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# Comparative Assessment between Provisional Sums in Private and Public Client Initiated Project in Nigeria

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**Abstract**
A project is an activity moderated and measured within its set cost, time and quality. Funding of projects is as important as the project itself. Most projects are either funded by taxpayer's money (Public initiated projects) or from individual's pockets (Private initiated projects). Abuja, the capital of Nigeria is still developing after more than 30 years of creation, as evident with the volume of construction projects on going within the city. Cost overrun in the Nigerian construction industry is fast becoming a very popular occurrence especially in Abuja. This paper aims to conduct a comparative assessment of provisional sums in public and private client initiated projects in Abuja in a view to proffer solutions to the plague of cost and time overrun in construction projects. 50 structured questionnaires were administered to property developers and only 36 were eventually retrieved and employed for data analysis. The data was analysed using Analysis of Variance (ANOVA) and frequency distribution table. Findings revealed that the one-way analysis of variance (ANOVA) between the two groups indicates that $p<0.03$ meaning that significant difference exist between the percentage differences of provisional sum in a private initiated project and public initiated project. It was also discovered that the Federal, State, and Local tiers of government are the biggest funders of public initiated projects while individuals; banks and churches are the biggest funders of private initiated projects. . The paper concluded that bureaucratic bottlenecks, corruption amongst other factors is responsible for fewer developers in public initiated projects. Government must reduce corruption, operational lapses and promote project continuity to reduce the number of abandoned projects and ensure qualitative delivery. Recommendations include that projects should be awarded and executed as soon as they are tendered to reduce the effect of inflation between tender time and project execution.
**Keywords**: Provisional Sum, Private Initiated Project, Public Initiated Project, Cost, Funding.

## 1.0 INTRODUCTION

A project is an activity with a starting date and an end in view, executed to meet some defined goals and objectives in relation to time, cost and quality. The management of the project involves processes, which brings together and utilize necessary resources needed for its successful completion. These resources include human, materials and financial which can be harnessed in a construction work to qualify it as a project.

Projects are distinctively unique, in the sense that, the requirements of the projects sponsors differ with regards to cost, time, nature, complexity and a range of factors. Where the client's objective is cost certainty, selecting the procurement system that gives emphasis on cost becomes paramount to the client. In view of this therefore, clients have to prioritize their requirements or needs especially between quality, time and cost. This is because these three factors are rarely achieved at the same time; the client must choose the procurement method that gives the best alternative to achieve their objective.

Building construction projects are becoming very difficult to complete within the initial cost and estimated time, especially in developing countries, Nigeria inclusive. According to Elinwa and Buba (1993), construction projects in Nigeria shoot their original cost by 8 to 133%. Furthermore, Murtala (2002) studied 40 building projects in Nigeria and found out that the initial and final contract sum increased by approximately 113%. This suggests that there are reasons for the obvious and considerable disparity between the initial and final cost of construction projects.

## 2.0 STATEMENT OF PROBLEM

A number of researchers have drawn up a list of probable reasons for the discrepancies in the planned project cost and the constructed project cost. Contract variations, construction claims, compensations, provisional sums & prime cost sums derivation and expenditures were the most popular reasons for the disparity (Omoniyi 1996, Brook 2008). According to Okuwonga (1998), issues surrounding the derivation and expenditure of provisional sum alone, increased construction projects contract sums to a whooping 26.07% of its original value. Provisional sum is one of the reasons behind conflicting projects cost. (Hibberd**,** 1986; Murtala, 2002; Ibrahim and Aminu-kano; 2005).

The calculation of provisional sums is usually done at the pre–contract stage of any construction project. The sum allocated as provisional sum, makes up the total contract sum of any construction project. Poor project planning and under estimation by contractors to gain tender advantage against competitors are the root causes of the differences in contract sum (Aje et al., 2009, Aziz 2012, Kasimu 2012).

 

The disparity in contract sums can be attributed to poor project management during the calculation and derivation of a provisional sum for the project at the pre-contract stage of the construction project. Cunningham (2015) also stated that, provisional sums are majorly responsible for compromised cost of construction, especially in cases where the provisional sum quite huge.

This study seeks to compare, provisional sums in public initiated projects as against private initiated construction projects in Abuja, Nigeria.

## 2.1 THE CONCEPT OF PROVISIONAL SUM

Seeley (1997) states that, provisional sums are added in a construction contract to cover for work which the full extent and character cannot be determined precisely at the time in which the bill of quantities is prepared. In an ideal building construction project contract, all drawings and bills of quantities are completed and vetted by the consultants, specialist, nominated sub-contractors. All paper works, drawings and contracts are meant to be ready before actual construction, so the building team can plan accordingly on how to execute the project. However, the ideal situation is hardly achieved. This is frequently attributed to works that can't be accurately measured; of which an example is the provisional sum. According to Flyberg et al (2002), provisional sums are provided to cover work which cannot be accurately measured at the time of tender and which may be carried out by either main contractor, nominated sub-contractor, provided directives are given in accordance with the terms of the contract.

