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CAPACITY NEEDS ASSESSMENT AND PERFORMANCE OF CONSTRUCTION FIRMS IN ANAMBRA STATE, NIGERIA

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Abstract

In developing countries like Nigeria the construction industry continues to record chronic under-performance, limited access to modern equipment, weak management practices, frequent project delays and cost overruns, which impede the performance of construction firms. This study examined the relationship between capacity needs assessment and performance of construction firms in Anambra State. The specific objectives of the study were to investigate how various aspects of capacity needs such as technical expertise and financial capacity, affect performance of construction firms in Anambra State in terms of efficiency and project execution, To achieve these objectives, two research questions and corresponding hypotheses were formulated to guide the study. The study was anchored on Resource-Based View (RBV) theory primarily credited to Jay Barney (1991). It utilized descriptive survey research design. The population of study consist of 10 construction firms in Anambra state. Data were collected from both primary and secondary sources with the questionnaire serving as the major instrument of data collection. The data obtained from primary sources were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics, including tables, simple percentages, and mean scores, were employed to present and summarize the data. For hypotheses testing, inferential statistical techniques, specifically the Pearson Product Moment Correlation (r) technique was employed

using the Statistical Package for Social Sciences (SPSS) version 25. The hypotheses were tested at a 0.05 level of significance. Findings revealed that technical expertise and financial capacity have significant positive effect on performance of construction firms in Anambra State in terms of efficiency and project execution. Based on these findings, the study concluded that capacity needs assessment is a critical determinant of construction firm performance in Anambra State. It recommends that construction firms should invest in recruiting qualified technical professionals and engage them in continuous capacity building on modern construction technologies, standards, and methodologies in order to improve operational efficiency.

Keywords*: capacity needs assessment, performance*, technical expertise, efficiency, financial capacity, and project execution

Introduction

The construction industry plays a vital role in national development, serving as a major driver of infrastructure provision, employment creation, and economic growth. In emerging economies such as Nigeria, the sector is particularly important given the pressing demand for improved physical infrastructure to support urbanization, industrialization, and housing development (Ameh & Osegbo, 2021). The industry, however, is highly labour-intensive and knowledge-driven, and its success is largely dependent on the capacity of its workforce and organizations to deliver projects effectively, on time, within budget, and at acceptable quality standards. As such, understanding the dynamics of capacity needs assessment and its influence on employee performance has become a central issue in contemporary construction management discourse.

Capacity needs assessment is a systematic process to identify gaps between an organisation's or individual's desired capabilities and their actual existing strengths, revealing what is missing (skills, resources, systems) to achieve goals, informing targeted development plans, and ensuring effective resource allocation in areas like health education or business, ensuring solutions fit real needs. It involves assessing individuals, team, orgaanisations, and even the broader environment like policies or infrastructures to bridge

knowledge gap, create evidence-based plans for capacity building and identified strength to foster self-resilience

Statement of the Problem

In most developing countries, a thriving construction sector is widely recognized as a major contributor to economic development, infrastructure expansion and employment generation. Construction firms that possess adequate technical expertise, financial capacity and managerial competencies are better placed to deliver high quality infrastructure on schedule and within budget (Eze & Okafor, 2021). In developed construction markets, firms routinely undertake capacity-assessments to uncover skill gaps, resource deficiencies and operational inefficiencies; they invest in workforce training, modern equipment and strategic planning, thereby improving productivity and competitiveness (Nwosu & Chukwu, 2020).

By contrast, in developing countries such as Nigeria the construction industry continues to record chronic under-performance. Empirical studies show that many building firms face major constraints including inadequate start-up and working capital, limited access to modern equipment, weak management practices, frequent project delays and cost overruns. For example, Mbazor, Igbokwe, and Nwakaego (2022) found that inadequate start-up capital is the major challenge for small and medium building contractors in Nigeria. Likewise, Nwankwo and Ezeh (2020) reported that poor managerial competence and insufficient technical capacity significantly impede project delivery performance in the Nigerian construction sector. Research also shows that firms' capacity constraints are tied to institutional weaknesses, regulatory bottlenecks and poor adoption of technology (Onwurah & Okechukwu, 2021).

