FINANCIAL MANAGEMENT OF CONSTRUCTION WORK IN NIGERIA UNDER UNCERTAINTY

A Case Study of New Nigeria Construction Company Ltd.

BY

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NOVEMBER, 1989

TITLE PAGE

FINANCIAL MANAGEMENT OF CONSTRUCTION WORKS IN NIGERIA UNDER UNCERTAINTY:

(A CASE STUDY OF NEW NIGERIA CONSTRUCTION COMPANY, LIMITED)

BY

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Being a Project submitted to the Postgraduate School, Ahmadu Bello University, in partial fulfilment of the requirements for the award of the degree of MASTER OF BUSINESS ADMINISTRATION (MBA).

Department: Business Administration
Faculty: Administration
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DEDICATION

This project is dedicated to my late father, Mallam Kurah Gyet Tibom and his entire family.

to:

My beloved wife, Florence M. Andrew and my son, Master Wyeku J. Andrew.

Finally to:

My first and the late Supervisor, Dr. Ishaya Dan-Kano and the Ham Community in general.

DECLARATION

I hereby declare that this project has been composed by myself and that it has never been presented and accepted anywhere before in the fulfilment of the requirements for the award of any degree.

However, I have borrowed from other sources, and appropriate citations indicate the works of others upon which I have drawn.

Name: Andrew Z. Kurah

Signature:

Date: November, 1989

ACKNOWLEDGEMENTS

I wish to express my gratitude to a number of people, who have helped this project to be a success.
I thank my family for the understanding they showed during my absence for this course.

To my first, surpervisor the late Dr. Ishaya Dan-Kano. My gratitude is unlimited for the access I had to him and the advise and encouragement given to me by him. May his soul rest in peace.

I also wish to express my gratitude to Mrs. Nwasike, the MBA course coordinator.

To my business partners Messrs P.N. Buba, Alhaji M.M. Yakubu and Mr. L. Sukai of Buka Quantity Surveying practicing firm. Also David O. Maiye and Bolade Mustapha of Foresight Associates for their encouragement and support.

Finally, I am highly indebted to Mrs. Ladi Gambo who patiently typed the scrips of the project repeatedly.

THE CHOICE OF NEW NIGERIA CONSTRUCTION

COMPANY LIMITED

New Nigeria Construction Company is one of the largest indigenous construction companies operating in Nigeria between 1972 to date. By 1981, the company had projects worth approximately one hundred million Naira (₦100 million) and a turnover of approximately one million Naira (₦1 million). The fact that some of these various projects span for a period of over 5 years make the study of financial management of construction projects under uncertainty worthwhile. This is because the kinetics of cost escalations may surface in the course of the construction for the length of time.

Also the factors of the collapse of construction firms could be revealed. This could be due to management or other factors.

At the time of this writing it is still an existing entity. With the continous existence of the mother company (NNDC), it is most likely to survive with good management.

ABSTRACT OF THE STUDY

Man through the ages has two basic needs - food and shelter. With the need for shelter and infrastructures entails construction works. It means finance and the prudent financial management to maximise the financial benefits.

Financial management of construction projects in Nigeria calls for a special attention because 'contracting' has come to be erroneously thought to mean money making for whosoever undertakes contract work.

It has been viewed by several professionals and non-professionals that contract costs in Nigeria are among the highest in the World. For example, it is argued or opined that contracts cost approximately 40 percent more than similar projects in Kenya, 25 percent more in Britain, 40 percent more in Brazil and 30 percent more in U.S.A. The present comparable estimates taking SFEM/FEM into consideration indicate that the cost of construction in Nigeria relative to the countries mentioned range between 125% and 300% .

Government projects are financed from revenue raised through several sources of funds, one of which is the public taxes and levies.

The Government through several policies aims at encouraging indigenous companies in the production and technological advancement through such decrees as Indigenisation Enterprises promotion decree. But how do the government policies in the implementation of the construction works affect the Nigerian Indigeneous Firms?

TABLE OF CONTENTS PAGE NO.

Litle		i
Dedication		ii
Declaration		iii
Acknolwedgement		iv
Choice of New Nigeria Construction Company Ltd		v
Abstract of the Study		vi
Table of Contents		viii
List of Tables		xiii
List of Fig.		xiii
CHAPTER I		
1.1	Purpose of research	1
1.2	Research methodology	2
1.2.1	Primary Data	2
1.2.2	Secondary Data	3
1.2.3	Prodecure of Analysis of Study	3
1.3	Hypothesis	4
1.4	Problem encountered	5
1.5	Significance of Study	5
1.6	Preamble	6-7
1.7	Introduction - background information	8-9
1.8	Definations of Key terms and abbreviations	10
1.8.0	What is financial Management	10-11
1.8.1	Contractor's cash flow	12
1.8.2	The Construction team	12-14
1.8.3	Abbreviations	14-15
1.8.4	Construction activities	15

CHAPTER II		PAGE NO.
2.1	Historical Background	16-17
2.2	The importance of finance	18
2.3	Management concepts	18
2.3.1	Forecasting	19
2.2.2	Planning	19-20
2.4	Roles of Consultants in Construction	21-24
2.5	Characteristics of Finance	24
2.6	Sources of Finance for Construction	24-26
2.7	Contractual provisions and Finance Contract	26
2.7.1	Time borne	26-27
2.7.2	Variations	27
2.8	Significance of Construction Works in National Development	27-29
2.9	Constraints of the Construction Industry	29
2.9.1	Finance	29
2.9.2	Interest rates	30
2.9.3	Inflation	30-31
2.9.4	Man Power	31-32
2.9.5	Availability of building materials	32-33
2.9.6	Socio-polical	33-37
2.9.7	Media Reports	37-42
2.9.8	Building projects, Lump Sum Contracts	42-43
2.9.9	Closer study of building projects using historical data	43-44

CHAPTER III		PAGE NO.
3.1	Introduction	45
3.1.	Objectives	45
3.1.2	Subsidiaries	45
3.1.3	Historical of NNCC Limited	46
3.1.4	Share Capital	47
3.1.5	Percentage holding	47
3.1.6	Corporate objectives	47
3.1.7	Measures of effectiveness	48-49
3.1.8	Organisational structure	49-50
3.2	Contracts, types and provisions	51
3.2.1	Contract	51
3.2.2	Types of Contract	52-53
3.2.3	Contractual Basic provisions	53-56
3.2.4	Competence	56-57
3.3	Contract financing	57-59
3.3.1	Mobilisation fees	59
3.3.2	Abuse of Mobilisation	60
3.3.3	Government pay-system	61-62
3.3.4	Irony of Encouragement	63
3.3.5	Implications	64
3.3.6	Local Approach	64