Chan and Kumaraswamy (1997) expanded the meaning of provisional sum to include work or services to be executed by a statutory authority or statutory undertaken or for either defined or undefined work. Giwa (1988), Ibrahim and Aminu-Kano (2004) and Ramus and Birchall (1998) also established that provisional sums contribute to disparity between initial and final contract sums.

## 2.2 AN INVESTIGATION INTO PRIVATE INITIATED VS PUBLIC INITIATED CONSTRUCTION PROJECTS

Funding is a major factor to be considered in differentiating private and public initiated contracts. Private sector investors, whose sole purpose is to maximise profit, usually fund private initiated construction projects while private sector initiated projects are usually subjected to a whole lot of vetting before a final project cost is agreed. It is very rare to find a private sector initiated project that has ran its initial estimated cost by a wide margin as compare to public sector initiated projects.

On the flip side, taxpayers usually pay for public sector initiated projects. As compared to private sector initiated construction projects, public sector construction projects are always plagued with time and cost overruns issues. According to Flyvbjerg et al. (2004), 9 out 10 infrastructure projects overrun their budgets and infrastructure projects have an 86% likelihood of exceeding their budgets. Ahiaga-Dagbui and Smith (2014), also added that cost overrun are more prevalent in public sector projects that are politically motivated to make high political statements.

Public sector initiated projects are known to have long conception periods stretching over several years before final approved is attained, this usually allows for the project scope to change many times, by so doing, sponsors and estimators adopt the Machiavelli factor by intentionally underestimating the true cost and overestimating the benefits of the projects to make it look good on paper and in turn get them approved (Ahiaga-Dagbui and Smith 2014, Flyvbjerg et al. 2005). The Machiavelli approach, corruption and bureaucratic bottleneck could just be the reasons for a high frequency of cost overruns in public sector initiated projects.

## 3.0 MATERIALS AND METHODS.

The study area under investigation is Abuja, the federal capital territory of Nigeria. It is located at the middle belt of the country; which is the area close to the river Niger and river Benue. Abuja was chosen as the capital of Nigeria because it was located at the centre of the country. Due to disruptions in the development of the country's capital arising from economic and political instability, Abuja officially became the capital city on the 12$^{th}$ of December 1991. The population of Abuja has been on a steady increase yearly, from a population of under a hundred thousand in 1989 to over 3,000,000 in 2014. As of 2015, the growth rate of the city is being estimated at about 30% annually; this very high growth rate has consolidated Abuja's position as Africa's fastest growing city and one of the fastest growing cities in the world.

Abuja has witnessed a steady influx of people since the early 1990's when the federal capital moved to the city. The movement of the capital to Abuja meant that all embassies and federal ministries, parastatals, government agencies and business corporations had to move to Abuja. It also meant that people coming to work in Abuja, had to be housed in decent and affordable homes. Since, we can't move houses and infrastructure from one geographic location to the other; it only meant that new infrastructure and buildings had to be constructed. This spurred a construction boom and a very a busy construction industry in the city.

Local and international construction companies were involved in various construction projects at

 

various levels. Abuja is still at its developmental stages till date, a lot of construction activities are very visible all over the city. The city has a very high presence of contractors, developers and companies partaking in construction projects for public and private initiated projects.

The survey approach was used for this study. The target population for this study consists of property developers who are registered with Real Estate Developers Association of Nigeria (REDAN). By virtue of Decree they are the only professional statutorily empowered to undertake such in Nigeria. 50 respondents were selected for the survey. Structured questionnaires were randomly administered on the target population and the findings analysed. The result from the analyses of these data forms the basis for inference. The descriptive statistics computed on the sampled data provides the basis on which inferences was made about the population. The Analysis of Variance (ANOVA) and frequency distribution table was used for the presentation of the result.

### 3.1 RESULT AND DISCUSSIONS.

**Table 1: Questionnaire Administration**

| Respondents | | Frequency | Percentage |
|---|---|---|---|
| Developers | Distributed | 50 | 100.00 |
| | Returned | 36 | 72.00 |

A total of 50 questionnaires were distributed to construction projects developers in Abuja and only 36 representing 72% of the distributed questionnaires were retrieved and fit for analysis.

