

Research Article

Perception of Project Time Overrun In Building Construction Industry in Nigeria

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Abstract

Many construction projects are not completed as at when due. In Nigeria, the sight of abandoned uncompleted buildings is a common recurrence. This study sets out to explore how time management in building projects is perceived in the construction industry in Nigeria via case studies of constructed buildings, interviews and questionnaires with the major players in the construction industry; client, consultant and contractor. Progress control chart was compared against the program of works charts and overruns observed. The common factors that inhibit both time and cost control during construction projects were first identified. Subsequently, necessary measures were developed for the top five leading inhibiting factors which were classified as: preventive, predictive and corrective measures. They can be used as a checklist of good practice, and help project managers improve the effectiveness of control of their projects. The results reveal a correlation of causes between the client, consultant and contractor; Inaccurate estimate of time and cost, Irregular flow of finance (funds), Delay in payment of work done (client not honouring Architects payment certificate as at when due).

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1. Introduction

Planning and time schedule are the most important tools for construction project management. They are the basis for project time control (Bikram 2014). In the construction industry, the aim of project control is to ensure timely completion of projects and within budgeted cost among other project objectives. It is imperative that project managers Check and review project progress where necessary, and confirm the validity and relevance of what is left of the plan (Chapman 2014). In Nigeria, major players in the Architecture, Engineering and Construction (AEC) industry are criticized for their inability to complete building projects within the stipulated time. To facilitate timely completion of project, the parameters of time, cost and quality must be considered together. (Mitchell et al 2007)

Jrade and Lessard (2015), Vaardini (2015) carried out case studies and suggested that time overrun was due to inclement weather; changes initiated by designers, client requirement, site conditions, late deliveries, economic conditions, and problems in planning and design as main causes of construction delays. Kodwo and Seth (2014) identified variations in building projects as a source of cost overrun. Based on analysis of 46 completed building projects in the UK, Akinsola, et al (1997), classified these factors thus: client characteristics; especially lack of prior experience and knowledge of construction project organization. Project characteristics, such as type, size, complexity and duration of the project; and project organization factors, such as; design duration, percentage of design completed before tender, procurement and contract type, adequacy of information provided, and number of sub-contractors are also factors. An accurate estimation of time contingency is seen as a major factor for achieving a successful construction project.

The aim of this study is to explore how time management in building projects is perceived by those involved in the project team in Nigeria, to identify the main inhibiting factors of project time control and also to develop some mitigating measures to assist project managers' better control their projects.

Conclusions are drawn and recommendations made with respect to the perception of time management associated with building projects. These observations underlie the rationale for this study.

2. Methodology

A dual approach was employed:

- Case studies of constructed buildings; two buildings that had program of works and were assessable were selected and the program of works monitored against the progress of works done by studying the management and administration of work onsite.
- Interviews were conducted with the major players in the construction industry; Client, Consultant and Contractor to seek their informed opinions on the issue by asking questions of workers and building personnel.

3. Results and Findings

Two case studies were undertaken; the Inhabitant Resettlement Housing Scheme in Bukuru, Jos South-Plateau State and a Church Auditorium Project in Angwan Rukuba, Jos North-Plateau State. Figure 1 shows the program/ progress of works of the inhabitant resettlement housing scheme in Bukuru, Jos South-Plateau state. Time overruns were experience in most stages of the construction as seen from the progress of works

done. The project was taking longer than scheduled and significantly long delays were experienced due to poor funding.

Figure 2 shows the program/progress of works for the church auditorium project. This project like the first also exceeded the scheduled time objective for its completion as it was completed four months behind schedule. This was also due to poor funding.

It was observed by studying the management and administration of work onsite and by interviews with workers and building personnel that the most common factors responsible for the time overruns are as follows:

Inaccurate estimate of time and cost, Irregular flow of finance (funds), Delay in payment of work done (client not honouring Architects payment certificate as at when due), Deficiencies in management and Delays in decision by building professionals. These are tabulated in table 1 below.

