KWARA STATE POLYTECHNIC

STAKEHOLDERS PERCEPTION ON PERFORMANCE MEASURE FOR CONSTRUCTION PARTNERING PROJECT

By

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CHAPTER ONE

1.0 INTRODUCTION

The construction industry plays a pivotal role in the socio-economic development of any nation by providing the infrastructure necessary for economic growth and improved quality of life. However, the complexity and dynamic nature of construction projects often lead to challenges such as cost overruns, delays, and disputes among stakeholders (S. T. Kometa 2017). These challenges underscore the need for innovative project delivery methods that foster collaboration, efficiency, and shared accountability. One such approach is construction partnering, which emphasizes teamwork, open communication, and mutual trust among project stakeholders (P. O. Olomolaiye 2017).

Construction partnering is a project delivery method that brings together key stakeholders, including clients, contractors, consultants, and suppliers, to work collaboratively towards shared objectives. By promoting joint decision-making, risk-sharing, and conflict resolution, partnering has been shown to enhance project performance and mitigate common industry challenges. However, the successful implementation of partnering requires robust performance measurement frameworks that align with stakeholder expectations and project goals (A. P. Kuroshi and B. H. Zakariya 2014).

Stakeholder perception plays a critical role in determining the effectiveness of performance measures in construction partnering projects. Different stakeholders have diverse priorities, which may include cost efficiency, timely delivery, quality assurance, and sustainability. Understanding these perceptions is essential to develop performance metrics that accurately reflect project success and foster continuous improvement (. A. P. Kuroshi and H. Z. Baba 2014).

Despite the potential benefits of construction partnering, there is limited research on the perception of stakeholders regarding performance measures in this context, particularly in developing economies. This gap in knowledge presents an opportunity to explore the factors influencing stakeholder satisfaction and the effectiveness of performance metrics in construction partnering projects.

1.1 BACKGROUND TO THE STUDY

The construction industry is a critical driver of economic development, contributing significantly to infrastructure growth and national development. However, the industry is often characterized by fragmented processes, conflicting interests, and adversarial relationships among stakeholders, leading to inefficiencies, disputes, and project failures. These challenges necessitate innovative approaches to project delivery that prioritize collaboration and shared goals (I. O. Famakin and D. R. Ogunsemi 2012). One such approach is construction partnering, which has gained global recognition for its potential to improve project outcomes by fostering trust, teamwork, and joint accountability among stakeholders.

Construction partnering emerged in the 1980s as a response to the persistent challenges in traditional project delivery methods, such as poor communication, lack of coordination, and adversarial relationships. It emphasizes the integration of key stakeholders including clients, contractors, consultants, and suppliers into a unified team that works collaboratively to achieve mutually agreed objectives (I. O. Famakin and D. R. Ogunsemi 2012). By promoting a culture of openness, transparency, and shared responsibility, partnering aims to minimize conflicts, optimize resource utilization, and enhance overall project performance.

Performance measurement is a critical component of construction partnering, as it provides a framework for assessing the effectiveness of collaborative efforts and ensuring that project goals are met. Performance measures in partnering projects typically focus on key areas such as cost, time, quality, safety, and stakeholder satisfaction (A. A. Aliyu, et al 2015). However, the development and implementation of these measures are influenced by stakeholders' diverse perceptions and priorities, which can vary depending on their roles, experiences, and expectations improvement (A. P. Kuroshi and H. Z. Baba 2014).

Stakeholders' perceptions play a vital role in shaping the success of performance measures in construction partnering projects. For instance, clients may prioritize cost savings and timely delivery, while contractors may focus on profitability and risk mitigation improvement (. A. P. Kuroshi and H. Z. Baba 2014). Consultants and suppliers may value quality assurance and supply chain efficiency. Understanding these varying perceptions is crucial for designing

performance metrics that align with the interests of all stakeholders and promote a balanced approach to project success (D. Scott, and E. W. M. Lam 2014).

Despite the growing adoption of construction partnering in developed countries, its application in developing economies remains limited, and research on stakeholders' perceptions of performance measures in this context is scarce. In many cases, cultural, institutional, and economic factors present unique challenges to the implementation of partnering and the development of effective performance metrics (D. Scott, and E. W. M. Lam 2014).

1.2 STATEMENT OF RESEARCH PROBLEM

The construction industry is often plagued by inefficiencies, disputes, and project failures, stemming from fragmented processes and adversarial relationships among stakeholders. To address these challenges, construction partnering has emerged as a collaborative project delivery approach that fosters teamwork, trust, and shared accountability among clients, contractors, consultants, and suppliers (I. O. Famakin and D. R. Ogunsemi 2022). While partnering has shown potential to enhance project performance, its success is largely dependent on the development and implementation of effective performance measures that reflect the diverse priorities of stakeholders.

Despite the critical role of performance measurement in construction partnering, there is limited understanding of how stakeholders perceive the effectiveness of these measures. Stakeholders often have varying expectations based on their roles and experiences. For example, clients may prioritize cost efficiency and timely delivery, contractors may focus on profitability and risk-sharing, while consultants and suppliers may emphasize quality and compliance (I. O. Famakin and D. R. Ogunsemi 2022). These differences can lead to conflicts or misalignments in defining and evaluating project success, undermining the objectives of partnering.

