

## **BUDGETING AND PROJECT DELIVERY OF TERTIARY HOSPITALS IN RIVERS STATE, NIGERIA**

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### **ABSTRACT**

The study examined the relationship between budgeting and project delivery of tertiary hospitals in Rivers State, Nigeria. The measures of project delivery used are stakeholders' satisfaction, timing and quality. The study adopted a cross-sectional survey research design. The target population was the 2 tertiary hospitals in Rivers State as obtained from the updated directory of finelib.com. However, the study elements were 12 which comprised managers from the administration, finance, engineering services, human resources, procurement and facilities management departments of the (2) tertiary hospitals in Rivers State, Nigeria. The study adopted a census sampling technique since the population of the study was relatively small. Data for the study was collected through a structured questionnaire, while the four-point Likert scale was used to measure the responses from the respondents. Data was analyzed using mean and standard deviations with charts for the primary analysis of the study variables, while inferential statistics such as the Spearman's Rank Order Correlation Coefficient Statistics technique was used to test the hypotheses with the aid of Statistical Package for Social Sciences version 27. The results of the study showed that there is a significant positive relationship between budgeting and the measures of project delivery. The study concludes that budgeting has a strong relationship with project delivery of tertiary hospitals in Rivers State, Nigeria. The study therefore recommends amongst others that tertiary hospitals should implement participatory budgeting processes that involve key stakeholders—such as project beneficiaries, department heads, and financial officers—during the planning and budget allocation stages of projects.

**Keywords:** Budgeting, Project Delivery, Quality, Stakeholders Satisfaction, Timing

## INTRODUCTION

Project delivery has emerged as a critical indicator of organizational efficiency, especially in public sector infrastructure such as healthcare facilities. In the context of tertiary hospitals, project delivery reflects the extent to which healthcare construction or improvement projects are completed on time, within budget, and to the satisfaction of stakeholders (Olawale & Sun, 2010). Effective project delivery is essential in ensuring uninterrupted medical services, timely patient care, and optimized resource utilization. However, despite increased investment in healthcare infrastructure across Nigeria, many hospital-based projects continue to experience challenges such as delays, cost overruns, and substandard quality (Amadi & Kpakol, 2019; Ogbonna & Adegoke, 2021). These inefficiencies raise concerns about the institutional mechanisms guiding project delivery in tertiary hospitals, particularly in Rivers State. Evidence from project performance audits reveals that many government-funded health projects either stall midway or are delivered late, with dissatisfaction expressed by both stakeholders and service beneficiaries (Okoro, 2020). While several studies have examined project delivery from a general construction management perspective, there remains a limited focus on project delivery within the healthcare sector, especially concerning the internal financial controls that underpin success. This reveals a gap in the literature concerning how internal project control factors, such as budgeting, influence project outcomes in hospital settings.

One critical determinant of effective project delivery is budgeting, which serves as a foundational cost control tool within project management frameworks. Budgeting involves the estimation, allocation, and continuous tracking of financial resources to ensure that project activities are executed within planned financial constraints (Kerzner, 2017). An effective budgeting process provides a roadmap for spending, enables the identification of financial risks, and facilitates corrective measures when deviations occur. In the healthcare infrastructure context, budgeting becomes even more vital due to the capital-intensive nature of hospital projects and the necessity to align financial planning with public health priorities (Ezeokonkwo & Igwe, 2022). Unfortunately, poor budgeting practices remain a recurring issue in the Nigerian public health sector. Studies have identified inadequate budget preparation, lack of stakeholder involvement, and unrealistic cost estimations as key factors contributing to project failure in public institutions (Afolabi, Fagbenle, & Mosaku, 2018). These budgeting weaknesses often lead to inefficient fund utilization, stalled projects, and reduced stakeholder confidence. Yet, despite the theoretical link between budgeting and project success, there is limited empirical research assessing how budgeting as a component of cost control affects project delivery performance—especially in tertiary healthcare institutions in Rivers State. This study, therefore, seeks to address this gap by examining the relationship between budgeting and project delivery in tertiary hospitals in Rivers State, Nigeria. By using measures of stakeholder satisfaction, timing and quality.