In the case of Anambra State, the growing demand for infrastructure provides significant opportunity for local construction firms, yet their capacity to meet this demand effectively remains under-explored. Anecdotal reports and practitioner observations point to persistent

problems: indigenous firms struggle with limited technical and managerial capacity, face stiff competition from larger or foreign firms with stronger financial and operational bases, suffer delays, cost overruns, and sub-standard workmanship. However, there is scant empirical data on the specific capacity needs of construction firms in Anambra State, that is, on which technical skills, financial resources and managerial competencies are lacking, and on how these deficiencies relate to firm performance. Without rigorous evidence on capacity gaps, it is unclear whether existing capacity-building efforts are sufficient, appropriately targeted or capable of enabling local firms to compete and deliver.

If the capacity of construction firms in Anambra State continues to remain inadequate, the implications are troubling: infrastructure projects may frequently fail or be delayed, costs may escalate, quality may be compromised, investor confidence may weaken, and the ability of indigenous firms to contribute meaningfully to the local economy may be lost. In effect, the full potential of infrastructure-led economic growth may not be realized, and local firms may be relegated to subcontracting roles or excluded altogether in favour of better-resourced companies.

Given these stakes, this study seeks to carry out a structured capacity-needs assessment of construction firms in Anambra State, identifying the key gaps in technical skills, financial resources and managerial competencies, and to examine how these capacity-needs influence the performance of those firms.

Objectives of the Study

The broad objective of this study is to assess the relationship between capacity needs and performance of construction firms in Anambra State. Specifically, this study seeks to;

i. examine the effect of technical expertise on the efficiency of construction firms in Anambra State.

ii. analyze the effect of financial capacity on project execution in construction firms in Anambra State.

Hypotheses

The following hypotheses were formulated to guide the study.

i. H_0: Technical expertise has no significant effect on the efficiency of construction firms in Anambra State.
ii. H_0: Financial capacity has no significant effect on project execution in construction firms in Anambra State.

REVIEW OF RELATED LITERATURE

Capacity of Needs Assessment

Capacity needs assessment has been conceptualized differently by scholars and practitioners, but all definitions converge on the idea of identifying existing capabilities and gaps that must be addressed to improve performance within an organization or sector. According to Lusthaus, Adrien, Anderson, Carden, and Montalván (2022), capacity needs assessment refers to the systematic process of analyzing the strengths and weaknesses of an organization in relation to its mission, goals, and environment, with the aim of determining areas where development support is required. This definition emphasizes the dual focus on internal capacities and external conditions that shape organizational effectiveness. Similarly, Brown, LaFond, and Macintyre (2021) viewed capacity needs assessment as a diagnostic exercise that identifies the competencies, resources, and systems an organization requires to carry out its functions effectively and sustainably. Their definition underscores the importance of both human and institutional dimensions of capacity, extending beyond individual skills to organizational structures and processes.

Capacity Needs

The concept “Capacity Needs” has garnered increasing scholarly attention in the fields of organizational development, human resource management, and institutional strengthening, particularly in relation to performance outcomes. Over the years, various scholars have attempted to define the concept, providing diverse interpretations based on specific disciplinary lenses and research contexts. In general terms, capacity needs reflect the gaps or deficiencies within an individual, group, organization, or system that must be addressed to improve functionality, achieve goals, or perform optimally (Azeez, 2019). According to this perspective, capacity needs encompass both tangible and intangible requirements ranging from infrastructure, tools, and financial resources to knowledge, skills, and competencies required to execute tasks effectively.

Kapucu and Khosa (2021), define capacity needs as the "necessary improvements in skills, resources, and institutional capabilities that are essential to fulfill expected responsibilities and meet organizational objectives." This definition aligns with a performance-based outlook, suggesting that capacity needs are fundamentally linked to the ability to deliver outcomes. It also emphasizes that capacity is not static but an evolving construct influenced by changes in roles, responsibilities, and external demands. Similarly, Scharff and Horn (2018) described capacity needs as the "specific gaps in organizational readiness and operational proficiency that hinder effective service delivery." This viewpoint situates the concept within a framework of operational efficiency and effectiveness, highlighting that performance can only be enhanced when these capacity gaps are identified and strategically addressed.

