterion and attributed quality performance to it. Additionally, under the heading of product quality, some additional researchers examined

quality as a criterion. PMI. (2017) However, other studies believed that the quality management method was a project success factor that helped other criteria and components succeed. Ishikawa, (2015) Quality refers to the degree of excellence, superiority, or merit of something. It is a measure of how well something meets or exceeds expectations, standards, or specifications. Quality can be applied to various aspects of life, such as products, services, processes, experiences, relationships, and outcomes (Juran's Quality Handbook (Vol. 5)

In the context of products, quality is often associated with durability, reliability, functionality, aesthetics, safety, and value for money. Garvin, (2014) in the context of services, quality is often associated with responsiveness, professionalism, empathy, communication, and customer satisfaction. In the context of processes, quality is often associated with efficiency, effectiveness, consistency, innovation, and continuous improvement. In general, quality is a subjective concept that varies depending on the context, the stakeholder, and the criteria used to assess it. However, quality can also be measured objectively using various methods, such as inspection, testing, certification, benchmarking, or feedback analysis. The pursuit of quality is often a key goal of organizations, individuals, and societies that seek to improve their performance, reputation, and competitiveness.

2.30.4 Project Team

The following individuals usually make up the project team:

The project manager is in charge of leading the team and overseeing the project's scope, schedule, money, and quality (Lewis, 2015). They make sure that the job is finished on schedule and to the satisfaction of all parties involved. The person or organization that funds and supports the initiative is known as the project sponsor. They are in charge of making sure the project complies with the strategic goals of the company. These people are knowledgeable

and skilled specialists in a specific field, such as engineering, banking, or marketing. They offer advice and suggestions regarding particular project elements.

2.30.5 Top Management Support

Top management must prioritize the project over other initiatives and ensure that the project aligns with the organization's strategic goals and object Top management must provide clear direction and guidance to the project team, and ensure that the project is aligned with the organization's vision, mission, and values. (PMBOK® Guide). Top management must intervene and resolve any conflicts or issues that arise during the project, and ensure that the project team has the necessary support to overcome the success of a project is seen to be highly dependent on project management. The introduction of top Management Support, however, as the most crucial element for the effective completion of a building project.

An essential component of project management success is top management backing. Top management support describes the active participation and backing of top leaders in a project's design, execution, and monitoring. The support of top management is crucial for the accomplishment of project goals and objectives because it offers the resources, power, and guidance required. Project Management Institute (2017) In order to make sure that the project is sufficiently funded and resourced, top management must provide the required funds. e any obstacles. Top management must recognize and celebrate project milestones and the success of a project is seen to be highly dependent on project management. The introduction of top Management Support, however, as the most crucial element for the effective completion of a building project.

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accomplishment of project goals and objectives because it offers the resources, power, and guidance required. Project Management Institute (2017) In order to make sure that the project is sufficiently funded and resourced, top management must provide the required funds. Eases to motivate the team and maintain momentum.

2.30.6 Project Control

This arrangement of time, cost, and quality is called the project Control Mechanism. This is so that a project manager or project team can keep an eye on and steer the project toward success. Pinto (2015) In reality, project control, which some studies have identified as a determinant in project success, directly regulates and tracks a number of important project success metrics, including the project's duration, cost, quality, change, and most importantly, scope. (PMBOK® Guide) – Sixth Edition Project control is the process of monitoring and controlling a project to ensure that it meets its objectives in terms of scope, time, cost, quality, and risk. It involves tracking project progress, identifying deviations from the plan, and taking corrective action to keep the project on track (Meredith, & Mantel Jr, 2018). Project control includes the following key activities: Lewis, (2015) Monitoring project regularly tracking and measuring project progress against the project plan, including project scope, timeline, budget, quality, and risk (Mantel Jr, 2018).

Identifying any deviations from the project plan and determining their impact on project performance. Project Management Institute (2017). This involves analyzing the root causes of deviations and assessing the impact on project objectives. Lewis, (2015) Involves communicating project performance to stakeholders, including project sponsors, top management, and project team members. Reports may include status updates, progress reports, variance analysis, and risk assessments. Project Management Institute (2017) Effective project control is essential for project success. It ensures that the project is delivered on time, within budget, and meets its objectives. It

also helps to identify and mitigate risks and minimize the impact of unforeseen events (Lewis, 2015).

2.30.7 Project Scope

The success of the project depends on the creation of a thorough project scope statement. Scope has been used as a criterion or a factor since it is a quantifiable concept. In reality, some researchers have confirmed that a project scope with specific goals and objectives is a factor in project success. They view it as the most crucial factor in determining whether a software project will succeed. On the other hand, it is regarded as having a strict scope and as a component that is essential for satisfying the owner's needs and subsequently for success.

2.30.8 Project Change

Researchers have emphasized the fact that change affects a project's scope, objectives, and planning directly by referring to it as "everything." According to the sixth edition of (PMBOK® Guide) (2017). A well-developed scope change control method also includes scope change as a determinant in project success. Meredith, & Mantel Jr, (2018) Project change refers to any modification made to a project's scope, schedule, cost, quality, or risk during its execution. Changes can be initiated for a variety of reasons, such as changes in customer requirements, unforeseen events, or new opportunities. Project change is a normal and expected part of project management, and effective change management is essential to ensure project success (Kerzner, 2017).

This involves identifying potential changes to the project scope, schedule, cost, quality, or risk, and determining their impact on the project. Involves assessing the impact of the proposed changes on the project's objectives, and evaluating the costs and benefits of implementing the changes.

Effective project change management is critical to project success. It ensures that changes are carefully evaluated and approved and that the project team understands the impact of the changes on the project. (PMBOK® Guide) – Sixth Edition. (2017) By managing changes effectively, project managers can minimize the risk of scope creep, ensure that the project remains within budget and schedule, and ultimately deliver a successful project.

2.31Success Factors in a Construction ProjectBottom of Form

A dynamic construction business is brought about by rising technological, financial, and development process uncertainties. The building project team today faces unheard-of changes as construction projects become far more complicated and challenging. Understanding project success/failure and key success factors (CSFs) is a way to better understand how construction projects work. The following are a few aspects of the construction process' success. Suresh, & Srivastava, (2016) projects can be categorized as high technology with an extremely dynamic product development lifecycle.

Li, Li, & Zuo, (2013) to be a leader under such conditions, organizations need to focus priorities on achieving a shorter product development cycle along with organization agility and workforce agility. Suresh, & Srivastava, (2016) many researchers have tried to identify the enablers that affect workforce agility in different segments, but none has really looked into the Iota project environment. In this paper, efforts are taken to model the enablers of workforce agility in Iota projects and to understand the interrelationship among enablers using total interpretive structural modelling.

2.31.1 Definition of Project Objective

Clearly stating the desired outcome while consulting the relevant parties.

Despite the fact that each partner may have different precise goals in mind for the project, they must be stated.

- To clearly state the agreed-upon objective to all parties
- To state the more specific time and cost goals.

