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Analysis of Effects of Contract Planning on Building Construction Project Performance. (A Case Study of Selected Building Projects) In Port Harcourt, Rivers State.

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ABSTRACT:

This study analyzes the effect of contract planning on building construction project performance in Port Harcourt, Rivers State. The research examined how contract planning practices—monitoring intensity, risk management, evaluation, and planning procedures—influence project performance and successful delivery. A mixed-method design was adopted, incorporating quantitative data from 96 respondents across professional groups (engineers, architects, builders, quantity surveyors, project managers, and clients) and qualitative data from interviews with key stakeholders. Descriptive statistics and the Pearson Product Moment Correlation Coefficient were used for data analysis. Findings revealed a strong, positive, and statistically significant relationship between contract planning and successful project delivery ($r = 0.827$, $p < 0.01$) as well as a significant correlation between contract planning and overall project performance ($r = 0.624$, $p < 0.01$). The study concludes that contract planning significantly influences timeliness, cost efficiency, quality conformance, and client satisfaction. Recommendations emphasize institutionalizing contract planning frameworks, enhancing training in planning administration, and strengthening monitoring systems within the construction sector.

Keywords: contract planning, project performance, monitoring intensity, risk management, construction projects, Port Harcourt.

1. INTRODUCTION

The construction industry is a major driver of socio-economic development, contributing to infrastructure growth, employment, and national productivity. Building construction projects, however, frequently experience challenges such as delays, cost overruns, and quality shortfalls. Scholars have identified inadequate or ineffective contract planning as a critical contributor to these persistent problems (Banaitiene & Banaitis, 2012; Oluka & Basheka, 2019).

Contract planning—which encompasses defining scope, timelines, risk assessment, communication structures, and resource allocation—is fundamental to the successful delivery of building projects. Yet, in many developing countries, including Nigeria, contract planning practices remain weak or inconsistently implemented (Sayegh, 2014). This contributes to poor performance indicators such as project abandonment, financial losses, scope creep, and client dissatisfaction.

Port Harcourt, being a major industrial city, hosts numerous public and private building projects. Despite the volume of construction activities, many projects still experience chronic inefficiencies linked to planning failures. This study therefore investigates the effects of contract planning on building project performance in Port Harcourt, identifying planning practices used, levels of awareness, impacts on performance, and key inhibiting factors.

2. LITERATURE REVIEW (CONDENSED)

2.1 Concept of Contract Planning

Contract planning refers to the systematic preparation and management of contract terms, execution processes, monitoring requirements, and project controls. Basheka's (2008) model outlines planning components such as risk management, contract amendments, monitoring, and evaluation.

2.2 Monitoring Intensity

Monitoring ensures compliance with planned schedules, quality standards, and cost expectations. High monitoring intensity reduces inefficiencies, corruption, and opportunistic behaviour (Creswell, 1994; Liautaud, 2001).

2.3 Risk Management

Risk management identifies, analyses, and mitigates potential threats affecting project success. Studies argue that managing risks early and continuously enhances performance and reduces cost overruns (Raz et al., 2002; Eskesen et al., 2004).

2.4 Evaluation

Evaluation enables performance review, defect assessment, and improvement of project processes. Kaoru Ishikawa's (1960) model emphasizes root-cause analysis for performance improvement.

2.5 Theoretical Framework

Three theories anchor this study:

1. **Agency Theory** – highlights principal-agent inefficiencies due to information asymmetry.
2. **Transaction Cost Economics (TCE)** – evaluates governance mechanisms and contracting costs.
3. **Contingency Theory** – argues that planning effectiveness depends on contextual project conditions.

2.6 Empirical Review

Scholarly evidence demonstrates that robust contract planning improves project outcomes such as cost, time, quality, and stakeholder satisfaction (Oladapo, 2007; Dada & Jagboro, 2012; Aibinu & Jagboro, 2002).