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

CHAPTER IV		PAGE NO.
4.1	SUMMARY	65
4.1.1	Importance of Construction	65
4.1.2	Finance Impact	66
4.1.3.	Problems, Finance	66
4.2	Government and the Construction Industry	66-67
4.2.1	Constraints and failure of construction Industry	67-69
4.2.2	Bank Charges	69
4.2.3	Corruption	70
4.3	Problems and Recommendations	71
4.3.1	Problems	71
4.3.2	Recommendations	71-73
4.3.3	Planning	73-74
4.3.4	Specifications	74-75
4.3.5	Research	75
4.3.6	Pay System	76
4.4	Progress of Works	76
4.4.1	ABU Teaching Hospital Zaria, Phase 1	76-77
4.3.2	Payments	77
4.4	NNIL Office Complex	77
4.5	NNPC Refinery Houses	78

	CHAPTER IV (cont'd)	PAGE NO.
4.6	Ilorin Teaching Hospital	78
4.7	ABU Teaching Hospital Zaria Phase 1A	79
4.7.1	Payments	80
4.8	Professorial Unit	80-81
4.9	Ilorin Central Bank Houses	81-83
4.10	Further Research	84
	BIBLIOGRAPHY	85-87
	APPENDICES	88-97

LIST OF TABLES

		PAGE NO.
01	Construction Contribution to Economy	28
02	Selected reported cases in Media (1983-88)	38
03	Summary of Table 02	40
04	Engineering Projects extracts	41
05	NNCC Projects	82
06	Four Main projects Completed	83

FIGS

01	Defference between initial and final costs	39
02	Organisational Structure of NNCC LTD	50
03	20 NC.Steps Payment System	62

CHAPTER 1

1.1 PURPOSE OF RESEARCH

The purpose of this research is to conduct a case study into why construction projects are accompanied with high cost increases using New Nigeria Construction Company as a case study on the operations of Constructions, particularly, the indigenous firms.

It is also intended to highlight the cause or causes of the suspension or the abandonment of construction schemes.

Finally, to contribute to the views that would reduce the frequency of abandonment of projects and cost escalations.

1.2 RESEARCH METHODOLOGY

Consideration of the trend in the construction industry in Nigeria in general was the starting point. By so doing, an insight is gained into the nature of construction activities in the industry. Thereby, enables the study of New Nigeria Construction Company meaningful.

1.2.1 Primary Data

i. Data were collected from various sources on the mode of operations, organisational policies and the managerial styles of the organisation.

ii. On a wider Scope data based on market survey was conducted for over hundred (100) projects but with only very few authentic and reliable responses. Information is indicated in table 2 This was gottoned through the administration of Questionaires.

The questionaire was designed with the aim of extracting valuable information of the causes of suspended or abandoned projects as well as the main causes of projects cost exscalations.

1.2.2 Secondary data

The data collected in this case came mainly from the organisation itself notably, the Quantity Surveying department, Accounts division, construction sites management of nine sites where the organisation was operating. Also, through interviews with the top executive - the Managing Director, Financial controller, the Chief Quantity Surveyor, the purchasing Manager. Very importantly, with the chief Architect of the Federal Ministry of Health Lagos. He is the overall representative acting for and on behalf of the Federal Government on Hospital Projects. This is the major operational area of the company under study.

1.2.3 Procedure of Analysis of Study

After all the collection of primary and secondary information and data, the results from the questionaires with the personal interviews and other sources especially the Consultants to the projects, the following were arrived at:-

i Tabulation of data
ii Interpretation of the data collected
iii Formulations of conclusions based on evidence shown by the data.

1.3 Hypothesis

New Nigeria Construction Company Ltd has been operating for over ten years and for most cases they have operated at a loss or with minimal profit. My assumptions for the situation are as follows:-

a. Failure of the major clients, the Government to meet their financial obligations as when due in accordance with the contractual provisions.

b. The administrative tendency to use their cash flow on overhead items such as guest houses, travels, gifts, et cetera.

c. Failure on the part of Management to be aware of the average industrial overheads and profit chargeable into a contract.

d. The staff turnover. The frequency of employment and firing or resignation of staff is rather high.

e. Political inclination. Donations to political organisations. While being part of marketing, it increases the overheads of the organisation. These overheads costs are eventually charged into the contract. This tends to increase the overall price of a project.

1.4 Problems encountered

Generally, research is proned with the problem of respondents for interviews and or the filling of questionaires. As any business organisation. It was not easy to have access to personnel. Priority was given by personnel to production in the business. Information required was collected for a period of 6 months.

The second stage is of course the sorting out of data, obtaining charts. Transportation to various site was by no means easy. Trotting between Zaria, Ilorin, Lagos and the immediate surrounds and keeping to appointments with whom you want to see was by no means an easy experience.

1.5 Significance of Study

The purpose of the study is to help the reader in whatever circle in business to evaluate its organisation's structure, policies and its environment of operation.

It is mainly directed to the indigenous construction firms. It is also and mainly to the Government on their lapses in the policy of aiding indigenous firms in enhancing the economy.

1.6 PREAMBLE

The generality of Nigerians, be they administrators, permanent secretaries, army officers, professors or the ordinary man are weary of the situation where construction works have always being given to foreign firms who they argue tend to inflate the contracts over and above the initial contract amounts.

They are conscious of the increase costs of the construction works with the attending financial drain on the National economy.

The Government has considered the assertions and consequently came up with the Nigerian Enterprises Promotion Decree of 1972, thereby, provided the indigenous 'Contractors' to prove their capabilities to perform. This was the challenge.

This study intends to look at the Government policies towards contract financing and as it affects the indigenous contracting firms and cost escalations of construction works.

The question to be discussed is why the indigenous construction firms failed. Why are there several delayed, suspended and even abandoned projects all over the nation.

These are some of the possible factors, the main causes include:-

a. Lack of capital for the construction firms to take off. Capital here include plants, machinery and equipment as well as cash for the purchase of materials.

b. Lack of cash flow planning and control by the contractor.

c. Irregular or lack of payments from the client (building owner).

d. Other factors as indicated in Appendix 'B'
This study intends to address itself to item C situation, that is, irregular or lack of payments from the client and in particular the Government, being the major finaceir of construction works.

The study intends to show that if the financial planning of cash disbursement to contractors and the present pay system is re-evaluated, the performance and growth of the indigeneous construction firms will be enhanced and there will be an acceleration of the pace of our economic development and less drain on the national revenue.

INTRODUCTION

1.7 Background Information

Construction works in Nigeria is pronged with several uncertainties. These uncertainties arise from the nature of the industry itself - the competitive tendering process due to the level of competition, national slumps in the economy, the company's turnover, site production rates, weather situation, Government policies and the cash flow problems and proven business practices are all variables. Construction industry executives must learn to cope with these problems and uncertainties. However, with management techniques such as production planning through the setting of targets using bar charts, linked bar charts, network analysis and cost control, the variability of uncertainty can be reduced. One could justifiably argue that there is no other industry that requires the proper application of business practices as much as the construction industry.

