

## THE RUDIMENTS OF CONSTRUCTION PROJECT MANAGEMENT: SOME CAUSES AND REMEDIES IN PROJECTS FAILURE NIGERIA.

---

*Abdulkadir, Abu Lawal*

*Department of Building Technology,  
Hassan Usman Katsina Polytechnic, Katsina.  
Email: [aalawal3@gmail.com](mailto:aalawal3@gmail.com)*

### ABSTRACT

The high cost of finance in today's business environment necessitates prompt project delivery at a reasonable costs and good quality in order to obtain early return on capital investment. Much more so considering the razor thin profit margins of construction contracts putting corruption a sides This calls for effective project management where all construction resources are fully utilized. On the contrary the prevailing situation this country reflects a worsening poor resource management as manifested in the form of abandoned projects and construction cost escalation, several times the initial cost of projects at completion. A trend exhibited at the three tiers of government, parastatals and private sector organization due to the reckless financial arrangement and control of projects. This paper takes a cursory look at the methodology for planning, organization and control of projects in order to achieve desired objectives of prompt project delivery, eliminate scope creep, cut budgetary swelling, cost and time over-runs ,manage unexpected delays and interruptions.

**Keywords:** Construction Industry, Public Sector, Project Planning, Resource Scheduling, Monitoring.

### INTRODUCTION

The client's inadequate financial provision is a very common problem in both the public and private sectors' projects execution, the situation being worse with public sector clients whose unplanned financial managements for executing projects constitutes a major cause of construction scope creep and attendant cost escalation. Project Architects no matter how their role is defined, either in public service or as independent consultants are found to aggravate this problem by not

issuing projects' detailed designs as at when due. And even when this is done, elements of construction economics is usually at miss, and its linkages from project conception as essential technical appendages that propel project objectives, is relegated. Where project seem to be flowing with less turbulence, payments are not usually made to contractors as at when due, (Lawal,2008). With public sector clients, this financial crisis situation is found to be associated with improper estimations of eventual cost of project at inception, when undetailed instructions are given. The clients inability to fund consequent future cost over-runs, and the zealous client's over optimistic projections of their revenue expectations which may not materialized, are firm shackles in many projects smooth progress. And finally total reliance on procurement of funds from financial institutions to complete project is a common practice. While banks cripple the contractors' financial capabilities by asking for impossible collaterals and unworkable high interest rate. The situation became worse when construction industry was removed from the lending priority sector, it could also be advanced that when government is the client, cash flow problems arise as a result of outright naivety on the part of its officials to carryout adequate planning and feasibility studies before awarding contracts, (Lawal,2016).

The difficulty encountered in procuring construction equipment and materials is usually heightened by fluctuation prices, scarcity of essential materials, unfavorable government policies, delay caused by manufacturers and suppliers, transportation problems and bad weather all together makes prompt project delivery a near impossible feat, (Adeyemo, 1974). These Problems leading productivity decline are on many occasions compounded by consulting Architects in Building contracts or Design Engineers in Engineering Projects. These are in the habit of submitting incomplete designs and poor detailing as well as serious omissions in the Bill of Quantities, Engineering specification and schedule of works, which frequently leads to unnecessary changes and variations. This more often than not paves way to selfish and corrupt tendencies of siphoning project funds faraway from reaching a milestone, in compounding this problem is when the commissioned consultants are incompetent, inexperienced and only beclouded with fast bucks syndrome. It is also not unusual for consultants to produce grandiose designs that may be difficult to realize, this problems is more from Architects than Engineers. An important setback to project success Nigeria is legal frame work of our contractual set up, the bulk of the contractors who get jobs ostensibly are only the political plutocrats,

money bags with political machinations, and unbridled greediness to loot. Many of them are usually in connivance with some equally corrupt government officials to frustrate successful project completion. Flaunting, and rendering the promulgated Decree 45 of 1989, others of construction regulatory agencies as merely rhetorical stipulations. Many of these well-connected contractors are technical illiterates, as such organizational and managerial skills are lacking and results in failed contracts all over the nation, (Jibril, 1996). Poorly organized and managed construction firms operate confusion in typical marble stake syndrome thereby delivering sub-standard and sometimes distorted products. The organizational structure and leadership style of a large number of Nigerian Building and Civil Engineering firms are inadequate for efficiency to prevail, due to this situation the adequate manpower level required is rarely obtained. And, as a result of the low level technical expertise, many of the firms are actually ineffective. Lack of technical expertise also leads to excessive profiteering, naked thievery and sheer mockery of professionalism in the Construction Industry. Poor resources management too hinges on this problem, crippling the proper capacity development and to a large extent breeds corrupt practices in the Construction Industry (Ademoroti, 1998).