Furthermore, the lack of standardized performance metrics and the challenges of adapting them to specific project contexts complicate the evaluation of partnering projects. In developing economies, such as Nigeria, additional factors such as limited resources, cultural differences, weak institutional frameworks, and a lack of experience with collaborative approaches—further exacerbate these issues (M. O. Dada 2020). Without a clear understanding of stakeholder

perceptions, performance measures may fail to capture critical aspects of project success or adequately address stakeholder concerns (A. A. Aliyu, et al 2015).

In addition, existing research on performance measures for construction partnering projects primarily focuses on developed economies, with limited attention to the unique challenges and dynamics of developing contexts (M. O. Dada 2020). This gap in knowledge hinders the effective adoption and optimization of partnering practices in regions like Nigeria.

This study seeks to address these gaps by investigating stakeholders' perceptions of performance measures for construction partnering projects. By identifying the key factors influencing stakeholder satisfaction and evaluating the effectiveness of current performance metrics, the research aims to contribute to the development of more inclusive and context-sensitive measures that enhance the success of partnering projects.

1.3 RESEARCH QUESTIONS

1. What are the key performance indicators (KPIs) used in evaluating construction partnering projects?

2. What are stakeholders' perceptions on the effectiveness and relevance of existing performance measures in construction partnering projects?

3. What are the challenges associated with the development and implementation of performance measures in construction partnering projects?

1.4 **AIM AND OBJECTIVES**

1.4.1 **AIM**

The aim of this study is to investigate stakeholders' perceptions of performance measures for construction partnering projects, with a view to identifying critical performance indicators, evaluating their effectiveness, and proposing strategies for improving collaboration and project outcomes.

1.4.2 OBJECTIVES OF THE STUDY

1. To identify the key performance indicators (KPIs) used in evaluating construction partnering projects.
2. To assess stakeholders' perceptions of the effectiveness and relevance of existing performance measures in construction partnering projects.
3. To evaluate the challenges associated with the development and implementation of performance measures in construction partnering projects.

1.5 SCOPE AND LIMITATION

1.5.1 SCOPE OF THE STUDY

1. Geographical Coverage:
   This study focuses on construction partnering projects within Lagos state, allowing for an in-depth understanding of local challenges and dynamics that influence stakeholder perceptions of performance measures.
2. Stakeholder Groups:
   The study examines perceptions from various stakeholder groups, including clients, contractors, consultants, suppliers, and regulatory authorities, to provide a comprehensive view of the performance measurement landscape.
3. Performance Metrics:
   The research emphasizes identifying and evaluating key performance indicators (KPIs) commonly used in construction partnering projects, such as cost efficiency, time management, quality, safety, and stakeholder satisfaction.
4. Project Context:
   The study includes projects undertaken through a partnering approach, characterized by collaborative planning, shared risks, and mutual accountability among stakeholders.
5. Time Frame:
   The analysis covers a selected period during which partnering projects have been

implemented, providing insights into historical and recent trends in performance measurement.

1.5.2 LIMITATIONS OF THE STUDY

1. Geographical Limitations:
   The study is limited to Lagos state and may not fully capture the dynamics of construction partnering projects in other states in Nigeria with different socio-economic, cultural, and institutional contexts.
2. Stakeholder Participation:
   The research relies on the willingness of stakeholders to participate in surveys or interviews. Limited participation from certain groups could affect the comprehensiveness of the findings.
3. Data Availability:
   Access to detailed data on performance measures and outcomes of partnering projects may be restricted due to confidentiality or insufficient documentation.
4. Generalizability:
   The findings of this study may be specific to the sampled projects and stakeholders, limiting the extent to which they can be generalized to other settings or industries.
5. Complexity of Perceptions:
   Stakeholders' perceptions may be influenced by personal biases, experiences, and external factors, making it challenging to isolate specific determinants of performance measure effectiveness.
6. Time Constraints:
   The study's duration may limit the ability to conduct longitudinal analyses or capture long-term outcomes of performance measurement in partnering projects.

Despite these limitations, the study aims to provide valuable insights into stakeholder perceptions of performance measures, contributing to the body of knowledge on construction partnering and informing the development of effective performance management frameworks.

1.5 JUSTIFICATION FOR THE STUDY

The construction industry is a significant contributor to economic development, providing critical infrastructure for societal growth. However, the sector is often plagued by inefficiencies, cost overruns, delays, and disputes, which negatively impact project outcomes (A. U. Elinwa and M. Joshua 2021). The adoption of construction partnering has been widely recognized as a means to address these challenges by fostering collaboration, mutual trust, and shared accountability among stakeholders. Despite its potential, the success of partnering largely depends on the effectiveness of performance measures used to evaluate project outcomes (A. U. Elinwa and M. Joshua 2021). Understanding stakeholders' perceptions of performance measures is crucial because different stakeholders such as clients, contractors, consultants, and suppliers have varying priorities and expectations. These differences, if not well managed, can lead to conflicts, undermine collaborative efforts, and jeopardize project success (W. Swan and M. M. A. Khalfan 2017). By investigating these perceptions, this study aims to provide a deeper understanding of how performance metrics can be tailored to align with stakeholder needs, thus enhancing the overall effectiveness of construction partnering. This research is particularly significant for the following reasons:

1. Improving Project Outcomes:
   By identifying and analyzing key performance indicators (KPIs) and their perceived effectiveness, the study will contribute to the development of more robust performance measurement frameworks, leading to improved cost efficiency, quality, and timely delivery of projects.
2. Enhancing Stakeholder Collaboration:
   Insights from this study will help address the misalignment of expectations among stakeholders, fostering a more cooperative and productive project environment.
3. Addressing Knowledge Gaps:
   Limited research exists on stakeholders' perceptions of performance measures in construction partnering, especially in developing economies. This study will fill this gap and provide context-specific insights applicable to similar regions.
4. Policy and Practice Implications:
   The findings of this study can inform policymakers and industry practitioners on the

design and implementation of performance measurement systems that align with industry best practices and stakeholder priorities.