2.31.2 Scope of Project

- To outline the overall strategy and spell out the requested customer specifications
- To provide a concise design brief that undergoes a few modifications after presentation. A brief must be precise and held by the client at the highest (strategic) level within the client and project organizations.

2.31.3 Project Manager

The project manager is the key player in the endeavour. He or she must: • Display a range of talents, particularly those related to organization, communication, and technology.

The project manager needs to be aware of all of the duties that fall under his or her purview as the project's leader, as well as the extent of their involvement and their level of power and influence over the team.

Attitude - The project manager needs to exude confidence toward colleagues, coworkers, and teammates.

Leadership - The project manager should be able to successfully apply management skills as well as having leadership traits. The project manager must be able to persuade other team members to agree with their ideas and settle conflicts between parties. Project managers should be in charge of outlining, selecting, and planning. Coordinating – the project manager should identify

interfaces between the activities of the functional departments, subcontractors, and other project contributors.

Motivating - The project manager must inspire the project team to carry out their responsibilities and persuade them to work together.

2.31.4 Project Team Commitment

Any project's success depends heavily on the devotion of the project team. This phrase alludes to the commitment, zeal, and accountability that team members bring to their tasks and responsibilities within a project. Team members are more likely to collaborate effectively, maintain their motivation, and see that the project's goals are met when they are devoted to it. Key elements of project team commitment include the following: Shared Vision: A dedicated project team has a distinct understanding of the aims and purposes of the undertaking. Members of the team are aware of the significance of the project and how their contributions fit into the overall scheme.

2.32 Factor Affecting Project Success

Following a thorough literature analysis, a number of factors influencing the success of project execution were discovered. According to a thorough analysis of earlier literature, there are seven major groups into which CSFs can be divided. These include:

- Project Management Factors
- Procurement –Related Factors
- Client-Related Factors
- Design Team-Related Factors
- Contractor –Related Factors
- Project Manager –Related Factors

- Business and Wok Environment –Related Factors.

2.32.1 Project Management Factors

For a project to be successful, the project management activity must be performed (Hubbard, 1990). According to Jaselskis and Ashley (2011), project managers may better plan and carry out their construction projects to increase the likelihood of success by employing management tools. Following that, the factors in project management include adequate communication, control mechanisms, feedback capabilities, problem-solving, coordination effectiveness, decision-making effectiveness, monitoring, project organization structure, plan and schedule followed, and related prior management experience (Belout, 1998; Chua et al., 2019; Walker and Vines, 2010) The communication system, control mechanism, feedback capabilities, planning effort, organizational structure, safety and quality assurance program, control of subcontractors' work, and overall managerial actions are some of the factors that have an impact on this aspect.

2.32.2 Procurement –Related Factors

The importance of procurement factors has been noted by several researchers (Pocock et al.2017; Walker, 2017; Kumaraswamy and Chan, 2019; Walker and Vines, 2010). According to Dissanayaka and Kumaraswamy (2019), the framework for construction creation, acquisition, or acquisition is the scope of procurement. The procurement technique (choosing the company to design and build the project) and the tendering method (procedures employed for the selection of the project team and in particular the main contractor) are the two attributes used to quantify this aspect.

2.32.3 Client-Related Factors

Project participants are referred to as the key players by Chua et al. (2019), who list the project manager, client, contractor, consultants, subcontractor, supplier, and manufacturers among them. According to Walker (2015), the client's representatives' influence is a crucial element in how quickly a construction project is completed. According to Chan and Kumaraswamy (2017), Songer and Molenaar (2017), and Dissanayaka and Kumaraswamy (2019), the client-related factors include client characteristics, client type, and experience, knowledge of construction project organization, project financing, client confidence in the construction team, owner's construction complexity, well-defined scope, owner's risk aversion, and client project management.

1.3.2.4 Design Team-Related Factors

Designers are vital to any project since they are involved from the beginning to the end. Design team experience, project design complexity, and mistakes made or delays experienced in preparing design documentation are among the aspects associated to design teams, according to Chan and Kumaraswamy (2017). In 2019, Kohtala, and Vignoli, Design teams are essential to the creation of new goods, services, and systems (Kim, and Jung, 2017). The success of a design project depends on various factors related to the design team, such as the skills, experience, and diversity of the design team members can affect the quality and creativity of the design solutions. A well-balanced team that includes designers, engineers, researchers, and other stakeholders can bring different perspectives and expertise to the project.

2.32.52 Contractor-Related Factors

When the project enters the construction phase, the principal contractor and subcontractors begin their primary responsibilities. According to Chan and Kumaraswamy (2017) and Dissanayaka and

Kumaraswamy (2019), the variables include the speed of information flow, the effectiveness of the cost control system, the supervision and engagement of subcontractors, the contractor's cash flow, and the expertise of the contractor. The success of a construction project can be significantly influenced by the reputation and experience of a contractor. An experienced contractor is more likely to do high-quality work and adhere to project deadlines. Han, Li, Li, & Li, (2019) state that the contractor needs to have the capacity and resources to finish the project on schedule and within the allocated budget. This consists of a trained workforce, tools, supplies, and money (Langford, & Newcombe, et al. 2019).

2.32.62 Project Manager-Related Factors

Another important party involved in a construction project is the project manager, whose expertise has a significant impact on project planning, scheduling, and communication (Belassi and Tukel 2016). The abilities and traits of project managers, as well as their commitment, competence, experience, and authority, are variables under this component (Chua et al., 2019). Collaboration is necessary for a building project. Team development is crucial among many parties as a result. The successful completion of a project requires a collaborative effort from all stakeholders, including the contract, architect, construction manager, contractor, and subcontractors (Hassan 2015).

2.32.7 Business and Work Environment-Related Factors

According to numerous researches (Akinsola et al., 2017; Kaming et al., 2017; Songer and Molenaar, 2017; Chua et al., 2019; Walker and Vines, 2010), the environment has an impact on a project's success. According to Akinsola et al. (2017), "environment" also refers to all external factors influencing the construction process, such as social, political, and technological systems. The economic environment, social environment, political environment, physical environment,

industrial relations environment, and level of technical advancement are the qualities utilized to measure this element.

2.33 Conclusion

According to a survey of the literature, there are significant gaps in the knowledge of crucial success elements, stakeholder management in construction projects, stakeholder relationship management, and stakeholder management processes. There are gaps

1. A complete list of the elements influencing the effectiveness of stakeholder management has not yet been created; A systematic framework for stakeholder management needs to be further developed;
2. A variety of useful strategies for stakeholder management have not yet been consolidated.
3. The majority of studies concentrate primarily on the promotion of connections themselves, while few studies examine how these stakeholder ties affect the project.