### **Pitfalls in Project Management**

According to the Nigeria Institute of Building (NIOB, 1998), projects are costly and time-consuming ventures. To take on a project, an organization must devote a large measure of its own resources to produce a result output that will in the short and long run will be financially rewarding. It is therefore worthwhile to look at a number of problems usually encountered in project management and execution. Usually goals and objectives are not clearly defined in many projects, as from onset the right professionals are not involved: Many construction and consulting firms proceed without any set plan for exactly what is to be achieved through the efforts of its employees, instead they work towards an 'idea' of what will be accomplished. They have nothing that is written and directed, especially for the rank and file employees in the project environment. Poor financial estimates contribute to the project predicaments: Some firms do not develop an accurate financial estimates for the completion of specific activities or even the entire project, as such, project simply drift aimless without monitor or costs bounds. The result is unexpected over-expenditure on some activities and under expenditure on others. Some firms in the Nigerian construction Industry, for example, have made determined attempt to

predict the cost of an activity or entire project, but unfortunately and mistakenly used outdated financial information. In which cases arise that even though the current project was quite similar to a previous one, either they ignore the time value of money, the continuous changing character of a free market economy, and other combination of productivity dimensions, results in projects failure. Somewhat related to the previous point is poor state of antecedent data: Many estimates are based upon insufficient and inaccurate data, when some firms do make an effort to plan a project, they use data that are either too brief, insignificant, outdated or irrelevant, and therefore inapplicable. Thereof contribute to improper scheduling and poor resource utilization in projects execution. Poor formulation of tasks makes operations difficult: Without an organized approach for breaking down tasks in a work breakdown system (WBS) into cohesive plan, individual project members find themselves in a situation where their responsibilities are ill desired. They may inadvertently concentrate on activities that do not contribute directly to the completion of the project consequently. Many construction and consulting firms try to accomplish too much in too little time: Thus trying to compress activities without determining the dependencies on the constraints that affect the final successful completion of a project, which contributes to improper scheduling, poor allocation of resources, and inadequate expenditure and consequent project creep and escalations. Many construction and consulting firms pertinently lack a systematic way for the planning, organizing and controlling of projects. They don't establish the means to determine priorities, administrative requirement, manpower resources, expenditures or even schedules, decrease of profits or increased losses as consequences of poor project management.

### **Establishing a Monitoring System for Projects**

Controlling or monitoring of projects occurs when all ways for tracking the course of all event and activities in a project are established, such as a change in:

1. The project completion date
2. Budgeting considerations
3. Specifications
4. Weather conditions
5. Working conditions
6. The economy
7. Construction methods
8. Resource requirements

Some of these changes have firm pronounced impact on the projects and site productivity while others could be superficial with subtlety. Either way, the changes could affect the project in terms of quality, quantity of work, cost and time, and hence overall site productivity, (Lawal,2017). Many sources of information if professionally prepared and made readily available, such as including revised drawings, amended specification, minutes of site meetings,, correspondences, inspection reports, daily construction reports, and many others would indicate how a delay will affect particular events and activities. To fully capture this information and to assess whether a delay will occur, there must be an established means for monitoring project activities.

### **Monitoring Preparation**

Monitoring requires the collection of data on the actual progress of the project and to verify whether the effort is progressing in conformance with plans. For the purpose of this paper just to provide the theoretical basics, monitoring is taken to mean controlling. With the collected data, it would be possible to detect any deviations or variances occurring in activities, and develop a way to compensate or rectify any project malady emanating in such activities, so as to meet the project completion date.

A number of the actions recommended to be taken to monitor a project include:

1. Develop procedure for coordinating and integrating the activities of the project participants.
2. Establish effective communication channels.
3. Assess the impact of problems and delays.
4. Determine the adequacy of resources devoted to the project.
5. Obtain reliable information on the status of the project
6. Assess accurately project costs
7. Measure project status and accomplishments, and
8. Compare current progress to projection and standards.

### **Feed Back.**

This is the key to effective monitoring, so developing ways to obtain adequate, reliably correct feedback on the progress of a project is necessary. Feedback provides the construction project manager with information needed to keep the project moving according to its budgetary and time constraints, the more a reliable feedback plinth is established better is the monitoring process. When a variance is detected, attention must immediately be directed to developing

alternatives which will adequately reduce or eliminate it so that the ultimate goal of completion date of the project is achieved. (John, T. & Butler, 1998).

In general, a project could be monitored according to three main criteria: scheduling, resource utilization and budgeting. Each provides a project manager with an effective way to detect variances.

Let us briefly examine these three main criteria.

### **Schedule Monitoring**

When a project is monitored determine if everything is proceeding as schedule, data is collected along the following lines to detect the type of problems that might be likely encountered.