5. Supporting Sustainable Development:

   By promoting the effective use of performance measures in partnering projects, this research will contribute to the successful delivery of infrastructure projects that support long-term economic and social development.

   Given the critical role of the construction industry in driving economic progress and the increasing adoption of partnering as a project delivery method, this study is both timely and relevant. Its findings will provide valuable contributions to the body of knowledge in construction management and offer practical recommendations for improving project performance through effective performance measurement.

1.6 DEFINATION OF TERMS

1. Stakeholders: Individuals, groups, or organizations that have an interest or role in a construction project and can affect or be affected by its outcomes. Examples include clients, contractors, consultants, suppliers, and regulatory authorities.
2. Perception: The interpretation or understanding of performance measures based on stakeholders' experiences, roles, and expectations in the context of construction partnering projects.
3. Performance Measure: Quantitative or qualitative indicators used to evaluate the effectiveness, efficiency, and success of construction partnering projects. These may include cost, time, quality, safety, and stakeholder satisfaction metrics.
4. Construction Partnering: A project delivery method that emphasizes collaboration, mutual trust, shared risks, and joint accountability among project stakeholders to achieve common objectives and improve project outcomes.
5. Key Performance Indicators (KPIs): Specific, measurable metrics used to assess critical aspects of project performance, such as cost efficiency, schedule adherence, quality, and stakeholder engagement.
6. Project Success: The degree to which a construction project meets predefined objectives, including cost, time, quality, and satisfaction of all stakeholders involved.

7. Collaboration: A working relationship among stakeholders in which they jointly plan, execute, and manage project activities to achieve shared goals and mutual benefits.
8. Challenges: Factors or issues that hinder the effective implementation of performance measures or the success of construction partnering projects, such as conflicting priorities, resource limitations, or lack of communication.
9. Developing Economies: Countries or regions characterized by lower industrialization levels, limited resources, and emerging infrastructure, where construction partnering practices may face unique challenges.
10. Construction Industry: A sector of the economy involved in the planning, design, development, and maintenance of buildings, infrastructure, and other physical structures.
11. Mutual Accountability: A principle in construction partnering where all stakeholders share responsibility for project outcomes and take collective ownership of risks and rewards.
12. Collaborative Project Delivery: An approach to managing construction projects that emphasizes teamwork, transparency, and joint decision-making among all parties involved.
13. Performance Evaluation Framework: A structured system for assessing the success and effectiveness of a project using defined metrics and stakeholder feedback.
14. Sustainability: The ability to manage construction projects in a way that meets current needs without compromising the ability of future generations to meet their own needs, considering economic, environmental, and social dimensions.

These terms establish a foundation for understanding the key concepts and components of the study, ensuring clarity and consistency throughout the research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Construction partnering is a collaborative approach aimed at improving project delivery through enhanced relationships among stakeholders. Measuring performance in such projects is crucial for assessing success and identifying areas for improvement. This chapter reviews existing literature on key performance indicators (KPIs), stakeholder perceptions, and the challenges involved in developing and implementing performance measures in construction partnering projects.

2.1 Historical Background

The concept of construction partnering emerged in response to the adversarial nature and fragmentation often found in traditional construction procurement methods. Historically, construction projects were characterized by rigid contractual boundaries, poor communication, and frequent disputes among stakeholders (Latham, 1994). These challenges led to project delays, cost overruns, and client dissatisfaction.

The idea of partnering was first institutionalized in the United States during the 1980s by the U.S. Army Corps of Engineers, who sought more collaborative working relationships with contractors to improve performance outcomes (CII, 1991). This new philosophy emphasized shared goals, mutual trust, continuous communication, and cooperative problem-solving.

In the United Kingdom, partnering gained prominence following the publication of the Latham Report (1994), titled "Constructing the Team", which identified poor relationships and lack of integration as major issues affecting construction performance. Latham advocated for a new culture of collaboration and recommended the use of partnering as a strategy to enhance performance and reduce conflict. This was reinforced by the Egan Report (1998), "Rethinking Construction", which emphasized performance improvement through key performance indicators (KPIs), client satisfaction, productivity, and safety.

As the construction industry globally embraced more collaborative procurement strategies, measuring performance became crucial. Organizations began to recognize that effective performance measurement especially in partnering arrangements requires not only financial

metrics but also qualitative indicators such as stakeholder satisfaction, communication efficiency, and trust (Beatham et al., 2004). Over time, the use of KPIs became more widespread as a tool for benchmarking and continuous improvement in project delivery.