**Table 2: Involvement in Projects in the last 5yrs (2010-2015)**

| Involvement | Number of Projects Handled |
|---|---|
| Private Initiated | 70 |
| Public initiated | 28 |
| Both | 44 |

Table 2 shows that more developers are involved in privately initiated and sponsored projects compared to public sector projects. This may be attributed to the fact that private sector clients tend to pay for jobs on time and the conditions for prequalification, tender qualifications and payment are not as stringent as that of public sector jobs. Another reason for few contractors involved in public sector initiated projects might be due to corruptions, bureaucratic bottlenecks and complexity surrounding payments. The Nigerian public sector is plagued with various forms and patterns of corrupt practices, which has scared investor's away from dealing with the government and its officials in regards public sector projects. Public sector projects payments can be delayed due to government policies or a change in Government. Most times, the new government cancels or suspends projects already being executed by past governments to fully concentrate on its own projects.

**Table 3: Sources of Project Funding**

| Private Initiated Projects | Public Initiated Projects |
|---|---|
| Individuals | Federal Ministries, Agencies and Parastatals. |
| Banks | State Government |
| Cooperative Societies | Local Government |
| Religious Bodies | International Cooperation's between Governments |

Table 3 reveals the various sources of funding for both privately and publicly initiated projects in Abuja, Nigeria. The Table posits that individuals, banks, cooperative societies and religious bodies usually fund private initiated projects. In recent times, construction of churches is on the increase, churches have been discovered to build magnificent edifices in the smallest space possible; they also carry out a lot of demolition, alterations, modifications and expansions on the churches when they are able to acquire lands around the original church structure.

The various spheres of government are the biggest spenders in public sector projects. The federal and state governments are the most popular and lucrative clients to work for in regard, public sector projects. Even though there is a huge risk involved in payments when it comes to public sector projects, the rewards afterwards seem to be worth the risk, hence the developers who are neck bent on sticking with this kind of projects. International cooperation's between Nigeria and international countries and organisations are on the increase. Foreign donor agencies or countries sponsor various infrastructure projects all over the country.

 

**4: Analysis of Variance (ANOVA) between Private and Public Sector Projects Provisional Sums Provided in Public and Private Sector initiated Projects**

| | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Percentage Difference of Final and Initial Provisional sum | Between Groups | 40685.2866 | 1 | 40685.2866 | 5.47995 | .003 |
| | Within Groups | 250348.2261 | 48 | 5442.35265 | | |
| | **Total** | **291033.5127** | **49** | | | |

The result of the one-way analysis of variance (ANOVA) between the two groups presented in Table 4.8 indicates that $p < 0.05$ for percentage differences in final and initial provisional sums, meaning that significant difference exist between percentage difference of provisional sum in a private initiated project and public initiated project. The difference could be attributed to the nature of the projects involved, source of financing and the type of client involved in the projects.

## 4.0 CONCLUSION

In conclusion, there are more developers or contractors involved in private initiated contracts than public initiated contracts, this is due to corruption, bureaucratic bottlenecks, payment complications and change of government risk factors which are prevalent in public sector initiated projects.

The tiers of governments and foreign donor agencies or countries fund public sector projects, they are very big spenders and they can handle whatever the cost of the project. This makes it easy for corrupt practices to be incorporated in the executions and payments of projects. The private sector funders are more thorough with payments and the end products of construction.

Finally, provisional sums in public sector projects are much higher than that of private sector initiated and funded projects; this corroborates the finding of Chindo (2008). The reason for the disparity in the provisional sum, in the projects in view, might be due to the fact that the contractor and the various corrupt government officials hide under the umbrella of provisional sums to incorporate their bribes, risks and extra-unaccounted monies under provisional sums.

## 5.0 LIMITATION

One of the limitations to this study was that some important sections of the Bills of Quantities were missing in the project files. In addition, some relevant information were also not documented properly, making it necessary to rely on verbal information from supervisors of the projects through the administration of questionnaires. Another limiting factor was that the investigation was carried out on developers of projects executed in Abuja only and should not be extended to other parts of the country.

## 6.0 RECOMMENDATIONS

Based on the findings in this research some recommendations are made as ways of improving building projects delivery as it relate to provisional sums.

Adequate information should be given on every item of work before producing Estimates. This will help in reducing the application of provisional sums in building projects

The client and contractor should make sure that projects are awarded and executed as soon as they are tendered so as to reduce the effect of inflation between tender time and project execution.

Contract records should be kept properly by parties involved in order to ease the substantiation of claims for extension of time and relevant events considered for extension of time should be clearly stated with the amount of time awarded indicated against each relevant event.

The change in government should not alter or delay the progress and payment of ongoing projects.

Further research on appraising the adequacy of provisional sums should be carried out by any interested individual or persons in other project management or construction disciplines.

## 7.0 CONTRIBUTION TO KNOWLEDGE

This study has contributed to knowledge by providing information relating to the sources of project finance and factors militating against successful delivery of projects. It serves as an eye opener for the government and developers on the need for detailed information in the computation of provisional sum before the commencement of a project and proper management of provisional sums during project execution. The research has also enhanced the professional services of quantity surveyors in the computation and management of provisional sum for a project. It has added to existing literature on the subject matter both in the academia and professional practice.

 

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