4 A wide variety of parties are involved in construction projects, and meeting their requirements and expectations is crucial to the project's success. As a result, it's critical to identify project stakeholders and create a careful stakeholder management procedure. To guarantee efficient communication within the project context, expertise is required.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The methodology used in the research was based on a structured questionnaire survey of five principal target groups within the Ghanaian construction industry, with a focus in the Cape Coast. In this chapter, the study approach was thoroughly discussed. The primary data collecting, analysis, and presentation processes as well as the research design, methodology, approach, and objectives were also documented. It described the process used to obtain data on important factors for stakeholder management in Cape Coast construction projects. Additionally, describe the data analysis technique used, as well as how the sample size and population sampling technique were established. Groups within the Ghanaian construction project, with a focus on the Central Region of Ghana. Because the study was limited to commercial projects, residential construction was not included. The research approach was the focus of this chapter. Along with the gathering, analysis, and presentation of primary data gathered with the intention of resolving the major issues brought forward by the particular objectives, it also documented the research methodology, design, and procedures. It explained the methodology used to gather information on crucial success elements for stakeholder management in Ghanaian building projects. It also described the data analysis methodology that was applied, as well as how the population was sampled and the sample size was established.

3.2 Research Design

This study employed a quantitative research approach to conduct the research. Using quantitative research to gather factual information and investigate relationships between facts and events by theory, a comprehensive list of Critical Success Factors impacting stakeholder management in building projects was created. 66 factors that have an impact on stakeholder management in

construction projects were chosen by the researcher. These criteria were separated into eight (8) categories in accordance with the literature review. Sections A and B of the feedback form, which dealt with significant issues in stakeholder management and general information about the replies, respectively, were divided into two (2) categories. The survey was carried out at Cape Coast and the surrounding area in February 2023. There are two main types of sampling designs, probability and non-probability, according to Saunders et al. (2007) In probability sampling, the fundamentals of the population have some known chance of being selected as sample subjects, while in non-probability sampling, the elements do not have a known or determined chance of being selected as subjects, fitting into the general categories of convenience and purposive sampling. Convenience sampling is the practice of collecting data or statistics from members of the population who are easily reachable to the researcher. Sample size and a comprehensible study. Out of the fifty-four (54) registered construction enterprises in the Cape Coast Region, the researcher randomly picked practitioners from thirteen (13) different building sites. For the purpose of gathering primary data, the researcher visited these chosen practitioners.

3.3 Population

The researcher targeted the audience for the survey including project managers, architects, building contractors, quantity surveyors, and consultants from various businesses in the construction sector. The respondents were carefully chosen from among Central Region stakeholders and practitioners, specifically Cape Coast and its surroundings.

3.4 Sampling Techniques

Sampling is the process of choosing a subset of the total population to serve as a representative sample of the full population, with the results indicating the complete group Johnson, & Christensen, (2019)**.** As a result, the chosen sample should reflect the population being studied in

order for results to be generalized and used to represent the population (Smith, & Brown, 2020). Non-probability sampling and probability sampling are the two types of sampling. Non-probability sampling is employed in this investigation. The respondents were carefully chosen from among stakeholders and professionals based in the Central Region, specifically Cape Coast and its surroundings.

3.5 Sample Size

The six construction stakeholders who made up the study's population were the government, architects or designers, private clients, consultants, contractors, and project managers. Papaa Baiduba Construction Limited was one of the thirteen (13) construction sites that the researcher visited. All respondents were selected at random based on their annual work volume and staff size. In order to make sure that the sample is representative of the population and has the potential to produce statistically significant results, Browner, Grady, Newman, and Hulley (2013) state that calculating the ideal sample size is frequently necessary.

3.6 Data Collection

Since surveys' most common technique for gathering data is the questionnaire, it was decided to use this tizzy to collect information about facts, opinions, and perspectives. Questionnaires are frequently used in descriptive and analytical surveys to gather information about facts, opinions, and perspectives (Naoum, 2007). Benefits include enhanced confidentiality, support for internal and external validity, ease of analysis, and resource conservation. The data were examined using descriptive statistics, and the findings were presented as frequency tables and percentages. 94 of the 130 surveys that were provided were correctly filled out and returned. Data from population samples are collected using a standard format. Using the standardized form, the researcher may analyze the data statistically. Individual questionnaires were sent to each location, and the

researcher often stayed around to assist responders. The researcher occasionally had to leave the questionnaires behind and pick them up later, according to Guest, Namey, and Mitchell (2012). 130 questionnaires were given out in order to collect the necessary data.

3.6.1 Questionnaire Design and Development

A questionnaire is a collection of well-crafted questions designed to extract from respondents accurate and statistically significant information regarding the research topic. Questionnaires make it easier to collect data because they ask the sample sample to respond to the same questions, according to Johnson, & Smith, (2020).

The questionnaire's layout and the interviewing process were divided into the following key sections:

Respondent biographical information, fundamental knowledge, and/or perceptions of stakeholders' management are included in Section A.

Section B - Key success factors for stakeholder management, as well as barriers to workable mitigation solutions. Respondents were asked to rank the stakeholder management strategies employed in the various sites on a scale of 5-1, with 5 denoting "Strongly agree," 4 denoting "Agree," 3 denoting "Fairly agree," 2 denoting "Disagree," and 1 denoting "Don't know." The respondents were asked to rank the importance of each stakeholder management challenge on a scale of 1 to 5, with 1 denoting "Strongly agree," 2 denoting "Agree," 3 denoting "Fairly agree," 4 denoting "Disagree," and 5 denoting "Don't know." The significance of stakeholder management in construction projects was also asked of the respondents. Finally, the respondents were asked to rate the management mitigation strategies on a scale of 1 to 5, where 1 is "don't know," 5 is "strongly agree," 4 is "agree," 3 is "fairly agree," and 5 is "disagree." In the appendix, an example of the questionnaire is available.

3.6.2 Interview

The primary data source was used in the study. The main goals of the survey are to gather data that can be evaluated, to make conclusions easier, and to let the researcher gather first-hand knowledge through in-person interviews and trips to the various areas where the questionnaires will be distributed.

3.6.3 Observation

The researcher observed that there were poor communication skills between the internal and external stakeholder's management, lack of a financial plan, managers and control of the construction project phenomena risk management and issues for project managers in construction organization or project. However, this observation highlights critical factors for Stakeholder management in the construction project the researcher visited in Cape Coast.

3.7 Data Analysis

Saunders et al. (2007) assert that until quantitative data is processed and examined, very little significance can be deduced from it. To guarantee completeness, uniformity, and readability, the completed surveys were edited. The data were checked and then organized in a way that made analysis simple. Statistical Packages for Social Sciences (SPSS) version 17 was used to process and input the received questionnaires after they had been combined into larger units. The results gathered were given graphically and in tabular form to help clarify the conversation in this field. Pie charts and bar graphs are used to show information on the respondents' backgrounds. Non-parametric statistical analysis using the mean score and descriptive statistics were used to analyse data.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter present the results and discussions of the study obtained from the questionnaires, interviews and observation.