Technical Expertise

Technical expertise is a critical concept that has garnered significant attention across various academic and professional fields. Thus, Scholars from different fields have defined it in various contexts. In a simple term, it means specialized knowledge, applied skills, and

the ability to solve complex, domain-specific problems. Dutton, Ashford, O'Neill and Lawrence (2015), defined technical expertise as the specialized knowledge and skills required to perform tasks within a specific domain. They highlighted that this knowledge is acquired through education, training, and practical experience. This view emphasizes the role of both formal education and hands-on practice in developing technical expertise.

Similarly, Ofori (2021), described technical expertise in the construction industry as the "ability of professionals to interpret, implement, and manage construction processes efficiently," The author painted out that expertise involves not just knowledge but also the capacity to apply that knowledge effectively. The author's definition underscores the process-oriented nature of technical expertise, situating it within the operational environment where project success is directly tied to the effective deployment of technical skills.

Building on this, Ahmed, Aibinu and Pasquire (2021), conceptualized technical expertise as the "combination of procedural knowledge, problem-solving ability, and practical skill that allows an individual to execute specific tasks to a high standard of quality." This definition captures the complexity of technical expertise by integrating both cognitive and behavioral dimensions, acknowledging that expertise is demonstrated through action and consistent performance. The authors emphasized that technical expertise is not merely theoretical knowledge but must be demonstrated through competence in real-world situations.

In the context of construction project management, Gamil and Rahman (2018), argued that technical expertise encompasses "the capacity of construction professionals to manage on-site activities, interpret drawings and specifications, and ensure compliance with quality standards." This definition highlights that technical expertise is closely linked to the ability to manage dynamic work environments where coordination among various actors and adherence to standards are crucial. According to the authors, technical expertise involves

both individual capability and the ability to collaborate effectively in multidisciplinary teams.

In a broader organizational context, Buvik and Rolfsen (2019), defined technical expertise as "the ability of an organization's personnel to utilize specialized knowledge and skills to achieve organizational objectives effectively." This definition shifted the focus from individual professionals to the organizational level, indicating that technical expertise is a collective asset that can enhance organizational performance. They suggested that technical expertise also involves the integration of new technologies and continuous learning to maintain competitiveness.

Financial Capacity

Financial capacity is a pivotal concept in organizational and project management literature, particularly within the construction industry, where it significantly influences firms' ability to undertake and complete projects successfully. Various scholars have offered definitions that encapsulate the complex nature of the concept, emphasizing aspects such as liquidity, solvency, and access to capital.

The APMG Public-Private Partnerships Certification Program (2025), defined financial capacity as the assurance that a company or consortium possesses a healthy financial situation, enabling it to meet the financial demands of a project. This includes the availability of funds to meet equity requirements and the capacity to raise third-party funds in the form of long-term debt. Indicators of financial capacity, as per this definition, encompass financial ratios like debt-to-equity, liquidity ratios, and metrics such as average revenues and profit levels over recent years.

In the context of small and medium-sized enterprises (SMEs), Mugisha, Omagwa and Kilika, (2022) described financial capacity as the ability of business organizations to

remain solvent during economic downturns by offsetting both short-term and long-term obligations. They argue that a firm's inability to meet its obligations as they fall due exposes it to risks such as restructuring or bankruptcy, which can adversely affect its equity value. Thus, financial capacity is directly and indirectly linked to a firm's performance and sustainability.

Tucker, Windapo, and Cattell (2025) explore financial capacity within the construction industry, identifying it as a predictor of corporate performance. They suggested that financial capacity includes the financial capital and net assets of construction companies, which are positively correlated with corporate performance indicators like turnover. Their study emphasizes the importance of financial capacity in enabling construction firms to undertake projects and achieve financial success.