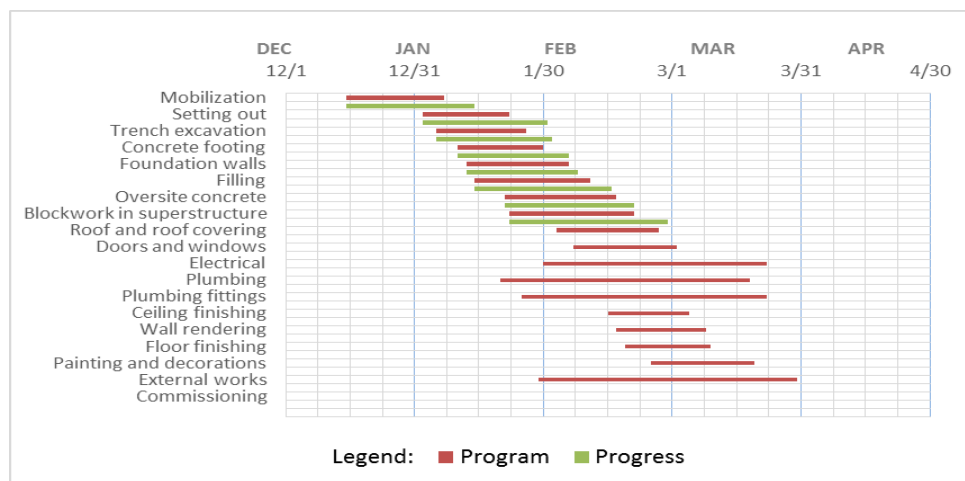


Figure 1: Program/ Progress of Works for Inhabitant Resettlement Housing Scheme

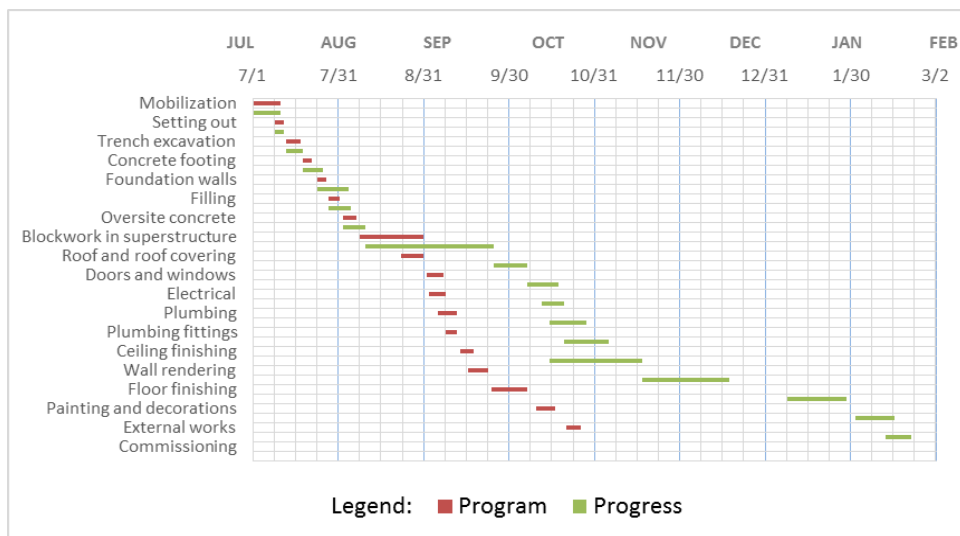


Figure 2: Program/ Progress of Works for Church Auditorium Project at Angwan Rukuba

Table 1: Factors perceived as causes of project overrun

Rank	Client’s perception	Consultant’s perception	Contractor’s perception
1	Improper planning and scheduling of contractor	Delay in honouring Architect’s payment certificates by client	Delay in progressive payments by client
2	Poor site management and supervision by contractor	Poor site management and supervision by contractor	inclement weather
3	Poor liquidity of contractor	Short supply of experienced technical staff of contractor	Delay in approving extra work and variations by consultant
4	Shortage of experienced technical staff and labourers of contractor	Poor liquidity of contractor	Delay in approving major changes in the scope of work
5	Poor control and monitoring of contractor by consultant	Inaccurate planning and scheduling of contractor	Shortage and/or unavailability of specified material in the market

From the results presented above, the findings of the research shows that the major factors responsible for the time overrun in building construction projects are Delay in progressive payment by clients (honouring consultant’s payment certificate), Inaccurate planning and scheduling of projects by contractors, inclement weather, short supply of experienced technical staff, and poor liquidity of the contractor. Going by the views of both clients and consultants, contractor related factors are the most significant for time overrun. The contractors indicate that external factors are the significant factors for time overrun.

4. Conclusion and Recommendations

Finishing projects on time will not only save money, but will help to establish a good track record. When a history of finishing projects well and within stipulated time has been established, potential clients will be

apt to trust and recommend a business. From the study conducted, it is evident that the major players in the construction industry share the blame for untimely completion of projects. The measures to remedy time overrun were classified viz:

- Predictive: Planning should incorporate weather forecast. Where possible, external works should be avoided during inclement weather. The client should always request for an updated bank bond before he pays the contractor to ensure liquidity of contractor.
- Preventive: Reputable contractors with proven track records should be employed for building projects. Their experience in drawing and executing realistic program of works will ensure that realistic time frames are allotted for each stage of construction and time overrun avoided.
- Corrective: Architects payment certificate raised should be honoured within the stipulated time (usually 21 working days). The funds needed for projects should be earmarked before the project commences.

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