In Nigeria and other developing countries, the concept of partnering is still evolving. The traditional procurement systems, often bureaucratic and adversarial, are gradually giving way to more integrated project delivery approaches. However, the adoption of performance measurement frameworks within partnering environments remains inconsistent, largely due to lack of awareness, technical know-how, and institutional resistance (Ayangade et al., 2009; Aje et al., 2011).

Understanding stakeholders' perceptions of performance measures is critical because it influences the adoption, implementation, and success of performance management systems in partnering projects. If KPIs are not perceived as relevant or effective by stakeholders, they are less likely to be used effectively, thereby reducing their potential impact on project outcomes (Meng, 2012).

Therefore, this research seeks to explore not only the types of KPIs used but also the views of key project stakeholders—clients, consultants, contractors, and regulatory agencies—on the appropriateness and challenges of these performance measures in the context of construction partnering projects.

2.2 Concept of Construction Partnering

Construction partnering is a strategic and cooperative relationship between project stakeholders—typically the client, consultants, and contractors designed to improve communication, reduce conflicts, and enhance project outcomes. It is defined by the Construction Industry Institute (CII, 1991) as "a long-term commitment between two or more organizations for the purpose of achieving specific business objectives by maximizing the effectiveness of each participant's resources." This arrangement is based on mutual trust, dedication to common goals, and a commitment to continuous improvement.

Unlike traditional procurement methods that are adversarial and contract-focused, partnering promotes a collaborative working environment. It encourages participants to focus on shared objectives such as timely delivery, cost-effectiveness, quality performance, and client satisfaction (Bresnen & Marshall, 2000). The philosophy of partnering is grounded in the understanding that

construction projects are complex and interdependent, requiring cooperation rather than conflict for optimal results.

According to Black et al. (2000), partnering fosters open communication, transparency, joint decision-making, and mutual respect, which are essential for mitigating risks and uncertainties. It transforms the typical "win-lose" mentality into a "win-win" mindset, where all parties benefit from project success. These relationships are often formalized through charters, joint performance reviews, and regular meetings to ensure alignment of expectations and early resolution of disputes.

Moreover, construction partnering has been linked to improved project performance indicators such as reduced cost overruns, fewer delays, and better-quality outcomes (Li et al., 2001). It also enhances innovation and learning by creating a platform for knowledge sharing and collaborative problem-solving (Bresnen & Marshall, 2002).

In practice, partnering can be implemented at various levels:

- Project-level partnering, which is focused on a specific construction project,
- Strategic partnering, which involves long-term collaboration across multiple projects or programs.

Though construction partnering is not without its challenges such as resistance to change, lack of trust, and unclear roles when properly implemented, it can transform the construction process into a more productive and harmonious endeavor (Chan et al., 2004).

2.3 Key Performance Indicators (KPIs) in Construction Partnering Projects

Key Performance Indicators (KPIs) are critical tools used to measure and track the performance of projects, individuals, or organizations in relation to predefined goals. According to Chan and Chan (2004), KPIs are quantifiable measures used to evaluate the success of an organization, employee, or project in meeting objectives for performance. In the context of construction partnering, KPIs are essential for evaluating the collaborative outcomes and determining whether the mutual objectives of stakeholders such as clients, contractors, and consultants are being achieved.

In construction partnering, KPIs not only provide a performance benchmark but also facilitate communication, alignment of goals, and continuous improvement. They help in identifying success factors, areas needing intervention, and the overall health of the partnership arrangement (Beatham et al., 2004). The most commonly used KPIs in construction partnering projects include:

2.3.1. Time Performance

Time is one of the most crucial project constraints and serves as a primary KPI in construction partnering. This indicator measures whether a project is completed within the stipulated timeframe. Delays in project delivery often indicate coordination problems, resource inefficiencies, or stakeholder disputes. According to Toor and Ogunlana (2010), timely delivery is a direct reflection of the effectiveness of collaboration and communication within the project team. Projects completed on or before the deadline suggest strong partnering dynamics and efficient planning.

2.3.2. Cost Performance

Cost performance assesses the project's ability to stay within budget. It examines the variance between the estimated and actual expenditures throughout the project lifecycle. In a partnering context, strong cost performance typically arises from shared risk management, transparency in procurement, and collaborative decision-making (Love & Holt, 2000). Effective cost control indicates that partners are actively managing scope changes, procurement efficiency, and financial accountability.

2.3.3. Quality Performance

Quality performance refers to the degree to which the completed project meets predefined specifications, technical standards, and client expectations. Beatham et al. (2004) emphasize that quality is not only about compliance with technical requirements but also about the users' satisfaction with the final output. In partnering projects, where parties work closely together, quality performance often improves due to integrated quality assurance procedures and joint reviews during construction phases.

2.3.4. Safety Performance

This KPI evaluates the frequency, severity, and types of accidents or incidents occurring on the construction site. Safety performance reflects the attention given to health and safety management practices. Hinze (1997) notes that construction partnering fosters better safety outcomes through joint safety planning, training, and real-time communication. A low incident rate demonstrates an effective collaborative safety culture and regulatory compliance.

2.3.5. Stakeholder Satisfaction

Stakeholder satisfaction is an essential KPI that gauges how well the needs and expectations of various stakeholders such as the client, end-users, contractors, consultants, and the public—are being met. According to Cheung et al. (2004), stakeholder satisfaction is enhanced when all parties are involved in key decisions, and when the project outcomes align with stakeholder interests. Regular feedback loops, open communication, and responsiveness contribute to high satisfaction levels in partnering projects.