Performance

The concept "performance" has been explored extensively across diverse academic disciplines and sectors to reflect its dynamic and context-specific nature. It generally connotes the extent to which an individual, group, or organization achieves predetermined goals, meets expectations, or accomplishes desired outcomes. In organizational studies, performance is widely regarded as a multidimensional construct that includes aspects such as efficiency, effectiveness, productivity, and quality. According to Osabiya (2025), performance refers to the degree to which objectives of an organization are achieved through appropriate use of resources and effective execution of planned activities. This definition underscores the interrelationship between resource utilization and outcome realization in defining organizational success.

Performance has also been defined as the consistent ability of an entity to produce results that meet or exceed expectations in a given context. Adiele and Abraham (2016) conceptualized performance as a measure of output in relation to input, emphasizing that higher performance levels denote increased efficiency and productivity. From this

perspective, performance is not merely the final result but also involves the process through which goals are attained. It reflects both input transformation and outcome achievement, thus aligning with the operational realities of modern organizations.

Eneanya (2018) builds on this by positing that organizational performance encapsulates a combination of factors, including employee behaviour, internal processes, innovation, and customer satisfaction. This broad interpretation suggests that performance should not be assessed solely based on profit margins or output levels but also through holistic metrics that capture overall functionality and adaptability of the organization. Thus, performance becomes a function of both tangible and intangible assets that contribute to organizational survival and competitiveness.

Similarly, Akinbowale, Lourens, and Jinabhai (2020) argued that performance can be viewed as a dynamic measure, indicating the ability of an organization to adapt to changing environments while achieving desired results. This view emphasizes strategic alignment and responsiveness as crucial components of performance. It resonates particularly well with firms operating in volatile industries such as construction, where flexibility and adaptability are critical for maintaining operational effectiveness.

Efficiency

Efficiency is a multidisciplinary concept. It generally refers to the ability of an entity, system, or process to achieve desired outcomes with minimal waste of time, effort, or resources. It embodies the principle of optimal performance, where resources are utilized effectively to produce maximum output. In the context of construction firms, efficiency signifies the ability to deliver projects on time, within budget, and at the expected quality standard, while ensuring the best use of manpower, materials, technology, and finances (Alamu & Danjuma, 2024).

Alamu and Danjuma (2024), discussed efficiency in the context of technological integration, particularly robotics, within Nigeria's construction industry. They highlight that efficiency encompasses the improvement of labour productivity, resource management, and project delivery speed through the adoption of advanced technologies. Their study underscores that embracing robotics can lead to significant enhancements in operational efficiency, despite challenges such as high acquisition costs and workforce apprehension.

Unegbu, Okorie and Nwosu, (2025) approach efficiency from the perspective of resource utilization within the framework of the circular economy. They define efficiency as the optimal use of resources to minimize waste and environmental impact while maximizing output. Their research emphasizes that adopting circular economy practices can lead to improved efficiency by promoting sustainable resource management and waste reduction in construction projects.

Eze (2020) examined efficiency through the lens of lean construction practices. He posited that efficiency involves the elimination of non-value-adding activities, thereby streamlining processes and reducing waste. By implementing lean methodologies, construction firms can enhance project performance, reduce costs, and deliver higher quality outcomes.

Aghimien, Aghimien and Adegbembo (2016), further elaborate on lean construction, defining efficiency as the ability to deliver projects that meet client needs with minimal waste and optimal resource utilization. Their study indicates that lean construction practices lead to improved workflow, reduced project timelines, and increased client satisfaction, all of which are indicators of enhanced efficiency.

Oke and Ogunsemi (2011) discussed efficiency in the context of value engineering, defining it as the process of identifying and eliminating unnecessary costs without

compromising quality. They argued that efficiency is achieved by optimizing design and construction processes to deliver maximum value to clients. Their research suggested that value engineering can significantly improve efficiency by focusing on cost-effectiveness and functional performance.

Project Execution

Before going on with the concept, project execution, let us understand the concept "project ". The term "project" has been defined by Akpan (2020) as any unique activity, situation, process, task, program, scheme, or human endeavour in which human, time, and other resources are utilized to satisfy a definable and definite one-off objective. The realization of the set objective generally signals the completion of this unique activity. This definition underscores the uniqueness and goal-oriented nature of projects, emphasizing the utilization of various resources to achieve specific objectives.

