

# Evaluation of Building Project Procurement Strategies (A case Study of Ondo State, Nigeria)

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**Abstract:** *The aim of this research is to evaluate the performance of the different procurement methods used in construction industry, using Ondo state as the case study. Data were collected using well-structured questionnaires administered to professionals in the study area. Descriptive and inferential statistics were used to analyze the data collected. In making choice of procurement method in the study area, the study revealed that project completion at expected time ranks as the highest factor considered for traditional method, while quality assurance ranks highest with non-conventional method. Therefore it was concluded that the variants of traditional method of contract procurement are the most adopted in project execution in the study area.*

## **Keywords:**

Building projects, Procurement Strategies, Project Execution, Project performance.

## **Introduction**

The importance of well functioning construction industry is beyond doubt since all human being in modern societies are directly affected by its processes and products [1, 2, 3]. Whereas, one of the backbones of the economics of many countries is the construction industry, [4] Oladipo [5] described the construction industry as the hub of the economy. Ngai et al [2] agreed

the statement by describing construction industry as an important part of the economical backbone in many countries. In order to increase the chances for construction projects to be successful and result in improved end product; practitioners, researchers and society at large have therefore called for a change in attitudes, behavior and procedures [6, 7]

Partly responsible for such poor performance, traditional or conventional procurement approach which is characterized by a 'win – lose' scenario was identified [8]. Attributing to this situation, the traditional procurement method which has been strongly existing and embedded in the construction for many years is seen as one of the major factors.

'Conventional contracts have proven to be unsuitable for the effective delivery of the project with higher risks and complexity' [9]. Also as cited by black et al [10] 'the need for change in traditional relationships has for many years been recognized by the UK construction industry, its client and government'. Feldman [11] opined that the major factor that contributes to the underperformance projects with cost, time overruns and low quality is the bid contracting which is common in traditional procurement. Regardless of any differences between projects,

clients tend to choose those procurement procedure they have a habit of using [12].

### Literature review

In acquiring construction projects, procurement is the entire process that is implemented [13]. The extent to which the client is able and willing to forgo some of the criteria within their value system reflects the various types of procurement strategies. According to Ashwort and Hogg [14] for meeting different clients' needs and projects, different variants of procurement are available.

In terms of quality, aesthetics, schedules, cost, function and safety, construction projects in Nigeria are characterized with poor performance. As illustration, over 70% of construction projects executed in Nigeria were overrun in time [15]. Construction project could over run for more than 450% of its schedule period and for more than 200% of its estimated cost [16,17]. Claims have occurred in almost every project executed, based on the perspective of poor quality of project is always unabated and very high [18]. Decisions on methods of project finance centre on factors like maintenance cost, capital cost, depreciation, replacement, operating cost and expertise of the projects which required through investigation. Hence, adequate consultations are required before the commencement of project to prevent complexities of construction project [19].

### Methodology

Field survey research method was adopted in Ondo state, Nigeria together with information from construction practitioner and operatives on sites with regards to the factors that affect the choice of procurement method in Nigeria construction industry.

The finding is aimed at getting information from construction practitioners, from construction companies, government establishment, consulting firms and public institution on the factor that affect the choice of procurement method in Ondo state.

In the distribution of questionnaires, stratified random sampling technique was adopted. The questions were addressed to Architect, Builder, Engineers and Quantity surveyors.

To get more information, other methods adopted were oral interview and observation.

Data collected from construction practitioners were analyzed using mean, percentage method and descriptive method.

### Data Presentation and Analysis

The findings were based on 73 (seventy three) questionnaires out of the ninety copies that were administered through convenient sampling technique within Ondo state in Nigeria.

Among ninety questionnaires that were distributed a total number of 73 (seventy three) were collected and below are the analysis of collected questionnaires.

**Table 1: Types of Organization of the Respondents**

Types of Organization	Frequency	Percentage (%)
Public Institutions	18	24.7
Consulting firms	16	21.9
Contracting firms	11	15.0
Construction company	28	38.4
<b>Total</b>	<b>73</b>	<b>100</b>

**Source: field survey, 2015**

Table 1 shows the percentage representation of the respondents' respectively. From the table, most information retrieved was from the construction compan

**Table 2: Nature of Project Undertaking by Respondents**

Types of Project Undertaking by Respondents	Frequency	Percentage (%)
Office Buildings	10	13.7
Residential Buildings	12	16.4
Industrial Buildings	5	06.8
Civil Engineering Projects	11	15.1
Combination of above	35	47.9
<b>Total</b>	<b>73</b>	<b>100</b>

**Source: field survey, 2015**

From Table 2, at least 47.9% of the respondents had undertaken a combination of building projects. This shows that the respondents have

Table 3. Indicates that 41% of the respondents were familiar with traditional procurement method, which takes the highest percentage among variants of procurements used. While 5.5% of the respondents were familiar with

adequate experience on all classes of construction projects in which different variants of procurement methods would have been implemented. This would give adequate data on the frequencies of variants of procurement methods on different categories of projects which the study intend to investigate.

**Table 3: Variants of procurement Methods Used by Respondents**

Types of procurement Methods	Frequency	Percentage (%)
Traditional method	30	41.0
Design and build method	18	24.7
Management method	13	17.8
Construction management method	8	10.9
Project management method	4	5.5
<b>Total</b>	<b>73</b>	<b>100</b>

**Source: field survey, 2015**

project management method, which takes the lowest percentage in ranking. The results reflect that traditional procurement method is mostly used.