2.3.6. Dispute Resolution

The presence or absence of disputes, and how they are managed, is a powerful indicator of project health. Effective dispute resolution mechanisms in partnering projects reduce the likelihood of litigation, save time and cost, and preserve relationships. Latham (1994) highlighted the importance of alternative dispute resolution strategies such as mediation and negotiation in construction partnerships. A project with minimal disputes and swift resolution of issues often signifies a successful partnering framework.

Overall, KPIs provide a basis for benchmarking performance, identifying gaps, and implementing corrective measures in construction partnering environments. They not only reflect the tangible outcomes of the project but also the intangible benefits of collaboration—such as trust, mutual respect, and improved stakeholder engagement (Beatham et al., 2004). When properly selected and aligned with project goals, KPIs serve as a powerful tool for continuous improvement and long-term success in construction partnerships.

2.4 Stakeholders' Perception on Performance Measures in Partnering Projects

Stakeholders' perceptions play a pivotal role in determining the effectiveness, relevance, and adoption of performance measurement systems in construction partnering projects. Construction stakeholders comprising clients, consultants, contractors, subcontractors, suppliers, and regulatory agencies often have diverse interests, expectations, and performance criteria, which influence how they perceive and respond to key performance indicators (KPIs) (Meng & Gallagher, 2012).

Performance measures are more likely to be accepted and used effectively when they align with stakeholders' roles and mutual project goals. According to Akintoye and Main (2007), stakeholders support performance measurement when KPIs are designed to reflect shared objectives and promote collaborative project delivery. In such cases, performance metrics are viewed not merely as assessment tools but as instruments for building trust, encouraging transparency, and enhancing accountability.

Luu et al. (2008) emphasized the importance of clarity and consistency in the application of metrics. When performance indicators are transparent, uniformly applied across the project lifecycle, and supported by clear data, stakeholders are more likely to engage with them positively. This leads to greater cooperation, open dialogue, and a stronger commitment to performance improvement. Furthermore, stakeholders appreciate KPIs that provide constructive feedback rather than punitive evaluations (Meng, 2012). The focus on continuous improvement, rather than blame, fosters a culture of learning and innovation, which is essential in the dynamic environment of construction partnering.

However, there are also challenges associated with stakeholders' perceptions of performance measures. One significant concern is that performance indicators can be perceived as biased or irrelevant, especially when they do not consider the unique context of specific projects or the nature of stakeholder contributions (Xue et al., 2007). For instance, a KPI that emphasizes cost-saving might undervalue design quality or contractor innovation. Such misalignments can lead to dissatisfaction, mistrust, and even conflict among project partners.

Another issue is the lack of stakeholder involvement in the development and customization of performance measures. When KPIs are imposed without consultation, stakeholders may resist their implementation, misinterpret their purpose, or manipulate results to present a favorable outcome (Egan, 1998). This undermines the essence of partnering, which thrives on mutual respect, shared decision-making, and aligned values.

Furthermore, different stakeholders may prioritize different aspects of performance. For example:

- Clients may focus on cost, delivery time, and end-user satisfaction.
- Consultants may emphasize design quality and technical compliance.
- Contractors may value safety, resource efficiency, and profit margins.

This divergence makes it essential to balance diverse expectations through inclusive KPI frameworks that integrate both quantitative and qualitative measures (Chan & Chan, 2004).

To address these challenges, project teams are encouraged to:

- Engage stakeholders in early and continuous discussions about performance objectives.
- Co-create KPI frameworks that reflect the interests of all partners.
- Regularly review and revise performance indicators to align with evolving project demands and stakeholder feedback (Meng, 2012).

When stakeholders perceive performance measures as relevant, fair, and actionable, they are more likely to support their implementation, leading to better project outcomes and stronger partnering relationships.

2.5 Challenges in Developing and Implementing Performance Measures

While performance measures are vital tools for tracking, managing, and improving outcomes in construction partnering projects, their effective development and implementation are often fraught with challenges. These challenges can limit the usefulness of key performance indicators (KPIs), reduce stakeholder engagement, and undermine the overall effectiveness of partnering initiatives.

2.5.1. Lack of Standardization

One of the major challenges is the absence of standardized KPIs across projects and organizations. As each project team tends to define and interpret KPIs differently, it becomes difficult to compare performance across different projects or to establish industry benchmarks. Robinson et al. (2004) noted that the lack of uniformity in performance measurement frameworks leads to fragmentation, impeding the ability of stakeholders to learn from previous projects or to institutionalize best practices. Without agreed-upon metrics, there is also a higher risk of performance being assessed subjectively or inconsistently.

2.5.2. Subjectivity and Bias

Some performance indicators, particularly those related to stakeholder satisfaction, team dynamics, or quality of communication, are qualitative in nature and inherently subjective. Pryke and Smyth (2006) argue that this subjectivity can introduce personal bias, especially when stakeholders have conflicting interests or varying levels of influence on the evaluation process. For instance, a client may prioritize time and cost, while a contractor may focus on safety or profit margins. When performance is judged through such diverse lenses without a balanced evaluation framework, it can distort project assessments and harm relationships.