Going on to the main concept, Project execution is a critical phase in the project lifecycle. It has been defined by various scholars, each providing insights into its processes and significance. For instance, Itsekor (2024) defined it as the sequence or stage involved in which a construction project follows from the award of the contract to the completion. This can be generally understood as the post-contract stage. This definition emphasizes the chronological progression of activities from contract award to project completion, highlighting the structured nature of project execution.

Anyanwu (2023) described project execution as the construction stage where supervising officers or project coordinators, often architects or engineers appointed by various government levels or private entities, are responsible for ensuring that projects are executed according to contract documents. This definition underscores the administrative aspect of project execution, highlighting the importance of coordination among professionals to achieve project goals.

In the context of construction management, Adedeji (2019) posited that construction planning is a fundamental and challenging activity in the management and execution of construction projects. It involves the choice of technology, the definition of work tasks, the estimation of the required resources and durations for individual tasks, and the identification of any interactions among the different work tasks. A good construction plan is the basis for developing the budget and the schedule for work. Developing the construction plan is a critical task in the management of construction, even if the plan is not written or otherwise formally recorded. This perspective implies that project execution is not only about the physical construction activities but also about effective planning and organizational decision-making to ensure successful project delivery.

Theoretical Framework

This study was anchored on the Resource-Based View (RBV) theory. The Resource-Based View (RBV) theory is a foundational framework in strategic management and organizational studies, primarily credited to Jay Barney in his seminal work of 1991. However, its conceptual roots can be traced further back to the works of Edith Penrose in 1959, who argued that a firm is essentially a bundle of resources and capabilities. Barney (1991) built upon this by formalizing the theory into a coherent strategic model. He posited that an organization's ability to gain and sustain competitive advantage lies within the internal resources it possesses rather than the external market environment. The central idea of the RBV theory is that organizations are heterogeneous in terms of the resources they control and that these differences can be the basis for superior performance if the resources are valuable, rare, imperfectly imitable, and non-substitutable. This inward-looking perspective marked a shift from earlier theories that emphasized market positioning and industry structure, such as Porter's Five Forces model. The RBV, therefore, offers a dynamic understanding of why some firms outperform others based on internal strengths, encouraging firms to evaluate and build upon their unique capabilities to create strategic advantage.

Empirical Review

Adekunbi (2025), investigated the effect of capacity needs assessment on performance outcomes of medium-scale construction firms in Lagos State, Nigeria. The study aimed to determine how systematic evaluation of workforce competence, equipment requirements, and managerial capabilities contribute to improved operational efficiency in construction projects. The research was anchored on the Resource-Based View (RBV) Theory, emphasizing internal resource development as a driver of competitive advantage. The study adopted a descriptive survey research design, targeting a population of 410 employees drawn from ten registered civil engineering firms in Lagos. A sample of 210 respondents was obtained through simple random sampling. A structured questionnaire served as the primary instrument for data collection, while multiple regression and descriptive statistics were used for data analysis. Findings revealed that capacity needs assessment significantly enhanced job proficiency, timely project delivery, and resource utilization. It also highlighted skills-gap identification, continuous professional development, and equipment upgrade planning as core determinants of organizational productivity. Respondents, however, noted constraints such as insufficient funding and inadequate institutional support for capacity-building.

Ezeugwu, Peters, and Mathew (2025), explored how capacity needs evaluation affects the performance of indigenous construction firms in Accra, Ghana. The core purpose was to evaluate the extent to which structured assessment of skill gaps, organizational processes, and equipment capability drives productivity in the Ghanaian construction industry. The study was guided by the Competency-Based Management Theory, which emphasizes aligning workforce capability with organizational needs. A mixed-methods research design was adopted, with a target population of 500 technical employees and management personnel from fifteen construction firms. The researchers sampled 240 participants through stratified random sampling, and data were obtained using questionnaires and key-informant interviews. Collected data were analyzed through linear regression and thematic

content analysis. Results indicated a significant positive link between capacity gaps identification and enhanced service quality, productivity, and adherence to project timelines. However, the study revealed issues such as insufficient investment in staff development and outdated mechanical equipment.