The many variables and complex relationships that exist between the variables that must be considered in the process of building a construction project necessitates sound business practices and decisions.

The coordination and use of the many types of labour, skills, materials, and equipment that are required to build a project requires daily application of proper business practices.

The variable environment concerns the use of labour materials and equipment. In addition, government influence and labour union's practices have a bearing on business decisions that must be made. The business practices or disciplines that are necessary part of a firm's everydays business vary some what depending on the size of the firm and the type of work the firm performs.

In addition, the need for various practices depends on the firms competition and the economic environment in which the firm is operating.

The varying necessity or importance of a given business discipline does not remove the contractor's need for certain common business skills. Whereas, the firm may be highly competent with regards to the technical aspects of the business, constraints as the business failure or highly inflated contract prices over and above the initially contracted figure as well as the contract period over-runs have been sources of concern, yet, the Nigerian clients do not feel concerned over this.

The Nigerian contractors because of the anxiety for "kwangila" (contract) is more concerned in obtaining the contract. Any thing can occurr there after.

There lies the problems of contract administration in Nigera. It is hoped that this project will be able to high-light the problems and perhaps avail reasonable explanations and also solutions.

1.8 DEFINITIONS OF KEY TERMS AND ABBREVIATIONS

1.8.0 What is Financial Management of Construction Works?

Financial Management involves a set of activities including keeping of financial records, preparation of financial reports, the management of firm's cash position, the provision of the firm's prospectivecash needs and the resourcing for working capital for the firm either internally and or externally. The decission for the investment of funds in assets, obtaining the best mix of finance in relation to the overall valuation of the firm's policy.

The investment of funds in assets, determines the size of the firm, its profits from its operations, its business risks and its liquidity.

The determination of the mix of any type and source of finance determines the firm's financial and its financial risk.

With the era of technological innovation and new industries in the 1920S, firms needed more funds. The result was a greater emphasise on liquidity and financing of the firm [1].

The effect is that money is gottened but the utilisation or management of the funds available is faulty. The interest rates are always rising, the return on investment becomes stalled. Time is very important.

Construction work is one area where quite a substantial amount of prudent Financial Management is desirable. Money sunked into a structure cannot physically be retrieved. This, therefore, requires a high degree of financial Management of funds right from the inception of the construction.

The large number of abuses with debt, particularly those that occured in connection with public utility holding companies and Governments are brought to the limelight when the companies collapsed or projects are abondoned.

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1 J. Fred Weston. The scope and Methodology of Finance (Englewood Chiffs, N.J. Prentice - Hall, 1966?

Chap. 2.

1.8.1 Contractor's cash flow

Many contracts are under / taken on the basis that the client pays for work progressively throughout the life of the project construction. Therefore, provided the contractor is able to raise sufficient capital to finance possibly the first two months of the contract, he can rely on 'steady' interim payments thereafter. If is unfortunate that, the market takes a downward turn, the competition for contracts becomes more fierce, resulting in underpriced tenders. Should any unforeseen difficulties then arise during the course of the contract's execution, sufficient financial resources are not available to pay the creditors. This may lead the contractor into bankruptcy Moreso, during the period of inflation, the contractor's cash flow problem can be increased.

Therefore, the understanding of financial management based on forecasting, planning and control in the construction works . is significant and necessary for success in the industry.

1.8.2 The Construction Team

The Construction team is a group of professionals and client who are advisers to the construction, the contractor, sub-contractors and suppliers are all party to the construction. The key parties to the construction works include:-

a) The client : Is the building owner who wants the services or project to be undertaken. He briefs the consultants on his requirements.

b. The architect : He does the design, putting his ideas to meet the functional and acesthetics requirements of the structure on paper depicting how it would look like when practically executed.

c. The engineer: They are of three kinds:-

i. The structural engineer whose main concern will be designing the load bearing frame of the structure including determining the bearing capacity of the soil.

ii. The Electrical Engineer who is concerned with designing electrical requirements in accordance with the safety regulations and adequacy of the power for the functional use of the structure.

ii. The Mechanical Engineer whose concern is to ensure the proper specifications and installation of machines, equipments, plumbing systems that are consistent with the capacity of power and the effect of vibrations on the structure.

d. The Quantity Surveyor is a construction Economist.[1]

Hís duties include translating the designs of all other consultants into an easier and understandable form to the tenderers for the purposes of preparing a competitive tender (bidding) for the project.

He is the financial adviser to the other consultants, the client and the contractor, the American calls him "Construction Manager"

The Contractor: The contractor is the person that provides the services required by the client. His engagement is usually through a competitive quotation of a price for the service for the clients consideration and acceptance. His quotation is based on the prepared documents of the consultants and in particular, the documents prepared by the Quantity Surveyor. The following abbreviations shall carry the following interpretations:-

1.8.3 Abbreviations

NNDC	New Nigerian Development Company
NNCC	New Nigeria Construction Company Ltd
Q/S	Quantity Surveyor
NNPC	Nigeria National Petroleum Corporation
B/Q	Bills of Quantities
Site	Place where construction work takes place.

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1 Umaru Dutse The Quantity Surveyor 1981, Jan Edition, Vol. 1 page 12

Contract period - The duration of the construction works

Mobilisation Fee: loan to aid the contractor to start the works. It is a loan and to be paid back from the contract sum.

Contract sum: The agreed amount of money that the client shall installmentally pay the contractor for the works to be executed.

The works: The structure to be constructed.

JCT: Joint contract Tribunal.

Inflation: Increase in cost arising from time borne factors such as increase in cost of labour and or materials and exchange rates.

Cost Escalations: The total cost differential between the initial project cost and the actual and agreed final cost.

1.8.4 Construction activities

There are many and varied number of construction activities ranging from the minial of small thatch houses to modern houses, hospital, barracks, cinema, warehouses, the complexes like ducks, seaways, runways, roads, flyover bridges and a host of others. NNCC Ltd undertakes mostly building works like residential buildings, mosques, churches, hospitals and office blocks.

CHAPTER II

THE CONSTRUCTION INDUSTRY
(LITERATURE REVIEW)

2.1 Historical Background

Construction work here is understood to mean building and civil Engineering works and basically includes housing, offices, warehouses, hotels recreational facilities, hospitals, educational institutions, et cetera, which constitute building works. Examples of civil engineering works will include expressways and motor ways, petrol pipelines and refineries, sewage systems, bulk storage depots, nation wide telephone communications, and air transport systems.

Construction works have been as old as human existence. The period 1972 to 1981 witnessed a period of development euphemism in Nigeria.