2.5.3. Data Collection Issues

Reliable and consistent data is essential for meaningful performance measurement. However, many partnering projects struggle with fragmented data systems, poor documentation, or inconsistent reporting practices. Meng (2012) highlighted that collecting accurate and timely data becomes particularly challenging when multiple stakeholders are involved, especially in large or complex projects. Issues such as differing IT platforms, reluctance to share sensitive data, or lack of standard templates can result in gaps or inaccuracies that compromise the validity of KPIs.

2.5.4. Resistance to Evaluation

Despite the collaborative ethos of partnering, some stakeholders may view performance evaluation as a threat rather than a tool for improvement. Cheung et al. (2012) noted that performance measurement can sometimes be perceived as a fault-finding exercise, leading to defensiveness and reduced cooperation among project partners. This perception is particularly strong when KPIs are used to allocate blame or enforce contractual penalties rather than to promote

learning and growth. As a result, stakeholders may become reluctant to engage fully with the process, limiting the usefulness of performance data.

2.5.5. Inadequate Technical Know-how

The implementation of performance measurement systems requires a sound understanding of performance management frameworks, data analysis techniques, and benchmarking tools. Unfortunately, many construction professionals especially in developing countries lack the training or technical expertise required to design and apply these systems effectively (Love et al., 2005). This knowledge gap can lead to poor selection of indicators, misinterpretation of results, and failure to integrate performance insights into project decisions.

2.5.6. Overcoming the Challenges

To address these challenges, researchers and practitioners advocate for a collaborative and inclusive approach in the design and implementation of KPIs. Key recommendations include:

- Stakeholder Engagement: All project participants should be involved in defining what success looks like and how it will be measured. This encourages ownership, trust, and alignment.
- Customization and Flexibility: While standardization is important for comparison, KPIs must also be tailored to fit the specific context of each project (Beatham et al., 2004).
- Capacity Building: Training programs should be developed to improve technical knowledge around performance management tools and techniques.
- Technology Integration: The use of project management software, real-time dashboards, and centralized data systems can enhance the accuracy and accessibility of performance data (Chan & Chan, 2004).

By adopting these strategies, construction teams can make performance measurement a constructive and value-adding activity, rather than a procedural burden.

2.6 Theoretical Framework: Stakeholder Theory and Performance Management

The development and implementation of performance measures in construction partnering projects can be meaningfully understood through established theoretical lenses. Two prominent theories Stakeholder Theory and Performance Management Theory (specifically the Balanced Scorecard approach) provide valuable frameworks for ensuring relevance, fairness, and effectiveness of performance indicators in collaborative construction environments.

2.6.1 Stakeholder Theory

Stakeholder Theory, proposed by Freeman (1984), posits that organizations should not solely focus on shareholders or financiers, but rather recognize and balance the needs and interests of all stakeholders who are affected by, or can affect, the outcomes of a project. Stakeholders in construction projects typically include the client, contractor, consultants, suppliers, government agencies, and local communities.

In the context of construction partnering, the application of stakeholder theory ensures that performance measurement systems are inclusive and representative of the goals and concerns of all involved parties. Partnering projects, by their collaborative nature, depend on mutual trust, shared objectives, and cooperative performance monitoring. Therefore, stakeholder theory underlines the importance of engaging all relevant stakeholders in defining, implementing, and reviewing key performance indicators (KPIs) (Mitchell, Agle, & Wood, 1997).

By aligning performance measures with stakeholder expectations, the project team can:

- Improve transparency and accountability,
- Minimize conflict and increase cooperation,
- Promote equity and fairness in evaluation,
- Strengthen project commitment and satisfaction (Olander, 2007).

Failure to integrate diverse stakeholder perspectives may result in resistance, misaligned objectives, or the misinterpretation of performance outcomes thereby undermining the collaborative spirit of partnering.

2.6.2 Performance Management Theory: The Balanced Scorecard

The Balanced Scorecard (BSC), developed by Kaplan and Norton (1992, 1996), is a strategic performance management framework that enables organizations to evaluate performance beyond traditional financial metrics. It incorporates four key perspectives:

1. Financial – Are we meeting budgetary and profitability targets?
2. Customer – Are stakeholders satisfied with the project outcomes?
3. Internal Business Processes – Are our workflows and construction processes efficient?
4. Learning and Growth – Are we innovating and improving capabilities?

In construction partnering, the Balanced Scorecard is particularly useful because it encourages a holistic approach to performance measurement, blending both quantitative (e.g., time, cost, safety) and qualitative (e.g., communication quality, team learning, innovation) KPIs. This aligns with the multidimensional nature of project success in collaborative environments (Chan & Chan, 2004).

The BSC also facilitates strategic alignment by linking performance measures to the long-term vision and objectives of the project consortium. It provides a visual and structured method for tracking progress across various domains, promoting continuous improvement through feedback loops (Neely et al., 2005).

In the construction industry, applying the BSC within partnering arrangements has been shown to:

- Enhance clarity of roles and expectations,
- Improve project team coordination,
- Drive innovation and quality enhancement,
- Foster a learning culture across project phases (Yu et al., 2007).

Conclusion on Theoretical Framework

Combining Stakeholder Theory and the Balanced Scorecard approach offers a robust foundation for designing and evaluating performance measures in construction partnering projects. While stakeholder theory ensures equity and engagement, the Balanced Scorecard ensures balance and strategic alignment. Together, they help create a performance management system that is fair, comprehensive, and capable of driving collaboration and long-term success.