**Table 4: Factors Generally Considered in Making Choice of Traditional Procurement method**

Factors	1	2	3	4	5	Mean	Ranking
Project completion at Estimated Time	3	12	12	24	22	3.68	1 <sup>st</sup>
Quality assurance	0	16	14	22	21	2.97	12 <sup>th</sup>
Minimization of construction time	3	14	15	25	16	3.45	4 <sup>th</sup>
Minimization of design time	4	12	18	26	13	3.44	5 <sup>th</sup>
Cheapest cost	5	17	20	16	16	3.33	8 <sup>th</sup>
Financial arrangement	5	15	15	25	12	3.29	10 <sup>th</sup>
High degree of control	4	12	17	28	12	3.44	5 <sup>th</sup>
Complexity of design	7	13	19	17	17	3.33	8 <sup>th</sup>
Consultancy service offered	9	7	26	20	11	3.23	11 <sup>th</sup>
Technical complexity of construction	5	10	19	23	16	3.48	3 <sup>rd</sup>
Availability of information at project inception	3	6	20	28	16	3.66	2 <sup>nd</sup>
Risk avoidance.	3	12	24	24	10	3.36	7 <sup>th</sup>

**Source: field survey, 2015**

The following are the scale rating used for the table above 1= Negligible, 2= very low, 3= low, 4=High, 5= Very high.

The table above identified factors that affect the choice of the variants under traditional procurement method. It reflected that under traditional procurement method all the factors that affect the choice of the variants identified are important to project completion at estimated time with mean score of 3.68 was rated 1st.followed by other variables.

**Table 5: Factors Generally Considered in Making Choice of Design and Build Procurement Method.**

Factors	1	2	3	4	5	Mean	Ranking
Project completion at Estimated Time	2	10	19	21	20	3.60	3 <sup>rd</sup>
Quality assurance	1	7	14	30	21	3.85	1 <sup>st</sup>
Minimization of construction time	3	10	22	22	16	3.52	4 <sup>th</sup>
Minimization of design time	3	10	22	22	16	3.52	4 <sup>th</sup>
Cheapest cost	7	15	17	22	12	3.23	11 <sup>th</sup>
Financial arrangement	5	5	24	27	11	3.42	8 <sup>th</sup>
High degree of control	6	15	20	16	16	3.29	9 <sup>th</sup>
Complexity of design	7	7	21	23	15	3.44	6 <sup>th</sup>
Consultancy service offered	6	12	23	20	12	3.27	10 <sup>th</sup>
Technical complexity of construction	6	9	10	30	18	3.62	2 <sup>nd</sup>
Availability of information at project inception	5	13	11	33	11	3.44	6 <sup>th</sup>
Risk Avoidance	8	13	19	20	13	3.23	11 <sup>th</sup>

**Source: field survey, 2015**

The following are the scale rating used for the table above 1= Negligible, 2= very low, 3= low, 4=High, 5= Very high.

Table 5 above identified factors that affect the choice of variants under design and build procurement method. It was observed that the factors that affect the choice of the variants under design and build procurement method identified are important to quality assurance with mean score of 3.85 was ranked 1<sup>st</sup>. followed by other factors.

**Table 6: Causes and Effects on Procurement Methods in Construction Industry.**

Effects	1	2	3	4	5	Mean	Ranking
External factor	4	7	23	27	12	3.49	1 <sup>st</sup>
Clients Resources	5	9	19	25	15	3.49	1 <sup>st</sup>
Project Characteristics	5	9	20	28	11	3.42	3 <sup>rd</sup>
Ability to make change	5	11	22	24	11	3.34	4 <sup>th</sup>
Cost Issues	5	10	17	3	10	1.89	6 <sup>th</sup>
Time	5	13	15	20	11	2.62	5 <sup>th</sup>

**Source: field survey, 2015**

The following are the scale rating used for the table above 1= Negligible, 2= very low, 3= low, 4=High, 5= Very high.

Table 6. Shows the causes and effects on procurement methods in building industry. External factors and clients resources are the most effective with mean score of 3.49, followed project characteristics with mean score of 3.42. While the least is cost issue with mean score of 1.89.

**Conclusion**

The results from the variants give a general indication that both design and build and traditional procurement methods are currently embraces in Ondo state. The results further

indicate that the procurement method in use is still much of variants of traditional method. This is due to long age existence of traditional procurement systems. The choice of variants of traditional procurement system is made in order of consideration of project completion at estimated cost, estimated time and availability of information at project inception. The choice of design and build procurement system is made as variants in order of consideration of quality assurance, project completion at estimated time, estimated cost and nature of project. In making choice of the variants of the design and build procurement method minimization of design time are also considered as major factors indicating that more factors are considered in making choice of the variants of design and build method than the variants of traditional procurement methods in Ondo state.

From the findings, it is believed that the procurement method adopted by construction practitioners in construction industry was traditional method based on the three sequential phases of design, bid and build which allow contractors that fill competent to bid for project in competitive and free atmosphere so as to achieve efficient (defect free) delivery of building project.

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