3. METHODOLOGY

3.1 Research Design

A cross-sectional survey design combining quantitative and qualitative approaches was adopted.

3.2 Population and Sample Size

The study population comprised 125 construction professionals. Using Taro Yamane's formula, a sample size of **96 respondents** was derived and selected using stratified random sampling.

3.3 Data Sources

- **Primary data:** questionnaires and interviews
- **Secondary data:** journals, textbooks, reports, and project records

3.4 Data Collection Instruments

Questionnaires captured responses on planning, risk management, monitoring, evaluation, and performance. Interviews were conducted with experienced practitioners to provide contextual insights.

3.5 Data Analysis

- **Quantitative:** Descriptive statistics and Pearson correlation coefficient
- **Qualitative:** Thematic analysis
- **Decision rule:** Reject null hypothesis at $p < 0.01$

4. RESULTS

4.1 Response Rate and Demographics

Table 1: Summary of Respondents (n = 96)

Professional Group	**%**
Engineers	27.1
Architects	20.8
Quantity Surveyors	19.8
Builders	9.4
Clients	11.5
Project Managers	11.5

Most respondents had **11–15 years of experience**, demonstrating reliability of responses.

4.2 Contract Planning Practices

Table 2: Contract Planning Indicators (Mean Scores)

Indicator	Mean	Std. Dev
Contractors' quality conformance	4.11	0.94
Project quality standards	4.02	0.96
Excellent communication	3.83	1.16
Timely project delivery	3.88	1.05
Reliability of materials	3.87	1.04

Respondents strongly agreed that contract planning enhances quality, efficiency, communication, and timeliness.

4.3 Project Performance Indicators

Table 3: Performance Measures

Performance Variable	Mean
Safety Protocols	3.58
Quality of Service	3.43
Timeliness of Response	3.28
Cost Efficiency	3.24
Service Efficacy	3.17

Quality and safety had the strongest influence on project performance.

4.4 Correlation Analysis

Table 4: Correlation Results

Relationship Tested	r-value	p-value	Interpretation
Contract Planning vs Successful Delivery	**0.827**	0.000	Strong, significant
Contract Planning vs Project Performance	**0.624**	0.000	Strong, significant

Both relationships are statistically significant at $\mathbf{p < 0.01}$, leading to rejection of both null hypotheses.

5. DISCUSSION

Findings confirm that effective contract planning significantly enhances project performance in the building sector. Strong correlation values ($r = 0.827$; $r = 0.624$) align with prior research emphasizing the role of planning and monitoring in achieving project success (Cooke-Davies, 2019).

Key Insights:

1. **Quality Conformance:** Contract clauses related to material standards, workmanship, and inspection schedules drive improved project quality.
2. **Monitoring Intensity:** Regular inspections and reporting minimize deviations and enhance accountability.
3. **Risk Management:** Early risk identification reduces uncertainties and variation claims.
4. **Evaluation Mechanisms:** Performance reviews support corrective actions and knowledge improvement.

Failure to institutionalize contract planning often results in delays, cost escalations, and client dissatisfaction, consistent with the regional challenges noted in Port Harcourt's construction environment.

6. CONCLUSION & RECOMMENDATIONS

6.1 Conclusion

The study demonstrates that contract planning is a critical determinant of building construction project performance in Port Harcourt. Contract planning positively influences timeliness, quality, safety, cost efficiency, and successful delivery.

6.2 Recommendations

1. **Institutionalize Contract Planning Frameworks:** Construction firms should adopt standardized planning procedures across all project stages.
2. **Capacity Building:** Professional bodies should implement training programs on risk management, monitoring, and contract administration.
3. **Strengthen Monitoring Systems:** Regular inspections and digital monitoring tools should be adopted.
4. **Improve Risk Allocation:** Contract documents must contain detailed risk-sharing mechanisms.
5. **Stakeholder Collaboration:** Early involvement of clients, contractors, and consultants enhances planning clarity and performance.

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