Onyeka and Badmus (2025), analyzed the role of capacity needs assessment on the operational success of construction firms in Port Harcourt, Rivers State, Nigeria. The purpose was to ascertain the impact of structured evaluation of employee competencies, resource availability, and organizational structure on performance indicators such as cost savings and project delivery timeline. The study adopted the Systems Theory, emphasizing the interconnection between organizational components in achieving efficiency. A survey research design was utilized with a population of 298 engineers, site managers, and administrative staff from seven major construction firms. A sample of 160 respondents was selected through purposive sampling, and data were collected using validated questionnaires. The researchers analyzed data using multiple regression and frequency tables. Findings revealed that firms conducting regular capacity assessments recorded higher project delivery efficiency, improved safety standards, and lower operational risks. Despite this, challenges such as inconsistent training planning and managerial reluctance to invest in modern construction technologies were noted.

Musa, Adekunle, and Eze (2024), conducted an in-depth analysis of capacity development needs and their correlation with project delivery outcomes among indigenous construction firms across three Northern Nigerian states: Kaduna, Kano, and Jos. The study was premised on Human Capital Theory, which emphasizes the value of employee competencies and organizational learning in achieving project excellence. The researchers employed a mixed-methods sequential explanatory design, beginning with a survey administered to 300 personnel and followed by interviews with 20 senior managers across 50 firms. The survey measured capacity dimensions including technical proficiency,

administrative structure, knowledge-sharing practices, and adaptability to regulatory standards. Quantitative data were analyzed using SPSS software, while qualitative responses were subjected to thematic content analysis. The results revealed a statistically significant relationship between proactive capacity needs assessment and improvements in project execution, particularly in areas of cost control, quality compliance, and stakeholder engagement.

Musa and Okechukwu (2020), carried out a study entitled *"capacity assessment and productivity in the construction sector: A study of public sector projects in Northern Nigeria."* The aim of the study was to analyze the link between workforce capacity and productivity levels in public sector construction projects. The study was built on the Theory of Constraints (TOC), which posits that organizational performance is constrained by the weakest links in operational capacity. The research design was an exploratory survey, with a population comprising 310 professionals from federal and state construction agencies in Northern Nigeria. A sample of 130 respondents was drawn using cluster sampling. Data were obtained using a 30-item capacity assessment questionnaire and productivity scorecards from ongoing public projects. Data were analyzed using correlation and stepwise regression techniques. The study found that the lack of skilled labour, poor technical training, and outdated equipment were major bottlenecks to performance

METHODOLOGY

Research Design

This study adopted a descriptive research design. The design was considered most appropriate because it enables the researcher to systematically describe and analyze the existing capacity needs of construction firms in Anambra State and how these needs influence their performance. Descriptive research design also provides an opportunity to collect quantitative data from a representative sample of respondents, which was analyzed to draw inferences about the larger population. Through the use of structured questionnaires, the designl facilitate the collection of reliable data that can be statistically analyzed, thereby ensuring that the objectives of the study are adequately achieved.

Area of Study

Anambra State served as the area of this study. Anambra State is one of the 36 states that make up the Federal Republic of Nigeria, located in the South-East geopolitical zone of the country. The new Anambra state was created on August 27, 1991, following the division of the old Anambra State into present-day Anambra and Enugu States. The state derives its name from the Omambala River, a tributary of the River Niger that flows through its territory. Awka serves as the state capital, while other major urban centers include Onitsha, Nnewi, Ekwulobia, and Ihiala. The state is bounded to the north by Kogi State, to the west by Delta State, to the east by Enugu State, and to the south by Imo State, covering an area of approximately 4,844 square kilometers with an estimated population of approximately 5.5 million people, National Population Commission (2016).