The recognition of construction as a key service industry in the solution of urban problems of unemployment and productivity improvement in third World nations is probably the most persuasive development argument in support of construction in recent years.[1]

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1 Eno Usoro's 1978 - Project, Dept. of building ABU - Zaria.

Perhaps that is why past and present Federal and State Government of Nigeria have recognised the importance of adequate social and physical infrastructure in the development effort of the Country. And yet, a lot more is required to consolidate present achievements and to get the Country into a firm base for a self-sustained and self reliant growth.

A huge capital investment, underpinned by a suitable political environment and a realistic strategic planning will have to be sustained over a long period of time in order to achieve meaningful development.

The comparatively meagre resources of this country will be wasted or at best not put into optimum use if envisaged gigantic investments are not based on sound information analysis and costing.

Already, the World Bank is calling for the abandonment of the Ajaokuta Steel Rolling Mills. It is obvious that this is due to the nation's Financial constraints. This constraint is due to inadequate planning for Financing of the project.

The construction industry at present receives and accounts for a considerable, if not the largest, share of the country's investments; An awareness of the role of the industry in ensuring a cost-effective use of resources is, therefore, necessary.

2.2 The Importance of Finance

Finance plays a crucial role in the functioning and growth of any organisation. It is said to be the circulatory system of an enterprise, making possible the needed cooperation between diverse units of activity,[1] and the necessary linkages between diverse sectors of the overall system.

2.3 Management Concepts

Financial Management of construction fits into the so-called seven management concepts of:

i. Forecasting
ii. Planning
iii. Organising
iv. Monitoring
v. Controlling
vi. Coordinating
vii. Communicating

However, it appears that much of the financial activities in the financial management of projects can be re-grouped into:-

i. Forcasting
ii. Planning
iii. Control

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1 MOSHIN, N (1981): Financial Planning and Control; New Delhi: Vikas Publishing House, PVT Ltd: P.5.

2.3.1 Forecasting

The forecasting stage for most projects in Nigeria is the team work of Consultants and the client. Here the client may disclose his investment requirements and capacity From the briefing, the consultants would then go ahead to preliminary design within the conceptual requirements of the client having regards to:

i. Financial strength of the client
ii. Functional requirements of the structure
iii. Specific requirements of the client
iv. Inflation
v. Economic trend
vi. The site constraints
vii. Cost - in - use
viii. Return on investment.

Thus, the forecast establishes relationship between the financial requirement, and the financial management.

2.3.2 Planning

The planning process entails:

i. Design alternatives and comparative cost analysis
ii. Cost targeting or allocation of cost to the various elements of the design elements for the purposes of cost control
iii. Finance source or sources and cost of Finance.
iv. The management of the Finance during the construction.

Implementation stage consideration would include:

i. Preparation of final feasible design acceptable

ii. A Pre-tender costing of the design would be prepared to re-affirm earlier predictions and still considering inflation in relation to the time for actual site works.

It is expected that whichever contractors that are invited to tender for the works would be required to have access to the site of the proposed construction, study the design of the proposed project as well as the Bills of Quantities for the works. This will aid him to:-

i. Prepare a proper and competitive tender
ii. Prepare a proper and realistic works programme
iii. Prepare his cash flow that reflects the programme of works and the expected completion period.

This project is more concerned with the above factors as these reflect finance source, availability, cost and the successes or failures of construction works in Nigeria.

Shortage of funds, therefore, has an adverse effect on the progress and the completion of projects in Nigeria. Has the client made necessary planning for the financing of his proposed project?.

Has the proposed contractor the necessary type of plants he is tendering for? These are crucial questions in the financial management of construction works - planning. Why are there so many abandoned projects all over the Country-planning. What are the financial cost or implications on uncompleted projects. Who are responsible for the uncompletedprojects?.

2.4 Roles of Consultants in Construction

Most constructions are executed under contract agreement between two major parties. These are the building owner on one hand and the contractor on the other hand. There are usually subcontracts within the main contract but the provitions for the execution of the subcontracts are similar to the provisions of the main contract.

Consultants are instrumental to the preparation of the necessary documents for the client and contractor to enter into the contract and to ensure the proper execution and completion of project.

Therefore, there are three main parties that are usually involved in the construction industry. The client, consultants and the contractor the three "Cs".

The client wishing to execute or undertake construction works, consults, in most cases in Nigeria, the Architect and briefs him of his proposals. The type of structure he wants, the quality or standard, if he knows, or the capital that he has and is willing to invest in the required construction. When the Architect has established his client's requirements, he prepares sketch drawings, a translation of the client's requirements. When this is agreed upon by the client, other consultants get involved. Usually, it is the Quantity Surveyor.

The Quantity Surveyor receives the sketch drawings known as the Preliminary sketch drawings and prepares estimates of cost of the project. It is when the cost is within the client's budget that more consultants get involved.

The Structural Engineer at this point is to do his structural analysis of the nature of the frame that the building should have for a stable structure. In doing this many factors are considered, including, the nature of the soil, the topography, wind force, et cetera.

Other Engineers - specialist in electrical and mechanical designs are invited. It is the combined designs of the engineers and Architect that enables that Quantity Surveyor to translates the whole drawings into a document known as the bills of Quantities. The Bills of Quantities contain items of materials, labour and work specifications that would be required for the proper execution and completion of the project.

It also contains the terms of the contract to be entered into between the client and potential contractor.

Usually, more than one contractor are invited to tender (bid) in competition for the contract, the tendering process entails the pricing of those items in the Bills of Quantities (BQ) and totalling to arrive at a total figure of offer to the client. One among the several tenderers is subsequently chosen as the contractor.

Contract is entered into by formal appending of signatures by both parties to the contract - agreeing upon the contract sum that would be paid by the client to the contractor for the works to be done. The contractor agrees with the sum and also as to the period (Contract period) he is contractually bound to complete the project and the conditions of the contract include the mode of payment.

The problem with the construction industry is the ability of the parties to the contract to keep to the provisions of the contract particularly with the regards to:-

i. Regular payments
ii. Sufficiency of the contract documents prepared by the consultants
iii. Delays in the continuing of the construction deligently and regularly by the contractor
iv. Increase costs - inflation and claims.

Consultants, therefore, have the professional responsibility to advise their client with regards to proper budgeting and forecasting before entering into contract for construction works. They have professional responsibility to ensure that contract documents prepared are well thoughtof right at the begining to avoid modifications that could lead to claims and therefore increase costs to the client.

Time will come when consultants would be the focus for litigation because of professional negligence.

2.5 Characteristics of Finance

The level of access to finance determines the capacity for production. Fin ince also has a cost value, the level of which is a function of time to which it is tied down. In order to optimize finance, production has to be pre-planned to determine the extend of:

i. The level of finance required
ii. The financial structure needed
iii. The; expected^return or satisfaction derivable from the investment.