4.1 Background of Respondents

Qualification

Table 4.1 revealed the summary of respondents' academic qualification in their respective institutions. For qualification 38 respondents representing 40.4% are of HND qualifications in Building Technology, 41 of the respondents representing 43.6% have BSc Construction Technology, 4 of the respondents also representing 4.3% hold Masters of Technology Construction Management, but no one Holds PhD, finally the remaining 11 respondents represent 11.7%. The educational level of the respondents is important since it has an influence on the way to manager construction activities.

Table 4. 1 : Demographic information of Respondents Academic Qualification

Qualification	Frequency	Percentage	Cumulative percentage
HND	38	40.4	40.4
BSC	41	43.6	84.4
M-TECH	4	4.3	88.3
PhD	-	-	-
Others	11	11.7	100

Source: Field survey, 2023

Category of the Respondents Job Title

Table 4.2 revealed the summary of respondents' job titles in their respective institutions. For job title 5 respondents representing 5.3% are of Architects, 8 respondents representing 8.5% for building Contractors and 27 respondents representing 28.7% are project Managers. Furthermore 23 of the respondents representing 24.5% are quantity surveyors and 31 of the respondents representing 33.5% are for consultants.

It is clear that the building business has significant experienced specialist at all levels. This result suggests that Consultants play very important roles in achieving quality of final product in construction project.

Table 4. 2 : Category of the Respondents Job Title

Job Title	Frequency	Percentage (%)	Cumulative (%)
Architect	5	5.3	5.3
Building Contractor	8	8.5	13.8
Project Manager	27	28.7	42.5
Quantity Surveyor	23	24.5	67
Consultant	31	33.5	100.0
Total	**94**	**100.0**	

Source field Survey, 2023

Years of Working Experience

Table 4.3 revealed the summary of respondents' years of working experience in their respective institutions. For working experience, 17respondents representing 18.1% are less than five years of working experience, 21 respondents representing 22.4% have experience between six years to ten years working experience and 32 respondents also representing 34.0% have eleven to fifteen years working experience, furthermore, 19 respondents representing 20.2% have sixteen to twenty years working experience, then 5 respondents representing 5.3% had over twenty years working experience. This profile signifies the high levels of experience on which the

results of this survey was based. It gives a good indication that the respondents had at least a minimal level of experience with stakeholder management issues, moreover the variety of experiences between each group enriched the research with different knowledge and information.

Table 4. 3 : Years of Working Experience

Years in industry Working Experience	Frequency	Percentage	Cumulative Percentage
Less than 5 years	17	18.1	18.1
6-10 years	21	22.4	40.5
11-15 years	32	34.0	74.5
16-20 years	19	20.2	94.7
Over 20years	5	5.3	100.0

Source field Survey, 2023.

4.2 Results of Questionnaire

This section of the study presents the result of the study based on the data collected through the questionnaire from the Project Manage, Consultant, Quantity Surveyors, Building Contractors and Architects.

4.2.1 Results of Questionnaire from Project Managers in Construction Project

This subsection discusses the results obtained from the questionnaire administered to the Project Manager.

Table 4. 4 : Factors that Influences Stakeholder Management of Construction Projects

Factors that Influence Stakeholder Management of construction projects	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean X	SD	Rank
Project Manager Competences and Maintaining Alignment between Stakeholders	(4.3)	(6.5)	(4.3)	(58.1)	(26.9)	3.97	.98	1st
Team Work and Assessing Attributes (power, urgency, and proximity) of Stakeholders	(4.3)	(4.3)	(2.2)	(74.2)	(15.1)	3.91	.86	2nd
Project Organization and Managing Stakeholders with Social Responsibilities	(4.3)	(4.3)	(4.3)	(72)	(15.1)	3.89	.87	3rd
Formulating a Clear Statement of Project Missions	(4.3)	(5.4)	(2.2)	(75.3)	(12.9)	3.87	.86	4th
Keeping and Promoting Good Relationships and Evaluating the Stakeholder Legitimacy	(6.5)	(6.5)	(5.4)	(61.3)	(20.4)	3.82	1.04	5th
Communicating with and Engaging Stakeholders Properly and Frequently	(4.3)	(12.9)	(3.2)	(60.2)	(19.4)	3.77	1.04	6th
Formulating Appropriate Strategies to Manage Stakeholders	(7.5)	(5.4)	(4.3)	(69.9)	(12.9)	3.75	1.00	7th
Predicting Stakeholders ‘Reaction to Implementing the Strategies	(9.7)	(6.5)	(4.3)	(59.1)	(20.4)	3.74	1.15	8th
Good Leadership and Stakeholders ‘Involvement in Decision Making	(9.7)	(6.5)	(4.3)	(63.4)	(16.1)	3.69	1.12	9th
Understanding Area of Stakeholders ‘Interests	(9.7)	(8.6)	(6.5)	(63.4)	(11.8)	3.59	1.12	10th

Source: Field survey, 2023, N= 27

Table 4.4 indicates that the factors that influences stakeholder management of construction projects were Project Manager Competences and Maintaining Alignment between Stakeholders with a mean score -3.97, SD -.98, ranked 1st. Each project depends on its budget or expense. An intelligent budget plan and accurate cost estimation have been cited as key success criteria in various research, where cost has been identified as a very critical success criterion. Wiley & Sons, Inc. (Wiley & Sons) The project manager develops a budget that specifies how the project's resources will be distributed when the project cost is estimated. Cost is the sum of money, materials, or labor needed to finish a project, according to Kerzner (2017). Secondly, Team Work and Assessing Attributes (power, urgency, and proximity) of Stakeholders with a mean score -3.91, SD -.86, ranked 2nd. Furthermore, Project Organization and Managing Stakeholders with Social Responsibilities with a mean score - 3.89, SD -.87, ranked 3rd. For a project to be successful, the project management activity must be performed (Hubbard, 1990). According to Jaselskis and Ashley (2011), project managers may better plan and carry out their construction projects to increase the likelihood of success by employing management tools. Following that, the factors in project management include adequate communication, control mechanisms, feedback capabilities, problem-solving, coordination effectiveness, decision-making effectiveness, monitoring, project organization structure, plan and schedule followed, and related prior management experience (Belout, 1998; Chua et al., 2019; Walker and Vines, 2010) The communication system, control mechanism, feedback capabilities, planning effort, organizational structure, safety and quality assurance program, control of subcontractors' work, and overall managerial actions are some of the factors that have an impact on this aspect.