### **Purpose**

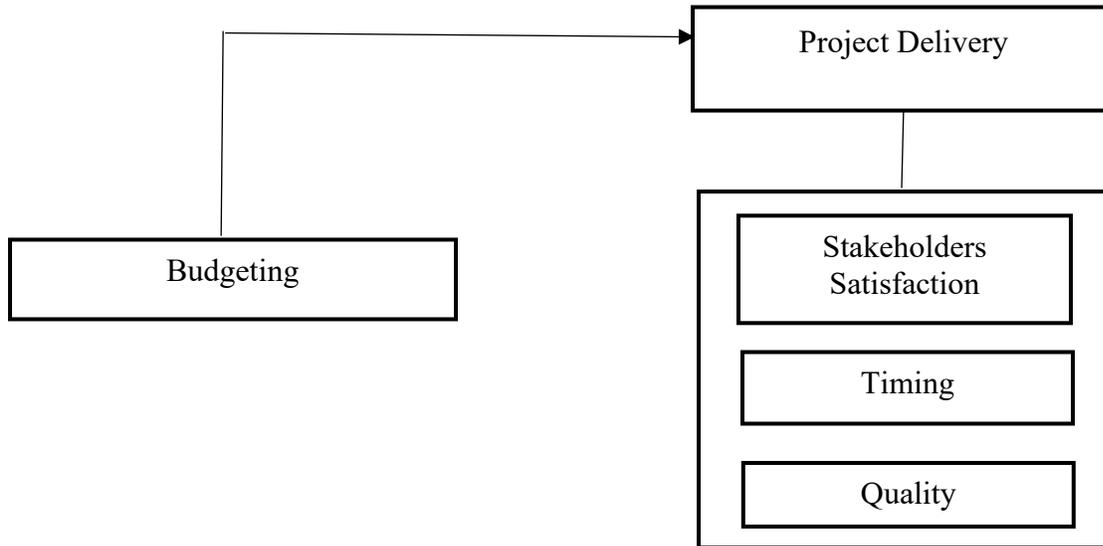
The purpose of this research was therefore to empirically examine the relationship between budgeting and project delivery in tertiary hospitals in Rivers State, Nigeria.

The specific objectives of the study include.

1. To examine the relationship between budgeting and stakeholders' satisfaction in tertiary hospitals in Rivers State, Nigeria.

2. To determine the relationship between budgeting and timing in tertiary hospitals in Rivers State, Nigeria.
3. To ascertain the relationship between budgeting and quality in tertiary hospitals in Rivers State, Nigeria.

### Conceptual Framework



**Figure 1:** Conceptual Framework Indicating the Relationship Between Budgeting and Project Delivery.

**Source:** Desk Research (2025); Kerzner (2017) and Rajan (2015).

### Research Questions

The Research questions are as follows

1. What is the relationship between budgeting and stakeholders satisfaction in tertiary hospitals in Rivers State, Nigeria?
2. What is the relationship between budgeting and timing in tertiary hospitals in Rivers State, Nigeria?
3. What is the relationship between budgeting and quality in tertiary hospitals in Rivers State, Nigeria?

### Research Hypotheses

The research hypotheses are as follows

1. There is no significant relationship between budgeting and stakeholders satisfaction in tertiary hospitals in Rivers State, Nigeria.
2. There is no significant relationship between budgeting and timing in tertiary hospitals in Rivers State, Nigeria.
3. There is no significant relationship between budgeting and quality in tertiary hospitals in Rivers State, Nigeria.

## LITERATURE REVIEW

### Theoretical Foundation

#### Transaction Cost Economics (TCE) by Ronald Coase

Transaction Cost Economics (TCE) was developed by Coase (1937), a British economist and Nobel. Coase is considered the founder of TCE, and his work laid the foundation for this field of study. Coase's seminal paper introduced the concept of transaction costs and explored how firms emerge to reduce these costs. Oliver (2009) who further developed TCE framework introducing concepts like asset specificity and governance structures. Douglass (2010) Contributed to the development of TCE, particularly in the context of institutional economics. Cheung (2009) Applied TCE to various fields, including contract theory and organizational economics. This is a theoretical framework that analyses the cost associated with transactions such as contracting, negotiation, monitoring and enforcing agreements; it helps to identify area where cost can be reduced by optimizing transaction process.