2.6 Sources of Finance for construction

Government could raise necessary finance for the construction works in the following ways:-

i. Budget surpluses from taxes
ii. Domestic borrowing advances from the central Bank, use of Government securities such as treasury Bills and Government Stocks.

iii. Revenue from internal charges such as tolls from highways, bridges and Air-port taxes.

iv. Internal revenue surplus of various statutory corporations and state-owned companies.

v. Foreign aids and borrowing from friendly Countries, loans from World and other international financial institutions.

vi. Revenue surplus from mineral right i.e Royalties.

The private sector could raise finance from the following sources:-

i. Borrowing from accumulated funds from Insurances Companies.

ii. Negotiating direct loans from commercial banks

iii. Promotion of cooperative societies

iv. Direct loans from other financial institutions such as Mortgage Banks, Industrial Development Banks, Agricultural Banks, Bank for Commerce and Industries and Building Societies.

Financing a project or construction from external sources is very costly. This is due to the high interest rate charged. Construction completion period is therefore, of high signaficance in the total cost of a project. For Government, the least finance cost sources are from the revenue from various taxes and perhaps, domestic borrowing, advances from the central Bank and the Government securities such as Treasury Bills. External resourcing has proved very costly as seen in the present situation in Nigerian where interest on borrowed money is a problem not to talk of capital its-self.

Commercial Banks interst rate in 1987 to 1989 alone ranges between 12 percent to 20 percent. That is, contract over-runs for over 24 months period can attract 8% increase on items that vary with time.

Contractual Provisions and Finance

2.7 Contract

A contract is an agreement enforceable in law under which a party has an obligation to another for the supply of goods and/or services or the performance of work at a determined price. It is usually executed along with other auxillary terms that have financial implications. Some of the usual and important terms or conditions would include:-

2.7.1 Time borne: All contracts entered into are required to be executed within a time limit. The obvious reason is that the client would like to get returns on his investment or satisfaction out of it.

None - completion as specified creates cost to the client. Therefore, lack of pre-planning causes loses, both to the client as well as to the contractor. If not completed in time, Liquidated and Ascertained Damages will be applied. Liquidated and Ascertained Damages is the equitable sum on

would be alternative return on investment which the client would have benefited has the contractor completed the works as due. The above attempts to show areas of rising cost within the construction industry. Minimisation of the occurence of the factors, cost reduction of construction factors, cost reduction of construction is believed will scale down.

2.7.2 Variations

Changes in quality and/or quantity in the design creates cost increase or decrease because the contract has been modified. Variations or modifications in Construction Works involve any of the following: change/quality (Specifications) of materials or labour, increase or reduction in the space of the structure as well as alteration in the executed part or parts of the structure being constructed. Perculiar site problems such as soil bearing capacity et cetera.

Interest charges on loans for the construction increase creates costs to the structure.

2.8 Significance of Construction Works in National Development

According to the World Bank Urban Data on Nigeria, the following is an indication of the relative sectorial incidence on the Gross Domestic Output for selected industrial activities for the period 1972 through 1976.

Table 01 below indicates the contribution to the National Development by the Construction industry within the main sectors of the National's economy.

In Million of Nigeria

	1972	1973	1974	1975	1976
Agriculture	3183	3123	3331	3213	3290
Petroleum	1673	1899	2190	1593	1938
Construction	515	646	746	900	1000
Transport & Communications	248	268	313	420	489
Mining & Quarry	75	90	100	83	63
Manufacturing	537	591	595	797	890
Electricity & Water	42	52	59	55	66

Source: Table 01: N.I.Q.S Journal, Vol 2, 1983

The contribution of the construction industry relative to the Gross Domestic Product compares favourably with the other sectors of the economy. Social and economic development has being exhibited in structures such as the Eko Bridge, Lagos flyovers complexes, the Kainji Dam, Tiga Dam, Tin Can Island, Port Complex, the Festac Village, the Satelite Town, Army Barracks, and seemingly endless kilometres of express roads, the Federal Government Secretariat, the National Arts Theatre, the National Stadium, Bookshop House, Unity House, NET Building, the New Federal Capital at Abuja are all monuments of the Nation's development.

If these are financed by the public sector; then, there lies the danger of lack of planning to save additional costs escalation due to fluctuations and variations and other factors. Today, there are hundreds of projects started and money sunked in but cannot be completed because of the escalation in costs (finance). Yet, a lot of money has been tied down with the introduction of the austerity measures of the period 1978 - 1979.

2.9 Constrains of the Construction Industry

We have quite a number of constraints within the Construction industry. These constraints affect the performance and the development of the industry. Some of the constrains are as follows:-

2.9.1 Finance

Construction cannot take place without finance. Finance for labour and materials are absolute necessities for any project. The respective finance institutions seem to be reluctant in the provision of loans for construction - Where and when there is willingness to grand such loans, there is high demand for coletarals before such loans are granted.

On the other hand, loan may be granted based on some "relationship" between the authority to approved such loans and the beneficiary of the loan or on the basis of a percentage gratification for the "gesture"

2.9.2 Interest rates

As December, 1988, the average interest rates on loans in Britain was 9% In a galloping in-flationary economy of Nigeria the average interest rate is 25%. This no doubt creates problem for Construction developers. This affects the Government, development speculators and private developers.

It is therefore, a problem to the Construction industry. Particularly that Finance is a key factor to any construction and for National Development.

2.9.3 Inflation

Inflation here refers to increase in costs not attributable to design variation or changes in specifications. Rather is due to time extension of the project, rising cost of Finance, abandonment and remobilisation on site to continue with the project. Also, the general inflationary trend in the economy as well as the exchange rate prevailing at the time being. These can cause or be the cost of cost escalation to a contract. It is, therefore clear that inflation of contract or project cost is a function of:-

a. Time
b. Cost of finance
c. Cost of demobilisation and remobilisation
d. Economic trend in general
e. Prevailing exchange rate.

Contracts cost 'escalations' include all of the factors of inflation as well as the following:-

a. Increase due to changes in design
b. Changes in specifications in materials or and in labour
c. Allowance for 'gifts'

All of these factors are necessary for consideration in the construction industry design and implimentation.

2.9.4 Man power

Shortage of man power affects the Construction industry in Nigeria to a consirable extend. Professionals in the industry are quite limited. This means that there is quite a sizable number of people who practice the profession or construction team who are ill equiped to perform. The resultant effect is to prepare or execute works on an adhoc manner which results in many cases to cost escalations.

This problem of project cost escalations particularly in Nigeria has become so well known even to foreigners. "In Nigeria, large and nationally presigious construction projects such as motor ways, dams, irrigation schemes and power stations very often spiral in cost during their Construction to such an extend that the actual final cost is many times the original cost. When this happens the result can be financial chaos.