Also, formulating a Clear Statement of Project Missions with a mean score - 3.87, SD - .86, ranked 4th. Keeping and Promoting Good Relationships and Evaluating the Stakeholder

Legitimacy with a mean score - 3.82, SD - 1.04, ranked 5th. Communicating with and Engaging Stakeholders Properly and frequently with a mean score - 3.77, SD - 1.04, ranked 6th. Formulating Appropriate Strategies to Manage Stakeholders with a mean score - 3.75, SD - 1.00, ranked 7th. Any project's success depends heavily on the devotion of the project team. This phrase alludes to the commitment, zeal, and accountability that team members bring to their tasks and responsibilities within a project. Team members are more likely to collaborate effectively, maintain their motivation, and see that the project's goals are met when they are devoted to it. Key elements of project team commitment include the following: Shared Vision: A dedicated project team has a distinct understanding of the aims and purposes of the undertaking. Members of the team are aware of the significance of the project and how their contributions fit into the overall scheme.Predicting Stakeholders 'Reaction to Implementing the Strategies with a mean score - 3.74, SD - 1.15, ranked 8th. Good Leadership and Stakeholders 'Involvement in Decision making with a mean score - 3.69, SD - 1.12, ranked 9th. Understanding Area of Stakeholders' Interests with a mean score - 3.59, SD - 1.12, ranked 10th. Project participants are referred to as the key players by Chua et al. (2019), who list the project manager, client, contractor, consultants, subcontractor, supplier, and manufacturers among them. According to Walker (2015), the client's representatives' influence is a crucial element in how quickly a construction project is completed. According to Chan and Kumaraswamy (2017), Songer and Molenaar (2017), and Dissanayaka and Kumaraswamy (2019), the client-related factors include client characteristics, client type, and experience, knowledge of construction project organization, project financing, client confidence in the construction team, owner's construction complexity, well-defined scope, owner's risk aversion, and client project management.

4.2.2 Results of Questionnaire from Consultant

This section discusses the results from the questionnaire administered to the consultants.

Table 4. 5 : Critical Success Factors that Influences Consultants of construction projects

Critical Success Factors	**Mean X**	**SD**	**Rank**
Consultant Experience	4.11	1.01	1st
Site Management	4.09	.897	2nd
Effective Supervision and good Program Time Management	4.04	.988	3rd
Contractor‘s Cash Flow	3.94	1.36	4th
Effectiveness of Cost Control System	3.94	.857	4th
Speed of Information Flow	3.92	.99	5th
Using JIT to reduce variation and waste	3.92	.96	5th
Effective materials management on construction projects for cost reduction	3.92	.71	5th
The implementation of appropriate information and communication technologies (ICT) to manage construction materials	3.85	.86	6th
The proper use of the procurement function	3.83	.892	7th
The logistics functions must be used properly	3.81	.86	8th
The importance of effective construction material handling	3.81	.900	8th
The importance of stock and waste control	3.81	.72	8th
The importance of effective transportation and efficient construction material management	3.75	.940	9th

Source: Field survey, 2023, N=31

Table 4.5 indicates that the factors that influences consultants in the management of construction projects **were** Consultant Experience with a mean score of 4.11, ranked 1st., Site Management with a mean score of 4.09, ranked 2nd, Effective Supervision, good Program Time Management and with a mean score of 4.04, ranked 3rd, Contractor ‘s Cash Flow and

Effectiveness of Cost Control System with a mean score of 3.94, ranked 4th. Speed of Information Flow, Using JIT to reduce variation and waste and Effective materials management on construction projects for cost reduction with a mean score of 3.92, ranked 5th. The implementation of appropriate information and communication technologies (ICT) to manage construction materials with a mean score of 3.85, ranked 6th. A dynamic construction business is brought about by rising technological, financial, and development process uncertainties. The building project team today faces unheard-of changes as construction projects become far more complicated and challenging. Understanding project success/failure and key success factors (CSFs) is a way to better understand how construction projects work. The following are a few aspects of the construction process' success. Suresh, & Srivastava, (2016) projects can be categorized as high technology with an extremely dynamic product development lifecycle.

Li, Li, & Zuo, (2013) to be a leader under such conditions, organizations need to focus priorities on achieving a shorter product development cycle along with organization agility and workforce agility. Suresh, & Srivastava, (2016) many researchers have tried to identify the enablers that affect workforce agility in different segments, but none has really looked into the Iota project environment. In this paper, efforts are taken to model the enablers of workforce agility in Iota projects and to understand the interrelationship among enablers using total interpretive structural modelling.

The proper use of the procurement function with a mean score of 3.83, ranked 7th. The logistics functions must be used properly, effective construction material handling, and importance of stock and waste control with a mean score of 3.81, ranked 8th. The importance of effective transportation and efficient construction material management with a mean score of 3.75, ranked 9th. Designers are vital to any project since they are involved from the beginning to the end. Design team experience, project design complexity, and mistakes made or delays experienced in preparing design documentation are among the aspects associated to design

teams, according to Chan and Kumaraswamy (2017). In 2019, Kohtala, and Vignoli, Design teams are essential to the creation of new goods, services, and systems (Kim, and Jung, 2017). The success of a design project depends on various factors related to the design team, such as the skills, experience, and diversity of the design team members can affect the quality and creativity of the design solutions. A well-balanced team that includes designers, engineers, researchers, and other stakeholders can bring different perspectives and expertise to the project.

4.2.3 Results of Questionnaire from Quantity Surveyors

Table 4. 6 : Factors that Influences Quantity surveyors of construction projects

Statement(S)	Mean X	RII
Poor site management and supervision	4.37	0.604
Improper planning and Public interruptions	4.39	.554
Inadequate resources due to contractor/lack of capital and financial difficulties faced by the contractor and owner	4.38	.588
Changed site conditions and Equipment breakdown and maintenance problem	4.35	.601
Unforeseen ground conditions and Poor planning and scheduling of the project by the contractor	4.26	.587
Slowness of the owner's decision-making process and Inadequate contractor experience	4.22	.610
Shortage of manpower and Shortage of technical professionals in the contractor's organization	4.68	.531
Architects' incomplete drawing	4.57	.559
Extensive post-award negotiations, delays in the preparation of technical specifications and drawings, delays in evaluation, an extensive system of controls, reviews and approvals, and land ownership disputes	4.33	.577

Source: Field survey, 2023, N=23

Table 4.6 reveals the factors that influences construction projects. They were Poor site management and supervision with a mean score of 4.37, RII - 0.604. According to numerous researches (Akinsola et al., 2017; Kaming et al., 2017; Songer and Molenaar, 2017; Chua et al., 2019; Walker and Vines, 2010), the environment has an impact on a project's success. According

to Akinsola et al. (2017), "environment" also refers to all external factors influencing the construction process, such as social, political, and technological systems. The economic environment, social environment, political environment, physical environment, industrial relations environment, and level of technical advancement are the qualities utilized to measure this element.

Improper planning and public interruptions with a mean score of 4.39, RII - 0.554. Inadequate resources due to contractor/lack of capital and financial difficulties faced by the contractor and owner with a mean score of 4.38, RII - 0. 588.Changed site conditions and Equipment breakdown and maintenance problem with a mean score of 4.35, RII - 0.601. Another important party involved in a construction project is the project manager, whose expertise has a significant impact on project planning, scheduling, and communication (Belassi and Tukel 2016). The abilities and traits of project managers, as well as their commitment, competence, experience, and authority, are variables under this component (Chua et al., 2019). Collaboration is necessary for a building project. Team development is crucial among many parties as a result. The successful completion of a project requires a collaborative effort from all stakeholders, including the contract, architect, construction manager, contractor, and subcontractors (Hassan 2015).