Population of the Study

The population of this study comprised all the registered construction firms operating within Anambra State. However, owing to challenges associated with obtaining comprehensive data from all construction firms across the State, the study was delimited to ten (10) purposively selected construction firms with a combined population of 224 staff members. The selected firms and their respective staff strength are shown in the table below.

Table 3.3.1 Population Distribution of Selected Firms

S/N	Firms	Location (Anamba State)	Number of Staff
1.	Interbau Construction Ltd	Awka	28
2.	Niger Construction Company Ltd	Onitsha	26
3.	Paul-B Nigeria Plc	Nnewi	25
4.	IDC Construction Ltd	Awka	23
5.	J. Berger Nigeria Plc (Anambra Unit)	Onitsha	22
6.	Deltatek Construction Ltd	Ekwulobia	20
7.	Bolus Construction Ltd	Awka	21
8.	Dutum Construction Ltd	Nnewi	20
9.	Tamad Construction Company Ltd	Ihiala	19

10.	Monier Construction Company (MCC)	Onitsha	20
	Total		**224**

Source: Field Survey (2025)

Sample Size Determination

The study adopted the purposive sampling technique. This technique was considered most appropriate because it allows the researcher to deliberately select firms that are relevant to the study objectives. In this case, ten (10) construction firms were purposively chosen from the population of construction firms in Anambra State based on their accessibility, operational scale, and relevance to the study. Furthermore, complete enumeration approach was employed in selecting respondents from the chosen firms. This implies that the entire staff population of 224 within the selected construction firms was studied. The adoption of the enumeration approach was justified by the manageable size of the population, which allows for the inclusion of all elements in the study without the need for sampling.

Data Collection Instrument

The main instrument for data collection in this study was the questionnaire. The questionnaire was structured using a five-point Likert scale of Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree.

Method of Data Analysis

The data collected from the administered questionnaires were carefully edited, coded, and entered into the Statistical Package for the Social Sciences (SPSS) version 25 for analysis. Both descriptive and inferential statistical techniques were employed. Descriptive statistics such as frequencies, percentages and mean scores were used to summarize and present the demographic data of respondents as well as their responses to the research questions. Inferential statistics, particularly Pearson's Product Moment Correlation Coefficient (PPMC) and simple linear regression analysis, were employed to test the hypotheses of the study and determine the relationship between capacity needs assessment and the performance of construction firms in Anambra State. All hypotheses were tested at a 0.05 level of significance, and the results were presented using tables and charts for clarity and proper interpretation.

RESULTS AND ANALYSIS

Descriptive Statistics Result

Data Analysis Based on Research Questions

Table 4.1.6: Mean Rating of the Effect of Technical Expertise on the Efficiency of Construction Firms in Anambra State.

S/N	Item Description	SA	A	U	D	SD	T	$\bar{x}$	Decision
1	The availability of skilled engineers in my firm improves timely project completion.	78	92	15	16	8	209	4.0	Agree
2	Regular use of modern construction technology enhances operational efficiency in my firm.	99	57	11	23	19	209	3.9	Agree
3	The level of technical know-how among staff reduces project errors.	73	86	9	27	14	209	3.9	Agree
4	Staff with specialized technical certifications improve construction output.	84	61	12	21	29	209	3.7	Agree
5	Lack of technical expertise among staff negatively affects operational efficiency.	101	75	18	9	6	209	4.2	Agree
	Cluster Mean							**3.9**	

Source: Field Survey, (2025).

The results show that all items in this section have mean scores ranging from 3.7 to 4.2, with a cluster mean of 3.9, indicating agreement among respondents. This implies that technical expertise significantly enhances efficiency in construction firms. Skilled engineers, modern construction technology, technical know-how, and specialized certifications were all rated as strong contributors to timely project completion and reduction of operational errors. The implication is that improving technical capacity remains a critical factor in enhancing the overall performance and competitiveness of construction firms in Anambra State

Table 4.1.7: Mean Rating of the Effect of Financial Capacity on Project Execution in Construction Firms in Anambra State.