As a result projects are abandoned by the Contractors because the normal monthly interim payments have long since ceased"[1]

This has being allegly attributed to "severe shortage of professionally qualified and experienced members of the design team" (Inglis 1983) Manpower shortage in the industry provides another constrain to the development of the construction industry.

2.9.5 Availability of building materials

The lack of the required building materials within the country poses a serious problem to the development of the industry. Many projects are often abandoned because necessary Materials ordered did not arrived on schedule.

Technological advancing projects such as steel rolling mills in the Country, have insuficient necessary imputs within the Country. The result is the cost of foreign exchange, the cost of time, the cost of interest rate on borrowed money. In the final analysis, the final cost of the project would have increased extronomically.

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1 Inglis, 1983, I.Q.S Journal Vol.33, "Glassglow Role in Nigeria."

The Ajaokuta steel rolling mills Construction has been stalled for years due to among other factors, to lack of materials for the construction.

Peugeot Automobile of Nigeria, alleges that the high cost of Peugeot is due to the inavalibility of parts in Nigeria. These parts, therefore, have to be imported. The importation attracts high importation costs in the form of exchange rate, tarrifs, custom duty and other sundry costs. The Kano - Kaduna express way has been delayed because of lack of steel reinforcement in the Country. The steel rolling mills in the Country could not meet the demand. The inability to complete the ways as per contract results in cost escalation to the contract.

2.9.6 Socio-political The Socio-political consideration in the construction development in Nigeria places the Country in difficult situation. The heteragenous nature of the country makes the Government to take decision or commitments that may not necessarily of immediate implementation but in order to satisfy certain geographical and ethnic areas, in the Country. A situation like this has little or no room for positive financial planning for the timely implementation of the project. Again what this situation means is inflation, cost escalation, differential exchange rates, increase in labour and materials.

In certain instances is a complete abandonment of the scheme. The money sunk into the project is either lost or new projects cannot take off.

"It would be senseless for the State Governments to embark on new projects when some projects started by past administrators over ten years ago and not been complete".[1]

It is obvious from the citation that there is polical overtune in the construction decisions and implementation in Nigeria. As one regime comes and goes, decisions are likely to be changed. This is the predicament of the construction industry in Nigeria.

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1 Gov. Umaru of Kano, Concord 30/13/86.

The importance of solving cost escalations problems in this Country cannot be overemphasised especially when one notices the amount of efforts being putin some countries to minimise it despite the fact that the magnitude of the problemsin these countries is less than 10% of ours. In the U.K for example, Good care (1974) asserts. "There is increasing anixiety from both the Government and private industry as well as general public over the /dismay about the differences between tenders and final accounts; and a justifiable reluctance to accept them as inevitable. Budgetting/which is of the utmost importance to all industries, cannot be effective when the estimates or tenders on which a budget was based may be subject to considerable revision when the work is actually carried out."

Increases in cost of building contracts, therefore, are of great concern not only to the client who pays for these additional costs but also to all dedicated members of the construction industry. It is also of greate concern to the public since majority of Construction projects are owned and financed by the various governments or governmental organisations with public funds. "Budgetting and financial planning of many clients as well as contractors are full of uncertainties" [1]

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1 Shehu Giwa, being paper presented at NIQS, 26/5/88 Theme: Managing variations in contract sums during a fluctuation exchange rate regime.

"It is a well known fact that consultants' particularly in the last regime were never taken into consideration in the award of contracts while on some occassions consultants were foisted with the contractors who were either ill-equiped for the job or not ready to do the job at all after having collected upwards of 15% - 20% mobilisation fees without the advice of the consultants. It was also glaring that certain proportion of these contract sums were slated for political and other patronages. This was in addition to the colossal inflationery trend witnessed in the last 18 months before the collapse of the last civilian regime leading to the unpredicatability of prices of building materials, especially the imported ones".[1]

In order to facilitate a closer examination of the causes of these differences, the study was based on contracts awarded on the basis of the Federal Ministry of Works Form of Standard Conditions on Lump Sum Contracts with bills of quantities.

This Form as well as the other various forms of contract being used in the Nigerian building Industry are mainly a modified format of British JCT 63 Form which has been heavily criticised by such commentators as Wallcae (1970) etc. as being too much in favour of the contractor. Infact, it is because of such several criticisms that the form went through several revisions virtually annually culminating into the current JCT 80.

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1 1984 Annual report of the general Secretary of NIA, Arch. Majoroh.

These criticisms not withstanding, I hold the belief that if the condition of contract were strictly adhered to by all concerned such major differences between initial and final contract sums could not have been observed. Our problem, therefore, lies in our getting the client and contractors as well as those connected with the operations of the contract Conditions to fully understand their rights and obligations under the Form and adhere strictly to them. This is not an easy task in Nigeria considering the litracy of majority of those in the Indus

Two approaches were used to identify the problem. These are media reports and data collection from those handling contract administration eg. Quantity Surveyors, Architects, Engineers, Ministries etc.

2.9.7 Media Reports A case study was carried out of about one hundred (100) cases reported in various news papers between 1983 to 1988. The main purpose is to investigate the extent of the problem which has attracted public attention. It is a fact that news papers reports are prone to contain many discrepancies. In fact out of the over 100 cases collected only 37 were found to contain at least the two basic information required ie. Initial Contract Sum and Revised Contract Sum.

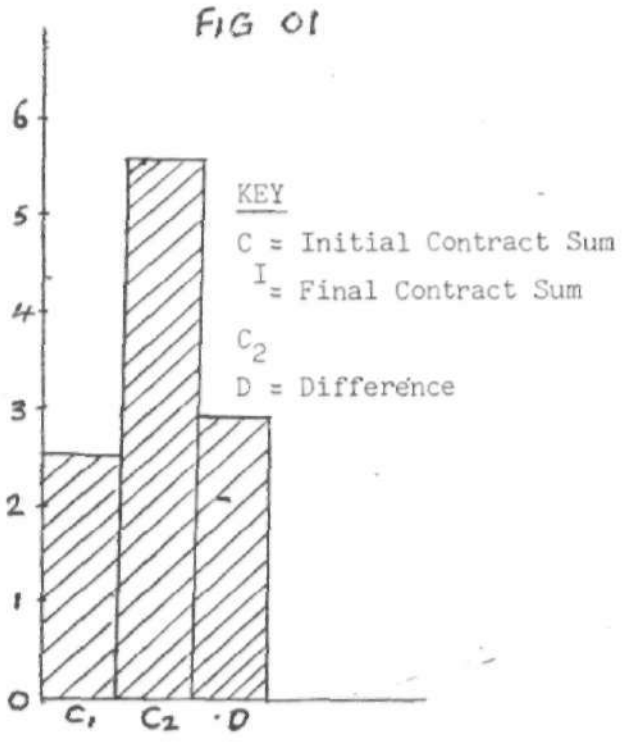
TABLE 02-SELECTED REPORTED CASES IN MEDIA (1983 - 1988)