Unforeseen ground conditions and poor planning and scheduling of the project by the contractor with a mean score of 4.26, RII - 0.587. Slowness of the owner's decision-making process and inadequate contractor experience with a mean score of 4.22, RII - .610. Shortage of manpower and Shortage of technical professionals in the contractor's organization with a mean score of 4.68, RII - 0.531. Architects' incomplete drawing with a mean score of 4.37, RII - 0.559. The success of the project depends on the creation of a thorough project scope statement. Scope has been used as a criterion or a factor since it is a quantifiable concept. In reality, some researchers have confirmed that a project scope with specific goals and objectives

is a factor in project success. They view it as the most crucial factor in determining whether a software project will succeed. On the other hand, it is regarded as having a strict scope and as a component that is essential for satisfying the owner's needs and subsequently for success.

Extensive post-award negotiations, delays in the preparation of technical specifications and drawings, delays in evaluation, an extensive system of controls, reviews and approvals, and land ownership disputes with a mean score of 4.33, RII - 0.577. When the project enters the construction phase, the principal contractor and subcontractors begin their primary responsibilities. According to Chan and Kumaraswamy (2017) and Dissanayaka and Kumaraswamy (2019), the variables include the speed of information flow, the effectiveness of the cost control system, the supervision and engagement of subcontractors, the contractor's cash flow, and the expertise of the contractor. The success of a construction project can be significantly influenced by the reputation and experience of a contractor. An experienced contractor is more likely to do high-quality work and adhere to project deadlines. Han, Li, Li, & Li, (2019) state that the contractor needs to have the capacity and resources to finish the project on schedule and within the allocated budget. This consists of a trained workforce, tools, supplies, and money (Langford, & Newcombe, et al. 2019).

4.3 Results of the Interview

4.3.1 Results of the Interview from Contractors

Categorizing the Critical Success Factors

The contractors indicated that**:** "Managing with Social Responsibilities, and communication with and engaging stakeholders properly and frequently ranked high in frequency measurement. Environment issue was the main concern at the Cape Coast Municipality as the new project aimed at creating a clean environment. Lack of adequate communication created

problems with stakeholders whose aims were to preserve cultural heritage as well as those who did not want changes in their residential area. In order to solve the problems "communication to build relationship and engage stakeholders in the project" was found to give good results in managing stakeholders. This confirms the finding of study by Hammad Shalah (2013) and Yang, et al. (2019) that communicating with and engaging stakeholders in the project is important.

Managing with social responsibilities

Managing with social responsibilities ‘involves environment issues, economic issues, legal issues and ethical issues. Equal in importance is "communication with and engaging stakeholders in the project." The findings were in line with several researchers' statements (e.g. Wood 2011; Carroll 2011; and Donaldson and Preston 2015) who named this factor as a pre-condition. The four factors in the pre-condition are economic, environment, legal and ethical issues.

- Economic issues: There out of five respondents agreed that economic issue is important as they must make profit from construction works. 'Unnecessary expenses incurred as a result of delays in execution of the project are not acceptable by sponsors of the projects'. This was critical as the organization must ensure its position in the construction industry and all projects are aimed at making profit.

The legal problems faced by construction organizations relate to permits and purchase of land from Municipalities. Legal problems are common and contractors has been faced with conflict with Stake holders. Identifying any deviations from the project plan and determining their impact on project performance. Project Management Institute (2017). This involves analyzing the root causes of deviations and assessing the impact on project objectives. Lewis, (2015) Involves communicating project performance to stakeholders, including project sponsors, top

management, and project team members. Reports may include status updates, progress reports, variance analysis, and risk assessments. Project Management Institute (2017) Effective project control is essential for project success. It ensures that the project is delivered on time, within budget, and meets its objectives. It also helps to identify and mitigate risks and minimize the impact of unforeseen events (Lewis, 2015).

Communication with and engaging stakeholders in the project: This factor was found to be important in all the three construction organizations. The contractors use various methods of communication to win the stakeholders support to the project. Some respondents use communication to engage stakeholders in the design of their projects where stakeholders are encouraged to participate in the design of houses. In the context of products, quality is often associated with durability, reliability, functionality, aesthetics, safety, and value for money. Garvin, (2014) in the context of services, quality is often associated with responsiveness, professionalism, empathy, communication, and customer satisfaction. In the context of processes, quality is often associated with efficiency, effectiveness, consistency, innovation, and continuous improvement. In general, quality is a subjective concept that varies depending on the context, the stakeholder, and the criteria used to assess it. However, quality can also be measured objectively using various methods, such as inspection, testing, certification, benchmarking, or feedback analysis. The pursuit of quality is often a key goal of organizations, individuals, and societies that seek to improve their performance, reputation, and competitiveness.

Another respondent indicated that; they use communication to inform the general public about up-coming construction works using neon signs and newsletters sent to residents.

This is in line with Briner, et al (2016) and Weaver (2017), who state that communication needs to be effective, regular and well planned. They recommend that project managers should be highly skilled negotiators and communicators capable of managing individual stakeholder's

expectations and creating a positive culture change within the overall organization. Also, this factor is essential in for keeping the support and commitment of all stakeholders as confirmed by Briner, et al (2016).

Critical Success Factors

The contractors identified, three critical success factors were identified, namely, i) formulating clear statement and project objectives, ii) keeping and promoting good relationship, and iii) predicting the influence of stakeholders accurately are important. Two organizations agreed with the factors, while one respondent from one organization was neutral.

- "Formulating clear statement involves identification of clear mission for the project". This belonged to the second group in importance. This is in line with Winch (2010), who state that definition of the project mission is inevitable and setting of common goals and strategies to manage stakeholders is essential and this is in line with Jergeas et al (2010).
- "Keeping and promoting good relationship" is practiced both construction firms. The good relationship with the top management and politicians helped the construction firms to have resources that made them to win the law suits filed by project stakeholders. This builds and promotes relationships with Stakeholders, especially with the politicians to maintain their support especially when purchasing land and obtaining permits to construct houses in line with (Yang et al 2019).
- "Predicting the influence of stakeholders accurately" was found to be important according to the contractors interviewed. Recognizing the stakeholders' influence is important for planning and executing a rigorous stakeholder management process and enables the project manager to analyses the potential impact of stakeholder influence in the project in line with Olander (2017).

4.3.2 Results of the Interview from Architects

The architects revealed that: "Identification of stakeholders properly" ranked three in the content analysis. This "Exploring stakeholders needs and constraints to project", and "Analyzing conflicts and coalition among stakeholders" were found to have the same level of importance'.