### Conceptual Review

#### Concept of Budgeting

Kerzner (2017) the concept budget defines the translation of an organizational plan into concrete form by way of resources allocation in form of cash. Cost estimation is the process of predicting the costs associated with a project, product, or service. It involves calculating the total cost of ownership, including all expenses, expenditures, and investments required to complete a project or produce a product. A budget is made up of two sides - Expenditure and Revenue. Just as budget have been used to plan country's economy, firms have been compelled because of the growing complexity in the construction industry to draw up budgets. It is through budgets that plans can be executed. Budgets are used to convert such plans and policies into qualitative and monetary terms which form the fundamental objectives of the firm. The process of budget estimates is used by firms to decide on policies of expansion, contraction or maintaining the status quo. It is this process which helps to shape the policy of the firm as regard future line of action depending on the market situation.

According to Lindsay, (2017), the execution of any project by a contractor requires cost control. Cost control is done by way of project planning and scheduling using different types of qualitative techniques available to the industry. The logic of these planning is to enable the contractor to exercise an effective control over his resources. It is the duty of the management team to ensure those tasks are carried out in accordance with the planned line of action.

## **Concept of Project Delivery**

Leizel Estrellas (2024) Project delivery refers to the comprehensive process of carrying out and completing projects such as the construction or renovation of a facility or building, among others. It requires careful planning, design, and construction measures from different actors. The project delivery system requires multiple roles, standards, and a defined set of procedures to proceed, project owner. They are the ones who commission and fund—directly or indirectly—a construction project. They also have the final say in choosing a contractor, delivery method, and other important decisions. The stakeholders involve in project delivery such as Designer, who is typically an architect or an engineer, they are the primary figure in the design process. They plan the design and look after the construction of the building.

The contractor, who take care of the daily operations on the construction site. They also hire subcontractors for specific tasks, The Project Manager, who functions as a consultant to the project owner. They manage the schedule and budget for the entire project on behalf of the owner. The phases of project delivery involve a small-scale facility or a large-scale residential subdivision, every project goes through four phases. Here's a walkthrough of the stages in delivering a construction project.

## **Measures of Project Performance**

### **Stakeholders' satisfaction**

Edward Freeman (1984): introduced the concept of stakeholder theory, which posits that organizations have a responsibility to various groups beyond just shareholders. Mitchell, Agle, and Wood's Stakeholder Salience Theory (1997). This theory proposes that stakeholders' influence on organizations depends on their salience, which is determined by their power, legitimacy, and urgency. Stakeholder satisfaction is the level of approval that people and groups with an interest in the business's success have. This term can refer to their approval of the whole business or its projects or programs. The satisfaction of internal and external stakeholders matters to businesses. Businesses can use surveys to gauge the satisfaction of their stakeholders.

Stakeholder satisfaction matters because it can influence the choices stakeholders make about their involvement in the business. Here are some benefits of satisfying stakeholders. Increased financial support, when stakeholders feel satisfied, they're more likely to support the business financially. Satisfied customers choose to spend money with the business instead of its competitors. Satisfied investors and shareholders put more money into the business because they believe in it and have had favourable returns. The increased financial support of satisfied stakeholders can help the business grow and weather economic challenges.

Long (2008) noted that delay of the Projects followed by cost increasing to cover all the expenses during construction. Owners are not preparing sufficient fund for project and pay on time as shown in contract agreement to contractor, which means stakeholders expected to contribute their respective obligations effectively.

## **Timing**

PMI (2020) Timing is a critical measure of project delivery, as it directly impacts the project's success, stakeholders' satisfaction, and the organization's reputation. Timing refers to the duration required to complete a project or a specific task within the project (Larson and Gray 2018). It encompasses the project schedule, milestones, and deadlines. Importance of timing includes: Meeting project deadlines and milestones is crucial to managing stakeholder expectations and satisfaction. Effective timing ensures optimal resource allocation, minimizing waste and maximizing productivity. Timing impacts project costs, as delays or accelerations can affect resource utilization, labor costs, and material expenses. Larson and Gray (2018) Organizations that consistently deliver projects on time can gain a competitive advantage, enhancing their reputation and attracting new business opportunities.