CASE	DATE (YRS)	INITIAL CONTRACT SUM ₦ Million	REVISED CONTRACT SUM ₦ Million	DIFFERENCE	% DIFFERENCE	ABANDONEMENT	REMARKS
1	77-83	44.32	72.81	28.49	64.28	A	Delay in payment
2	81-83	1200.00	1800.00	600.00	50.00	A	Political Land compensation
3	80-87	26.00	60.00	34.00	130.77	A	Payment Delay
4	81.82	7.00	32.00	25.00	357.14	A	Import Licence Variations
5	81-84	17.00	40.50	23.50	138.24	A	Payment delay, Variations
6	82-83	2.10	4.20	2.10	100.00	-	Fluctuation of PC Sum
7	83	60.00	106.00	46.00	76.67	A	Political, Increase in PC Sum
8	78-83	4.70	7.00	2.30	48.94	A	Variations
9	78-83	5.00	6.00	1.00	20.00	-	PC Sums
10	78-86	6.70	9.50	2.80	41.79	-	PC Sums, Fluctuations
11	80-83	9.00	40.00	31.00	344.44	A	Corruption
12	83	156.00	400.00	244.00	156.41	-	Fluctuation
13	70-83	6.80	14.00	7.20	105.88	A	Fluctuation
14	80-84	10.47	19.12	8.65	82.62	-	Corruption Variations
15	80-84	5.27	11.00	5.73	108.73	-	Fluctuation
16	79-83	5.70	10.30	4.60	80.70	A	Payment Delay
17	81-83	32.00	56.00	24.00	75.00	A	Fluctuation Compensation Payment Delay
18	82-84	1.50	1.60	0.10	6.67	A	Fluctuation,Overpayment
19	78-84	9.00	16.00	7.00	77.78	A	Payment delay,Fluctuation
20	80-85	11.50	28.00	16.50	143.48	A	Corruption delay,Fluctuation
21	74-84	6.30	27.10	20.71	324.10	A	Overpayment, Fluctuation
22	81-84	33.00	48.00	15.00	45.45	A	PC Sums Variations
23	77-84	14.90	25.00	10.00	67.79		Fluctuation,Delayed Payments
24	80-84	99.00	123.90	24.90	25.15	A	Corruption
25	80-84	6.00	11.00	5.00	83.33	A	Variations
26	80-84	6.63	12.00	5.37	81.00	A	Variations
27	78-84	6.00	11.00	5.00	83.33	A	Under pricing Fluctuation
28	79-85	56.07	136.70	80.00	141.09	A	Delayed payment,Fluctuation
29	81-82	3.20	13.38	10.18	318.13		Variations
30	83-86	1.90	3.20	1.30	68.42	A	Delayed payment
31	82-86	18.50	32.00	13.50	72.97	A	Delayed payment,Fluctuation
32	79-88	57.00	250.00	193.00	338.60	A	
33	80-88	127.80	990.00	802.20	674.65	A	Foreigh Exchange?Foreign Partners
34	82-88	19.00	37.70	18.70	98.42	A	Payment Delay,lack of materials Foreign Partners
35	76-88	89.82	140.00	50.18	55.87	A	Unreasonable,Foreign agreemen
36	74-88	88.00	160.00	77.00	92.77	A	Foreign agreement,payment dispute
37	84-87	300.00	689.00	389.00	129.67		Inflation,Foreign Agreement
TOTAL IN M		₦2548.90	5444.01	2895.11			
PERCENTAGE COMP.		100.00	213.58	113.58			

Source 1 Shehu L. Giwa on "Managing variations in contracts sums during a fluctuating Exchange Rate Regime; 26/5/88

These are shown on Table 01. From this table it can be seen that the overall initial contract sums of the 37 projects studies amounted to ₦2548.90 million the reported total revised Contract sums amounted to ₦5444.01 million giving overall increase of ₦2895.11 million. This represents an overall increase of 113.68 percent over the inital contract sum. Major deviations were observed in the percentage differences in individual projects. The lowest being case No.18 which has an increase of only 6.67% above the initial Contract Sum. The highest being case No.33 with an increase of 674.65 percent over the initial Contract sum. This information is presented below in a histogram shown in fig.F1.

FIG 01



Observations

From table 02, reported of these differences between initial and final contract sums can be summarised as follows:

TABLE 03 CAUSES

REPORTED CAUSES	NO OF OCCURRENCE	PERCENTAGE
Fluctuations	17	26.98
Payment delay (lack of funds)	13	20.64
Variations	8	12.70
Lopsided Foreign Agreement	7	11.11
Increase in PC Sums	5	7.94
Corruption	5	7.94
Compensation/Political	4	6.35
Overpayments (due to mobilization)	2	3.17
Disputes	2	3.17
	63	100.00

From the above observation (table 03) it can be seen that Fluctuation or inflation accounts for the highest increase between initial and final contract sums, since it amounted to 26.98% of the total. It is followed by Delay in Payment to contractors for work done or lack of funds which mainly led the contractors to abandon the projects. This accounted for 20.64 percent. Variations or additional works accounts for 12.70% and is the third on the list.

In addition to the above it should be noted that out of the 37 projects investigated 27 or 73% were abandoned at one stage or the other and many are yet to be completed to date.

Engineering Projects - Package Deal

Out of these 37 projects studied twelve (12) or 32% are Engineering Projects let on the bases of package Deal Contract.

These are:

TABLE 04 ENGINEERING PROJECTS EXTRACT

Case No	Date	Initial Contract	Revised Contract	Diff erence	% Diff erence		
1	77-83	44.32	72.81	28.49	64.28	A	Payment Delay, lack of funds
11	78-83	156.00	400.00	244.00	156.41	-	Fluctuation
22	81-84	33.00	48.00	15.00	45.00	-	Variations.PC Sums
24	80-84	99.90	24.90	25.14	25.14	A	Corruption
25	80-84	6.00	11.00	5.00	83.33	A	Variation
26	80-84	6.63	12.00	5.37	81.00	A	Variation
28	79-85	56.70	136.70	80.00	141.09	A	payment Delay Fluctuati
32	79-88	57.00	250.00	193.00	338.60	A	Foreign Agreement
33	80-88	127.80	990.00	862.20	674.65	A	Foreign Argreement Fluct
35	76-88	89.82	140.00	50.18	55.87	A	Foreign Agreements, Payment Dispute
37	74-88	300.00	689.00	389.00	129.67	-	Fluctuation, Foreign Agreement
TOTAL IN MILLION		₦1059.27	3033.41	1974.14			
		100.00	286.37	186.37			