2.7 Empirical Studies on Performance Measures in Construction Partnering

Empirical evidence supports the notion that the adoption of customized and project-specific key performance indicators (KPIs) significantly enhances project outcomes in construction partnering arrangements. These indicators not only serve as tools for measuring project performance but also act as facilitators of collaboration, transparency, and mutual accountability among project stakeholders.

In a notable study conducted in Hong Kong, Cheung et al. (2004) investigated the implementation of a web-based performance monitoring system in construction partnering projects. The study found that the use of client-focused KPIs led to enhanced communication among stakeholders, early identification of potential issues, and a significant reduction in disputes. The results highlighted the importance of tailoring performance measures to reflect client expectations, which in turn encouraged contractors and consultants to prioritize quality service delivery and alignment with project goals.

Similarly, in the United Kingdom, the Latham Report (1994) strongly emphasized the need for industry-wide adoption of performance measurement frameworks. The report advocated for KPIs such as cost predictability, timely delivery, customer satisfaction, and reduced conflicts as tools to drive efficiency, build trust, and improve relationships between construction partners. Latham argued that consistent use of performance metrics across partnering projects would foster a culture of collaboration and continuous improvement, which had been lacking in the traditionally adversarial UK construction industry.

Further empirical support is provided by Meng (2012), who conducted a study on relationship management and its impact on project performance in UK construction projects. The study revealed that projects with clear, jointly agreed-upon KPIs experienced higher levels of stakeholder satisfaction, better communication, and fewer contractual disputes. Meng concluded that the clarity and mutual understanding of performance measures play a pivotal role in maintaining healthy stakeholder relationships, especially in complex and multi-party projects.

In another related study, Love et al. (2005) explored the implementation of performance measurement systems in Australian construction projects and observed that teams that employed structured performance frameworks reported improved quality outcomes, better cost control, and

enhanced innovation. The researchers attributed this to the early establishment of measurable goals, regular progress tracking, and inclusive stakeholder participation in performance review processes.

Overall, empirical studies underscore the value of KPIs as enablers of successful partnering, particularly when they are:

- Developed collaboratively,
- Linked to project-specific objectives,
- Aligned with stakeholder expectations, and
- Supported by transparent monitoring systems.

These findings reinforce the idea that performance measurement is not merely a managerial tool but a strategic instrument for aligning interests, enhancing communication, and ensuring shared success in partnering construction environments.

2.8 Summary of Literature Review

The literature highlights that KPIs are essential in evaluating partnering project performance, yet their effectiveness depends on stakeholder involvement, contextual relevance, and consistency in application. Challenges persist in standardizing, implementing, and interpreting performance measures due to technical and human factors.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction of the chapter

This chapter describes the methodology adopted in carrying out the study. It outlines the research design, population, sample size and sampling technique, methods of data collection, as well as the validity and reliability of the research instrument.

3.1 Research Design

This study adopts a descriptive survey research design, which is suitable for gathering information about people's beliefs, opinions, perceptions, and practices concerning a specific subject. The goal of this design is to describe systematically and accurately the characteristics of a particular population or phenomenon without attempting to influence or manipulate any variables (Creswell, 2014).

In the context of this study, the descriptive survey design enables the researcher to collect primary data from a clearly defined population of construction stakeholders including clients, consultants, contractors, and suppliers regarding their perceptions and experiences with performance measurement systems used in partnering projects. The choice of this design aligns with the study's aim to identify the types of KPIs in use, assess the effectiveness of existing performance measures, and explore the challenges in their implementation.

Descriptive research is particularly effective in construction-related studies because it allows for the analysis of current practices, professional opinions, and institutional behaviors within the natural operational environment of stakeholders. It is non-experimental and is often used when the objective is to gain insight into "what is" rather than to determine causal relationships (Saunders, Lewis & Thornhill, 2019). This design also supports quantitative data collection through structured instruments, such as questionnaires, which is ideal for studies involving a large and diverse population.

Overall, adopting a descriptive survey design provides a flexible yet structured framework for examining the complex dynamics of stakeholder perceptions in performance measurement within construction partnering environments.

3.2 Research Population

The research population consists of key stakeholders in the construction industry who are directly or indirectly involved in construction partnering projects. These stakeholders include clients (both public and private project owners), consultants (such as quantity surveyors, architects, and engineers), contractors, and material or service suppliers. These groups are selected because they play crucial roles in the planning, execution, and monitoring of construction projects and are therefore in the best position to provide informed insights into the development, application, and perception of key performance indicators (KPIs) in partnering arrangements.

In construction partnering, the success of projects often depends on the quality of collaboration and communication among multiple stakeholders who bring diverse interests and expertise to the table. As emphasized by Olander (2007), stakeholder engagement is critical to project performance, and understanding their perceptions helps in identifying strengths and weaknesses in current performance measurement practices. Clients provide the funding and strategic direction; consultants offer technical guidance and quality assurance; contractors handle the day-to-day construction activities; while suppliers ensure timely delivery of materials and services. Each of these groups interacts with performance indicators in different ways, making their collective input essential for this study.