## **Quality**

Quality is a multifaceted concept that can be defined in various ways. According to the International Organization for Standardization ISO (2015), quality is the degree to which a set of inherent characteristics fulfills requirements (ISO 2015). The American Society for Quality (ASQ) defines quality as the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs (ASQ, n.d.). Quality has several dimensions that are critical to its understanding. According to Garvin (1987), there are eight dimensions of quality: performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality (Garvin, 1987). There are several types of quality, including design quality, conformance quality, performance quality, and support quality. According to Crosby (1979), design quality refers to the quality of the product or service design, while conformance quality refers to the degree to which the product or service meets specifications (Crosby 1979). Quality management is a systematic approach to managing quality. According to the Project Management Institute (PMI), quality management involves planning, assurance, control, and improvement (PMI, 2017).

## **Empirical Review**

Budgeting and cost estimation are crucial components of project delivery, ensuring that projects are completed within allocated financial resources. (Kezner, 2017). The contract document is the ground rule between all parties (contractors, consultants and clients). One part of the contract document is the contract procedure. The contract procedure shows the type of contract, payment procedure constraints and regulations within the contract. The type of contract affects the Projects because of the risk involved in some types of contract (i.e. lump sum). Unclear contract procedures will lead to disputes among the stakeholders, project unprofitability and cost overrun (Fisk, 2012). Budgeting is the process of allocating financial resources to specific project activities to establish a cost baseline for project expenses, ensuring that expenditures are controlled and managed.

## **METHODOLOGY**

The study adopted a cross-sectional research design. Therefore, the target population of this study was two (2) tertiary hospitals in Rivers State. Participants of the study were selected in line with

the unit of analysis which is the organization level study. By virtue of the aforesaid, six (6) representatives from each of the two (2) tertiary hospitals were chosen to make up the study elements. This included managers from the administration, finance, engineering services, human resources, procurement and facilities management departments of the (2) tertiary hospitals in Rivers State, Nigeria. These participants were chosen because it is in that cluster we have those who have the knowledge, intellect and official capacity to respond to the research instrument because some of the responses are not issues commonly dealt with every cadre of staff nor departments in the organization, rather those who are privy to corporate matters are deemed as most qualified to do so. Census sampling method was adopted because the target population of the study was relatively small. The main data collection instrument for the study was structured questionnaire. A total of twelve (12) copies of questionnaires were distributed, and (9) was eventually used for the study. Data was analysed using mean and standard deviations with charts to display the study variables, while inferential statistics such as the Spearman’s Rank Order Correlation Coefficient Statistics technique was used to test the hypotheses with the aid of Statistical Package for Social Science version 29.0 for the purpose of examining the nature and proposed association.

**DATA ANALYSIS AND FINDINGS**

**Relationship Between Budgeting and Project Delivery**

**Table 1: Correlation Between Budgeting and Project Delivery**

**Correlations**

			budgeting	ss	timing	quality
Spearman's rho	budgeting	Correlation Coefficient	1.000	.929	.928	.741*
		Sig. (2-tailed)	.	<.001	<.001	.022
		N	9	9	9	9
	ss	Correlation Coefficient	.929	1.000	.929	.701*
		Sig. (2-tailed)	<.001	.	<.001	.035
		N	9	9	9	9
	timing	Correlation Coefficient	.928	.929	1.000	.680*
		Sig. (2-tailed)	<.001	<.001	.	.044
		N	9	9	9	9
quality	Correlation Coefficient	.741*	.701*	.680*	1.000	
	Sig. (2-tailed)	.022	.035	.044	.	
	N	9	9	9	9	

\*. Correlation is significant at the 0.05 level (2-tailed).