- "Identifying stakeholders properly" is important as it answers the questions of "who are the project stakeholders and how can they be classified'. This helps the project manager to manage individuals or groups of stakeholders accordingly, and is in line with Karlsen (2012; Olander (2016); Walker, et al. (2018).
- "Analyzing conflicts and coalition among stakeholders" in the construction firms is important as different types of stakeholders can form coalition to stop the project'. This is confirmed by Freeman (2014) who observes that such groups who share the same objectives about a project can more likely form coalitions. At this level, compromising conflicts among stakeholders is important and this is mainly between suppliers and sub-contractors. The importance of this factor is that project manager must make decisions on how to compromise the conflicts and encourage a positive relationship between conflicting stakeholders. This is in line with Leung, et al (2015) who states that it is necessary for projects organization to be able to make a "win" "win" compromise solution.
- "Exploring stakeholders' needs and constraints to projects" is important and it has helped the architects to build apartments whose walls can be adjusted according to the tenants' needs. The bo-lab has been used adequately by both project owners and the stakeholders who are interested in the houses. Exploring stakeholders' needs and constraints means atomizing areas of stakeholders' concern and issues and this is in line with Freeman, et al. (2017).

- "Assessing Stakeholders needs" made it possible for the contractors to avoid the negative impact of stakeholder actions'. This factor creates opportunity to find solutions to the issues related to the construction projects. This is confirmed by Olander and Landin (2018) in a case study carried out in Sweden.
- "Formulating appropriate strategies to manage stakeholders" and "Predicting stakeholders' reaction for implementing the strategies", were found in two construction firms.
- "Predicting stakeholders' reaction for implementing the strategies" and considering their reactions to the strategies calls for paying attention to response and predict their behavior. This is important in implementing strategy and is in line with Cleland and Ireland, (2012).

4.4 Results of the Observations

The results of observations were obtained at the sites namely: Cape Coast University, College of Education Construction site and Cape Coast Technical University New mechanical engineering Block

4.4.1 The result of observation obtained from Cape Coast University, College of Education Construction site

The researcher visited paapa Baidiba construction site on 03/02/2023, the construction site located at university of cape coast, College of Education. As of the time of researcher visit the construction site the building stage was on progressed to the roofing level, various heavy machinery and equipment were in operation including concrete mixers, cranes. Safety measures were made, safety barriers, warning signs, and designated walkways, were in place to protect

both workers and visitors. Workers were observed wearing appropriate personal protective equipment (PPE)

• The construction site has taken environmental concerns into account. There are sediment control measures in place to prevent soil erosion, and proper disposal of waste materials as observed. The pictures of figures 4.1, 4.2 and 4.3 indicated the various observation at the college of Education, University of Cape Coast.

Figure 4. 1 : The sod-cutting ceremony for the construction of academic offices and labs at the University of Cape Coast, College of Education.

Figure 4. 2 : Cape Coast Technical University New Mechanical Building The researcher observed how the stage building was doing on the ground how progressive

Figure 4. 3 : Site contractor engineer with hard hat holding tablet with the building in background.

The construction seems to be progressing according to the planned timeline. The foundation and framework are in place, indicating that the project is on track for completion within the projected timeframe.

- Safety precautions are being taken seriously on-site. Workers were seen wearing appropriate safety kits, and there were visible signs emphasizing safety protocols. This commitment to safety is crucial for preventing accidents.
- Resource management seemed efficient. Materials were organized and labeled, which reduced the chances of delays due to misplaced items. This organization reflects positively on the project's management.
- Inspection teams were actively examining the work at various stages, ensuring quality Control.

Figure 4. 4 : Contractor supervising a project and Holding a Safety Helmet

Figure 4. 5 : Photo of contractor reading building plans in protective safety hard hat looking at blueprint plans on construction site.

Figure 4. 6 : Quantity surveyors and excavators on construction sit

Figure 4. 7 : Results and discussion of observation at cape coast Technical University the researcher observed the following from the university are the Abundant School Building auditorium on construction site due to poor communication and planning

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This Chapter presents a summary of the finding's conclusion, and recommendations of the Study.

5.2 Summary of Findings

The following is the summary of the findings;

1. The study revealed that factors that influenced stakeholder management of construction projects were, project manager competencies and maintaining alignment between stakeholders and teamwork and assessing attributes (power, urgency, and proximity) of stakeholders,

   Furthermore, project organization and managing stakeholders with social responsibilities and formulating a clear statement of project missions. Keeping and promoting good relationships and evaluating the stakeholder legitimacy.

   Communicating with and engaging stakeholders frequently, implementing the strategies and good leadership and stakeholder's involvement in decision making and understanding areas of stakeholder's interests.

2. The study indicated that the factors that influences consultants in the management of construction projects were consultant experience and site management skills of the building professionals. Effective supervision, good program time management and contractor 's cash flow and effectiveness of cost control system. The implementation of appropriate information and communication technologies (ICT) to manage construction materials, ranked 6th and the proper use of the procurement function, ranked 7th.

Speed of Information Flow, using JIT to reduce variation and waste and effective materials management on construction projects for cost reduction. The logistics functions must be used properly, effective construction material handling, and importance of stock and waste control, ranked 8th.The importance of effective transportation and efficient construction material management, ranked 9th.

3. The study revealed the factors that influences construction projects were poor site management and supervision and improper planning and public interruptions, inadequate resources due to contractor/lack of capital and financial difficulties faced by the contractor and owner and changed site conditions and equipment breakdown, maintenance problem. Architects incomplete drawing and extensive post- award negotiations, delays in the preparation of technical specifications and drawings.

5.3 Conclusion

The study conclouded that**:** "Managing with Social Responsibilities, and communication with and engaging stakeholders properly and frequently ranked high in frequency measurement. Environment issue was the main concern at the Cape Coast Municipality as the new project aimed at creating a clean environment. Lack of adequate communication created problems with stakeholders whose aims were to preserve cultural heritage as well as those who did not want changes in their residential area. In order to solve the problems "communication to build relationship and engage stakeholders in the project" was found to give good results in managing stakeholders.

Managing with social responsibilities involves environment issues, economic issues, legal issues and ethical issues. Equal in importance is "communication with and engaging stakeholders in the project.

Economic issues: Three out of five respondents agreed that economic issue is important as they must make profit from construction works. Unnecessary expenses incurred as a result of

Delays in execution of the project are not acceptable by sponsors of the projects. This was critical as the organization must ensure its position in the construction industry and all projects are aimed at making profit.

The legal problems faced by construction organizations relate to permits and purchase of land from Municipalities. Legal problems are common and contractors has been faced with conflict with Sstakeholders.

Communication with and engaging stakeholders in the project: This factor was found to be important in all the three construction organizations. The contractors uses various methods of communication to win the stakeholders support to the project. Some respondents uses communication to engage stakeholders in the design of their projects where stakeholders are encouraged to participate in the design of houses.

5.4 Recommendations of the Study

The following recommendations are made to address the findings:

- The stakeholders in the construction industry should provide adequate ICT equipment and software for implementing effective modern project execution planning. This could enhance the smooth documentation of construction project planning and cost control in the industry.
- The Contractors and project managers of the construction industry should organise periodic training programmes for the site supervisors to learn modern and sophisticated methods of executing construction projects to improve their cost effectiveness.