Moreover, these stakeholders operate within the geographical scope of the study (e.g., Lagos, Abuja, Port Harcourt, or any specified Nigerian urban centers known for high construction activity). These locations are chosen due to their concentration of infrastructure projects, availability of partnering arrangements, and presence of registered construction professionals.

By targeting this diverse but relevant population, the study seeks to capture a comprehensive picture of how performance measures are perceived and applied across the project delivery chain in real-world construction partnering scenarios.

3.3 Sampling Frame

The sampling frame for this study comprises registered professionals and construction firms actively involved in partnering projects within the selected geographical locations, such as Lagos, Abuja, and Port Harcourt. These cities were chosen due to their concentration of infrastructure and building projects, their economic significance, and the presence of large

numbers of skilled construction professionals. The sampling frame ensures that data is collected from individuals and organizations with direct involvement in performance measurement and project partnering.

To ensure the credibility and relevance of the sampling frame, the study relies on membership directories and professional registers maintained by reputable construction-related regulatory and professional bodies. These include:

- The Nigerian Institute of Quantity Surveyors (NIQS), which provides a database of qualified and practicing quantity surveyors who are instrumental in cost control and performance evaluation on construction projects.
- The Nigerian Society of Engineers (NSE), which includes civil, structural, and services engineers who contribute to planning, executing, and monitoring construction performance.
- The Council for the Regulation of Engineering in Nigeria (COREN), the statutory body responsible for regulating and licensing engineers and engineering firms across the country.

These institutions provide credible and up-to-date directories of registered professionals and firms, ensuring that the sample is drawn from a population that meets the criteria of competence, relevance, and active participation in the Nigerian construction industry. This approach enhances the validity of the study by ensuring that only qualified and experienced stakeholders those who have been involved in partnering arrangements or are knowledgeable about performance measurement practices are included in the research.

According to Saunders, Lewis, and Thornhill (2019), defining a clear and reliable sampling frame is essential for reducing sampling bias and ensuring that the results of the study can be generalized to the broader population. By leveraging professional registers, this study achieves both targeted reach and data credibility.

3.4 Sample Size

The sample size is determined using **Yamane's formula** for sample size determination:

n=N1+N(e2)n = \frac{N}{1 + N(e^2)}

Where:

- *n* = sample size
- *N* = population size
- *e* = level of precision (usually 0.05 for 95% confidence level)

Assuming a target population of 250 stakeholders, the formula gives:

n=2501+250(0.052)=2501+0.625=2501.625≈154n = \frac{250}{1 + 250(0.05^2)} = \frac{250}{1 + 0.625} = \frac{250}{1.625} \approx 154

Thus, the study targets a **sample size of 150–160 respondents** to ensure adequate representation.

3.5 Sampling Technique

This study adopts a purposive sampling technique (also known as judgmental sampling) to identify and select individuals who possess the knowledge, experience, and involvement necessary to provide relevant and reliable data regarding performance measurement in construction partnering projects. Purposive sampling is a non-probability sampling method that allows the researcher to deliberately target participants based on predetermined criteria aligned with the objectives of the research (Etikan, Musa, & Alkassim, 2016).

In this context, selected respondents include clients, consultants (e.g., quantity surveyors, architects, engineers), contractors, and suppliers who have either participated in partnering projects or are familiar with the use of key performance indicators (KPIs) in collaborative construction environments. These categories of stakeholders are considered information-rich cases, as they possess deep insight into the success factors, limitations, and dynamics associated with performance measurement in construction partnering (Patton, 2002).

Purposive sampling is especially suitable for studies like this where the goal is not to generalize findings to the entire construction population, but rather to obtain expert opinion and stakeholder perspectives on a specific phenomenon (Creswell & Plano Clark, 2011). By focusing on professionals with direct or indirect experience in partnering arrangements, the study ensures that the data collected is contextually valid and practically useful.

Additionally, where a broader representation of stakeholder groups is needed, a stratified purposive sampling approach may be applied. In this case, the population is divided into meaningful subgroups or strata—such as clients, consultants, contractors, and suppliers—and participants are selected proportionally from each category. This approach ensures that all relevant perspectives are adequately represented, thereby enhancing the comprehensiveness and balance of the findings.

3.6 Method of Data Collection

Primary data is collected using a structured questionnaire consisting of closed-ended and Likert-scale items. The questionnaire is divided into sections covering respondents' demographics, awareness of KPIs, perceptions of existing performance measures, and challenges in implementation. Questionnaires are distributed physically and electronically (via email or online forms) to ensure wide reach and timely responses.

Where necessary, follow-up interviews or brief discussions may be used to clarify responses and gain deeper insight.

3.6.1 Validity of the Instrument

Content validity is ensured by subjecting the questionnaire to expert review by senior academics and professionals in construction project management and quantity surveying. Their feedback is used to refine the items to ensure they are clear, relevant, and aligned with the research objectives. In addition, the instrument is pre-tested with a small group (10–15 respondents) from the target population to identify ambiguities and improve clarity.

3.6.2 Reliability of the Instrument

The reliability of the questionnaire is tested using Cronbach's Alpha to measure internal consistency. A pilot test is conducted, and a reliability coefficient of 0.70 or higher is considered acceptable for the study. The test helps to confirm that the items consistently measure stakeholders' perceptions and attitudes regarding performance measures in construction partnering projects.