**Source:** SPSS Output, 2025

Table 1 presented the Spearman’s rank order correlation matrix for the relationship between budgeting and the measures of project delivery (stakeholders’ satisfaction, timing and quality) in

the tertiary hospitals in Rivers State, Nigeria. From the data given in the table 4.2, the correlation results for **Ho1**, **Ho2** and **Ho3** were given as:

***Ho1: There is no significant relationship between budgeting and stakeholders' satisfaction in tertiary hospitals in Rivers State, Nigeria.***

From the analysis, the result showed the correlation coefficient of  $\rho = 0.929$  which shows the direction and strength of this relationship. The coefficient represents a very strong positive correlation between budgeting and stakeholders' satisfaction in tertiary hospitals in Rivers State, Nigeria. The test of significance shows that this relationship is significant at  $p = .001 < 0.05$  which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between budgeting and stakeholders' satisfaction in tertiary hospitals in Rivers State, Nigeria.

***Ho2: There is no significant relationship between budgeting and timing in tertiary hospitals in Rivers State, Nigeria.***

From the analysis, the result showed the correlation coefficient of  $\rho = 0.928$  which shows the direction and strength of this relationship. The coefficient represents a very strong positive correlation between budgeting and timing in tertiary hospitals in Rivers State, Nigeria. The test of significance shows that this relationship is significant at  $p = .001 < 0.05$  which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between budgeting and timing in tertiary hospitals in Rivers State, Nigeria.

***Ho3: There is no significant relationship between budgeting and quality in tertiary hospitals in Rivers State, Nigeria.***

From the analysis, the result showed the correlation coefficient of  $\rho = 0.741$  which shows the direction and strength of this relationship. The coefficient represents a strong positive correlation between budgeting and quality in tertiary hospitals in Rivers State, Nigeria. The test of significance shows that this relationship is significant at  $p = .022 < 0.05$  which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between budgeting and quality in tertiary hospitals in Rivers State, Nigeria.

## DISCUSSION OF FINDINGS

The first, second and third hypotheses sought to examine the relationship between budgeting and project delivery. Hence it was hypothesized that there is no significant relationship between budgeting and project delivery. These hypotheses (Ho1, Ho2 and Ho3) were tested using the Spearman rank order correlation technique. The study findings reveal that budgeting has a very strong positive and significant relationship with stakeholders' satisfaction, timing and quality.

The finding agrees with previous finding by Kezner (2017), budgeting and cost estimation are crucial components of project delivery, ensuring that projects are completed within allocated financial resources. The contract document is the ground rule between all parties (contractors,

consultants and clients). One part of the contract document is the contract procedure. The contract procedure shows the type of contract, payment procedure constraints and regulations within the contract. The type of contract affects the Projects because of the risk involved in some types of contracts (i.e. lump sum). Unclear contract procedures will lead to disputes among the stakeholders, project unprofitability and cost overrun (Fisk, 2012). Budgeting is the process of allocating financial resources to specific project activities to establish a cost baseline for project expenses, ensuring that expenditures are controlled and managed. This factor could be attributed to the unpredicted inflationary trend, lack of adequate training and experience at the senior management level and fraudulent practices (Mansfield, 2008).

### CONCLUSIONS AND RECOMMENDATION

The basis of the findings of this study concludes that budgeting has a positive strong relationship with the stakeholders' satisfaction of tertiary hospitals in Rivers State, Nigeria. It is also affirmed that that budgeting has a positive strong relationship with the timing of tertiary hospitals in Rivers State, Nigeria. Furthermore, it is affirmed that that budgeting has a positive strong relationship with the quality of tertiary hospitals in Rivers State, Nigeria. This means that as tertiary hospitals in River State, Nigeria enhance their budgeting activities, there will be increase in stakeholders satisfaction, timing and quality. Based on the relationship from the findings, the following recommendations were proffered:

- i. Tertiary hospitals should implement participatory budgeting processes that involve key stakeholders—such as project beneficiaries, department heads, and financial officers—during the planning and budget allocation stages of projects.
- ii. Project managers should develop realistic and time-phased budgets that align with project milestones and cash flow needs to uninterrupted execution and timely completion.
- iii. Hospital project planners should ensure that budget allocations are directly tied to defined quality standards, including the use of certified materials, skilled labor, and adequate supervision.

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