  The site supervisors should intensify their record keeping practices in order to improve performance in the industry.

- The construction site visit provided valuable insights into the project's progress and management. It's vital to stay observant and proactive in addressing challenges to ensure the successful completion of the construction project while considering the well-being of workers and the impact on the community and environment.

5.5 Direction for Future Research

Due to the research's restrictions, only 24.1% of construction businesses could be evaluated. Therefore, more research with greater simple sizes from these companies will aid in making the results more general.

The same research methodology should be used in future studies in other regions with various cultural traditions from Central Region, Cape Coast to compare and contrast the CSFs for stakeholder management in construction.

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APPENDICES

APPENDIX A

AKENTEN APPIAH- MENKA

UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT (AAMUSTED)

DEPARTMENT OF CONSTRUCTION AND WOOD TECHNOLOGY

QUESTIONNAIRE

PROGRAMME: M . TECH IN CONSTRUCTION MANAGEMENT

"EXPLORING CRITICAL SUCCESS FACTORS FOR STAKEHOLDER MANAGEMENT IN CONSTRUCTION PROJECTS IN GHANA".

Dear Sir/Madam, Mawuli Sallas is my name, a student of Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, Kumasi. In partial fulfillment of my postgraduate study award, I am undertaking research on critical success factors for stakeholder management in construction projects in cape coast north, to understand the perspectives of the client and practitioners within the Ghanaian context.

Therefore, I respectfully need information from project decision-makers like you to understand stakeholder management factors in cape coast construction projects.

This questionnaire is purely for academic work. I, therefore, ask for your maximum cooperation and assure you that the form provided here will be treated with the utmost confidentiality

Thank you.

Please provide the correct information by ticking [√] and filling in the blank spaces where necessary.

SECTION A

GENERAL INFORMATION

1. Gender: Male [ ] Female [ ]

2. What is your age?

29 years [ ] 30 – 39 years [ ] 40 – 49years [ ] Above 50 years [ ]

3. What is your highest academic qualification?

HND [ ] Bachelor‘s Degree [ ] Master‘s Degree [ ]

Doctorate degree [ ] other, please specify ……

4. What is your job title?

Architect [ ] Building Contractor [ ] Project Manager [ ]

Quantity Surveyor [ ] Consultant [ ]

5. Level of experience in years

0-5 [ ] 5-10 [ ] 10-15 [ ] 15-20 [ ] > 20 [ ]

6. Which of the following project do you undertake?

Civil work [ ] Building work [ ]

7. Sector of the client of the project

Government [ ] Estate Developers [ ] Investors [ ] Owner occupiers [ ] **SECTION**

B. IDENTIFICATION OF STAKEHOLDER MANAGEMENT

Factors relating to critical success for stakeholders management in construction projects in Ghana have been identified as key performance indicators (KPIs) that influence the construction project. With your experience and expertise, kindly indicate the level of influence of each determinant using the scale below.

NOTE: Use a scale of 1= Strongly agree, 2= Agree, 3= Fairly agree, 4= Disagree, 5=

8. Question: **To what extent do you think the following individuals or organizations are project stakeholders?**

		Levels of Importance				
	Identification of Stakeholders	1	2	3	4	5
	Client					
	Project Management Team					
	Consultant and Designing Team					
	Contractor					
	Subcontractor					
	Supplier					
	Employees					
	Funding Bodies					
	Government Authorities					

9. Question: **To what extent do you think the following individuals or factors influence project stakeholders?**

		Levels of Importance				
	Factors thInfluenceces Stakeholder Management	1	2	3	4	5
	Team Work					
	Managing Stakeholders with Social Responsibilities					
	Project Manager Competences					
	Project Organization					
	Formulating a Clear Statement of Project Missions					
	Identifying Stakeholders Properly					

	Understanding Area of Stakeholders'Interests					
	Assessing Attributes (power, urgency, and proximity) of Stakeholders					
	Evaluating the Stakeholder Legitimacy					
	Keeping and Promoting Good Relationships					
	Formulating Appropriate Strategies to Manage Stakeholders					
	Predicting Stakeholders' Reaction to Implementing the Strategies					
	Stakeholders' Involvement in Decision Making					
	Maintaining Alignment between Stakeholders					
	Communicating with and Engaging Stakeholders Properly and frequently					
	Good Leadership					

10. Question: **To what extent do you think the following Critical Success Factors influence construction projects?**

		Levels of Importance				
	Critical Success Factors – Client Related	1	2	3	4	5
	Influence of Client/ Client 's Representative					
	Client 's Knowledge of Construction Project Organization					
	Client 's Confidence in Construction Team					
	Timely Decision by Owner/ Owner 's Representative					
	Client 's Emphasis on High Quality of Construction					
	Client 's Ability to MakeDecisionsn					

11. Question: **To what extent do you think the following Critical Success Factors influence construction projects?**

		Levels of Importance				
	Critical Success Factors – Procurement Related	1	2	3	4	5
	Form of Procurement and Contractual Arrangement					
	Effective Resource Management in each Project					
	Project Delivery System (e.g. design-bid-build)					
	Project Bidding Method (e.g. negotiated bidding)					

Question: **influence**

		Levels of Importance				
	Critical Success Factors – Design Team Related	1	2	3	4	5
	Design Team Experience					
	Project Design Complexity					
	Mistakes/ Delays in Producing Design Documents					
	Adequacy of Plans and Specifications					
	Strong/Detailed Plan Kept up to Date for each Project					

Question: **To what extent do you think the following Critical Success Factors influence construction projects?**

		Levels of Importance				
	Critical Success Factors – Contractor Related	1	2	3	4	5
	Contractor Experience					
	Site Management					
	Supervision					
	Contractor‘s Cash Flow					
	Effectiveness of Cost Control System					
	Speed of Information Flow					
	Effective Program Time Management					

12. **Question: influence**

		Levels of Importance				
	Critical Success Factors – Project Manager Related	1	2	3	4	5
	Project Manager‘s Competence					
	Project Manager‘s Experience					
	Project Manager‘s Authority to Take Day-to-day Decisions					
	Technical Capability of Project Manager					
	Leadership Skills of Project Manager					
	Organizing Skills of Project Manager					
	Project Manager‘s Authority to Take Financial Decisions, Selecting Key Team Members, etc.					

	Coordinating the Ability and Rapport of the Project Manager with Contractors/ Subcontractors					
	Coordinating the Ability and Rapport of the Project Manager with Owner/ Owner Representatives					
	Motivating Skills of Project Manager					
	Project Manager‘s Commitment to Meet Quality, Cost and Time					
	Project Manager‘s Adaptability to Changes in Project Plan					

13. **Question: influence**

		Levels of Importance				
	Critical Success Factors – Business and Work Environment Related	1	2	3	4	5
	Economic Environment					
	Political Environment					
	Physical Work Environment					
	the commitment of all Parties to the Project					
	Adequacy of Funding					
	Technology Availability					