1. Collect information on any differences between estimated start dates and actual start dates for each activity.
2. Determine any difference between estimated finish dates and actual finish dates for each activity.
3. Determine the percentage of completion for an activity or the entire projects.
4. Any activity performed out of network sequence.
5. Any unexpected delays or other abnormalities that alter the project completion date.
6. Any milestone activities that appears unachievable.

Once the above information is collected, a series of actions could be performed to rectify the situation. For example, the schedule can be updated by re-assessing the duration of specific activities or activities can be re-sequenced, crushed or eliminated, in the laid down programmed chart.

### **Resource Monitoring**

To complete a project, three main resources are usually expended: Manpower, materials and equipment, and other productivity actors determined project productivity. When left uncontrolled, the costs associated with utilizing these resources will likely escalate, so there is need to really track closely the use of these resources from initial resource loading as the project progresses. Resource utilization could be determined using basically three ways: meetings, inspection and forms (records from stores and site records). Meetings provide one with the opportunity to acquire information rapidly, and even psychologically test the reliability of fed information. Inspection allow one to witness what, and how certain resources are being used by staff and other subordinates, while forms allow one to quantitatively determine the

amount of resources. In addition form serves as an excellent historical record on what occurs throughout the project.( Oladiran, 2000.)

### **Budget Monitoring**

When a project is monitored to determine if progress is proceeding according to budgeting plans, one of the aims is to determine the overall financial conditions of the project. This could be accomplished by detecting quantitative variation at any given point in time, either for a specific activity or the entire project, and one of such widely accepted techniques is the Earned Value Management system, (Lawal,2017), and ( Priya, et al, 2015). Usually, cost data is accumulated from a series of sources, related to manpower, materials, overhead and other charges or impliedly the volume of work executed. The actual accumulated data for a particular activity or the entire project with data for a particular activity or the entire project is compared with the estimated costs. Any difference or variances determined, actions such as curtailing resource devoted to a project activity or selecting alternative materials could be taken.

### **Using Network Diagram as Monitoring Tools for Scheduling**

The GANTT'S Chart, CPM (Critical Path Method), and PERT network diagrams are the three best known tools to monitor the scheduling of a project depending on complexity of project in question. Depending on how they are employed, each one can provide a convenient way for assessing project progress.

### **Monitoring by GANTT'S Chart**

The GANTT'S Chart can reflect the percentage of progress of a particular phase by merely placing slanted line sign white hollow bars located directly beneath each black solid bar, or the hollow bare could be replaced with a specific colour. The GANTT'S chart has one major advantage as a monitoring tool. It is very simple and effective for illustrating the progress or status of an entire project or its individual phases, but obvious disadvantages when more details are required. The GANTT'S chart is only especially effective for conveying information to non-technical professionals and managers. For conveying in-depth information on the progress of project, however, a GANTT Chart has some shortcomings because bar charts do not indicate which phase have activities located on the critical path. If these activities fall behind, reaching the project completion date may be difficult. It is just as difficult

to discern the non-critical activities, so one becomes falsely alarmed over the impact of a delay on the project completion date.

### **Using a CPM Network Diagram to Monitor Progress**

The CPM network diagram, unlike the GANTT chart provides enough detailed information to assess the effect of a delay associated with any particular phase or activity. The CPM diagram provides bit more “Micro” information than “Macro” information; it provides more specific information for evaluating the progress of project. Like GANTT ‘S chart, the CPM diagram reflects the percentage of completion for any activity needing progressive updating. Otherwise, the diagram becomes merely a historical document rather than an action tool. Information can be collected from many sources including existing documentation, meetings, and discussion with project participants, effective supervision, (Wearne, 1979). The PERT is suitable for more complicated projects and provides a complete package of project monitoring, as it considers in unison all the three avenues of project monitoring, and is outside the discourse of rudimentary limitations of this paper.

### **Cost Analysis and Review**

The accuracy and value of cost reports to the client will obviously depend on the adequacy of the internal procedures operated by the design and construction team of the project and the skill with which they are undertaken, and depends on their collective professional competence. Detailed discussion of this area is beyond the scope of this paper, though an example is drawn and it is recommended that “cost statements” should be compiled on a regular basis for the reason that they provide:

1. A convenient system of recording the financial history of the project.
2. A vehicle to provide essential financial information to those whom it should concern.
3. A natural means of self-discipline within the project participating members, facilitating proper financial reviews at regular intervals.
4. Change orders, inflationary pressures, delays, and other factors lead to escalating costs and budgetary problems. There is need to have a way to track all the costs associated with each project activity. At specific time interval, these cost could be compiled into reports to help the contractor assess the overall cost of the project.