S/N	Item Description	SA	A	U	D	SD	T	$\bar{x}$	Decision
6	Adequate financial resources ensure smooth execution of projects in my firm.	86	72	8	19	24	209	3.9	Agree
7	The ability to access credit facilities enhances timely project delivery.	69	87	4	32	17	209	3.8	Agree
8	Availability of working capital improves consistency in project execution.	97	76	11	9	16	209	4.1	Agree
9	Financial stability of the firm reduces delays in project implementation.	71	62	16	26	34	209	3.5	Agree
10	Limited financial capacity often hinders the completion of projects.	85	43	19	39	23	209	3.6	Agree
	Cluster Mean							**3.8**	

Source: Field Survey, (2025).

The table shows strong agreement across all items, with mean scores between 3.5 and 4.1 and a cluster mean of 3.8. Respondents agree that adequate financial resources, access to credit, availability of working capital, and financial stability are essential for effective project execution. The implication is that financial capacity is a major determinant of construction project success, and inadequate funding remains a critical challenge that can lead to delays or abandonment of projects in the state.

Test of Hypotheses

Hypothesis One

H_0: Technical expertise has no significant effect on the efficiency of construction firms in Anambra State.

H_1: Technical expertise has significant effect on the efficiency of construction firms in Anambra State.

Table 4.2.1: Pearson Correlation of Technical Expertise on the Efficiency of Construction Firms in Anambra State

		Technical Expertise	Efficiency
Technical Expertise	Pearson Correlation	1	0.74*
	Sig(2-tailed)		0.000
	N	209	209
Efficiency	Pearson Correlation	0.74*	1
	Sig (2-tailed)	0.000	
	N	209	209

Table 4.2.1 shows the correlation between technical expertise and efficiency of construction firms in Anambra State. The correlation coefficient (r = 0.74, p = 0.000) shows a strong positive and statistically significant relationship between technical expertise and efficiency of construction firms. Since the value is positive and close to 1, the null hypothesis is rejected. This implies that higher technical expertise leads to increased operational efficiency. The implication is that construction firms must prioritize improving technical skills and adopting modern construction technologies to enhance performance.

Hypothesis Two

H_0: Financial capacity has no significant effect on project execution in construction firms in Anambra State.

H_1: Financial capacity has significant effect on project execution in construction firms in Anambra State.

Table 4.2.2: Pearson Correlation of Financial Capacity on Project Execution in Construction Firms in Anambra State.

		Financial Capacity	Project Execution
Financial Capacity	Pearson Correlation	1	0.81*
	Sig(2-tailed)		0.000
	N	209	209
Project Execution	Pearson Correlation	0.81*	1
	Sig(2-tailed)	0.000	
	N	209	209

Table 4.2.2 shows the correlation between financial capacity and project execution in construction firms in Anambra State. The correlation coefficient ($r = 0.81$, $p = 0.000$) indicates a very strong positive and significant relationship between financial capacity and project execution. The null hypothesis is therefore rejected. This means that financial capacity is a key predictor of successful project delivery. The implication is that adequate funding, access to credit, and robust financial planning are essential for avoiding delays and ensuring the timely completion of construction projects in Anambra State.

Conclusion

Based on the findings, the study concludes that capacity needs assessment is a critical determinant of construction firm performance in Anambra State. Technical expertise, and financial strength, collectively form the foundation upon which construction firms deliver efficient, timely, and high-quality projects. Construction firms with skilled technical personnel, strong financial bases, well-trained workers, and competent managers perform significantly better and contribute more effectively to the infrastructural development of any region. The results underscore the need for systematic capacity development strategies to ensure sustainability and competitiveness in the construction industry. Therefore, addressing capacity gaps remains essential for optimizing performance, enhancing organizational resilience, and meeting the growing demands of the construction sector in Anambra State.

5.3 Recommendations

In line with the significant findings of this study, the following recommendations are made:

1. Construction firms should invest in recruiting qualified technical professionals and engage them in continuous capacity building on modern construction technologies, standards, and methodologies in order to improve operational efficiency.
2. Firms should adopt sound financial management practices, diversify funding sources, and pursue partnerships or financing arrangements that ensure stable cash flow necessary for timely and effective project execution.

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