### **Compiling Manpower, Equipment and Material Costs**

After collecting the necessary information on manpower, equipment and materials costs, the information could be compiled into weekly report. These weekly reports would help the contractor to determine how effectively and efficiently the resources are being utilized. The information could be used to detect any cost variance that may have occurred, and to take corrective action, such as rescheduling activities or decreasing resources allocation.

### **Determining Overall Project Cost**

Once the required weekly reports are created, they can be combined to determine the overall costs of each activity and the entire project to date. This overall cost will turn out to be a composite of four costs: Manpower, material, Equipment and Overhead.

### **CONCLUSION**

Projects are costly and time-consuming ventures. To manage a project any construction or consulting firm must devote a large measure of its own resources to produce result that will be not only financially be rewarding but standard to professional ethics. All too often, however, construction firm embark on projects, despite the investment of large sums of money, without a formal methodology for planning, organizing, documentation and controlling them, the results can be very disastrous. Controlling or monitoring occurs when a construction firm established ways to track the course of all activities and events in the project. Many changes can happen to alter the course of a project such as a change in:

1. The project completion date
2. Budgeting considerations
3. Specifications
4. Weather conditions
5. Working conditions
6. The state of the economy
7. Management
8. Construction methods
9. Resource requirements

Some of these changes will have a firm pronounced impact on the project, while others could have mere subtle ones. Proper documentation, monitoring and an in-depth cost analysis at regular interval help the situation to allow proper action be taken for interest of the project. I hope we would learn a lesson from this piece of write-up and use the information as guidance in managing our capital projects

## REFERENCES

- Ademoroti, A., (1995). Speech as Guest Speaker at Nigeria Institute of Building, 'NIOB Building Materials Exhibition', Lagos Igamu National Theatre, NIOB, Newsletter (1), 1995.
- Adeyemo, M.A., (1974). Financing the Construction Industry: Some Problems and Prospects. The Construction Industry in Nigeria, Proceedings of 197<sup>th</sup> Annual Conference of the Nigerian Economic Society. Pp 235-261.
- Butler, John, T., (1982). Element of Administration for Building Students: Hutchinson, and Co Publishers, Ltd, London.
- Jibrin, A.A., (1996). Guest Speaker, Nigerian Institute of Building at Lecturer, 'The Indigenisation of Nigerian Construction Sector' at Igamu National Theatre, Lagos, 1996.
- Lawal, A.A., (2000). Housing in Nigeria: The Dearth Crisis, Policy Bureaucracy, and Human Right Perspectives. A paper presented at the Departmental Seminar, Department of Building and Quantity Surveying, HUK, Polytechnic, Katsina.
- Lawal, A.A., (2008). Rationale Procurement and Choiced Alternatives in Construction Project Delivery. A paper delivered at 1<sup>st</sup> National Conference at HUK, Polytechnic, Katsina.
- Lawal, A.A., (2017). The Appraisal of Construction sites Productivity: In Kendall's Concordance. *A Published Paper in the Journal of Civil, Environmental, and Architectural Engineering. Waset.org/publication/100005999, 2(1), 2017.*
- The NIOB, (1998). Nigerian Institute of Building, 1998. The Professional Builder's Magazine, 3, (9),1998.
- Oladiran, O.J., (2008). Material storage and Handling on Building Construction Projects: Effects, Methods, and Solution. Department of Building University of Lagos
- Akoka, Yaba, Lagos. The Professional Builders Magazine, (9), 79-83, 2008.
- Priya, D., and Harihar, S. L.,(2015). Effects of Schedule performance in Earned Value Management, and Earned Schedule Using Weibull Gamma, and Exponential Function. *International Journal of Engineering Science Invention and Development, 2(4), 2015.*

Kolawole (2000) – A Complete Indigenous Domination of the building Industry in Nigeria – A Vision or an Illusion? *Building International Magazine*, No. 1 January, 2000. Pp. 18.

Adeyemo, M. A. (1974) – Financing the Construction Industry: Some Problems and Prospects. *The Construction Industry in Nigeria, Proceedings of the 197<sup>th</sup> Annual Conference of the Nigerian Economic Society*, pp. 235- 261.

Gumel, H. S. (1998) – Documentation, Monitoring and Cost Analysis of Project: *The Professional Builder, Journal of the Nigerian Institute of Building, June 1998, pp. 20-26.*

Wearne, S. H. (1929). *Control of Engineering Projects*. Edward Arnold, (Publishers), London.

---

**Reference** to this paper should be made as follows Abdulkadir, Abu Lawal (2017). The Rudiments of Construction Project Management: Some Causes and Remedies in Projects Failure Nigeria. *J. of Environmental Science and Resources Management* Vol. 9, No. 3, Pp. 21-31

---