The above Engineering projects ie (Table 04) are extracted from the projects under consideration on Table 02. They consist mainly Dams and heavy industrial projects. It can be seen from the above table that although their number is small ie only 32% of the whole projects investigated, they accounted for the largest difference. Almost all these contracts were let on Turn-Key or Package Deal bases. Their total contract sum was 1059.27 million and the revised sum was ₦3033.41 million giving an increase of ₦1974.14 million or 186.37%

2.9.8 Building Projects - Lump Sum Contracts

If the value of engineering projects are deducted from the total of Table 03 the values from building projects mainly awarded under the normal building contract conditions will be as follows:-

Total Initial Contract Sum	₦2548.90=1059.27	₦1489.63
" Revised " "	₦5444.01=3033.41	₦2410.60
" Difference (Increase)	₦2895.11=1974.14	₦920.97
Percentage Difference (Increase)	= 61.83%	

The building projects comprise mainly government financed residential, office, health, educational and hotel projects. Thus,though the number of buildings reported are more ie 25 out of 37 or 68%, the overall increase is only 61.83% as against the engineering projects which increased by 186.37%

Observations

We can thus conclude that government engineering and industrial projects accounted for the largest percentage increase in cost inspite of their heavy initial contract sums. The cost can rise by as much as 600% over initial contract sum. The lowest increase recorded was 25.15%. The overall increase however is 186.37% . 9 out of 12 or about 75% of these projects are normally abandoned before completion due to these heavy increase. Most of these increases are caused by fluctuations (inflation) especially as most of them carry heavy foreign content. Variations also account for part of these increases mainly due to the provisional nature of most engineering projects.

× Building projects though much more in number/have smaller percentage increases. They range from 357.14% (Case No.4) to 6.67% (Case No.18) with an overall increase of 61.83%. These are the cases of government financed projects. Smaller increase should be expected for priavete projects of companies and banks since they will be better managed.

2.9.9 Closer study of building projects - Using historical Data

Introduction

In order to carry out full investigation of the causes of the differences between initial and final contracts sums of building projects in Nigeria an analysis was carried out on some completed projects.

About 90 different types of projects were investigated.

All the projects were completed prior to the introduction of the Second Tier Foreign Exchange (SFEM) of 26th September 1986 despite the fact that the final accounts of nine of them were finalised in 1987, 86 out of the 90 projects investigated or (95%) were completed between 1980 - 1986. Only 5% were done prior to 1980.

The initial Contractsum of projects investigated ranged between ₦65,000 to ₦6,500,000. The buildings comprise warehouse, offices, Banks, Halls, Hospitals, residential and institutional buildings etc. The clients or building owners include Federal/State Governments Banks, Universities and privately owned Companies.

Sources of Data

the Data were obtained from various Quantity Surveying Firms, National Universities Commission, Federal and States Ministries of Works, Architectural Firms, Universities, Banks etc. They were collected from different parts of the Country.

The Data collected were in the form of Final Account Statements, which show the initial and final contract sum as well as the value of the seven variables causing the differences between them as stated in most Final Account Statements Forms.

CHAPTER III

NNCC LTD AND THE CONSTRUCTION INDUSTRY.

3.1 Introduction

New Nigeria Construction Company Ltd (NNCC) is a subsidiary of New Nigerian Development Company (NNDC).

NNDC was established in 1964 known then as the Northern Regional Production Development Board.

3.1.1 Objecttives

New Nigerian Development Company (NNDC) objectives include:-

a) To balance the development of the Northern states. then Northern Region.

b) To provide low interest loans and or investment capital to promising business ventures which will form the basis for viable and self sufficient economics in the owner states.

c. To serve as a training ground for potential Northern corporate executives.

3.1.2 Subsidiaries

NNDC is very diversified in virtually all economic activities, include:-

i. Hotels, Food and beverages

ii. Manufacturing and Agro-Allied industrial and Companies

iii. Financial Institutions and Commerce

iv. Real Estate, Construction and Building Services, for example, New Nigeria Construction Company Limited.

3.1.3 History of NNCC Limited

New Nigeria Construction Company (NNCC)Limited was incorporated under the Companies Decree of 1968 as a limited liability company on the 10th May, 1973. See appendix C . This was in persuance of the corporate objectives of the Mother Company (NNDC) By 1975 it was registered with the Federal Government of Nigeria under categoty 'D' reference BD/75/18. See appendix D. It also registered with various state Governments including Kaduna State.

At the inception of the company (NNDC) went into management contract with a French Company SATOM to run NNCC as the an organisation, for an agreed period.

Initally, the mother company, NNDC providing most of the projects which were mostly residential in order to bring up the young organisation. The firm came to the limight in the industry in 1975 when it won the First major project which ia the Phase I of Ahmadu Bello University Teaching Hospital Shika Zaria for an initial contract sum of ₦21 million and for a contract period of 120 weeks. However, the contract sum has been reviewed and the contract period extended see table 'A'

To date, the firm has handled or is handling many important projects including NNPC housing complex Kaduna and Central Bank Housing complex Ilorin.

Phase I of Ahmadu Bello University Teaching Hospital Shika Zaria, Phase A of the hospital, professional unit and the auxilliary works. Also, Ilorin Teaching Hospital, Ilorin, Kwara State. There are other minor projects. The total value amoung approximately ₦150 million.

3.1.4 Share Capital

Norminal share capital	₦1,000,000 Shares of one Naira each
Paid up share capital	₦500,000 of one Naira each

3.1.5 Percentage Holding

SATOM (French)	40%
NNDC	48%
Others	2%

3.1.6 Corporate Objectives

a. To realise the objectives of the mother company (NNDC) that is, the development of the ten Northern States of Nigeria in particular.

b. To be able to stay in business in competion within the necessary funds to the mother (NNDC) company and other share holders

c. To serve as a training ground for potential northe corporate executives.

d. To contribute to the technological growth in the northern states and in the Federation of Nigeria generally.

3.1.7 Measures of Effectiveness

The measures of effectiveness of the firm has always been reflected in the Managing Director's annual reports which include-

a. Marketing Activities

The amount of it's market in the industry. This involves consideration of the number of projects solicited and tendered for during the fiscal year.

The number of the tendered projects that were lost to competitors and its ratio in relation to the industrial average. The number that remain undecided by the client for award. This affords the officers to pursue the projects till they are awarded.

b. Production Activities

This entails level of construction work executed or achieved during the fiscal year. The turnover in relation to the planned achievement which is reflected in the contract planning stage. The effective performance and effeciency affects the turnover of the company as well as the profit for the share holders.

c. Financial Activities

Apart from the general financial considerations and activities of keeping financial records, financial reports, cash flow of the firm, sourcing for working capital, the firm is very concerned with the percentage of revenue that was received in the fiscal year against the budget of the company as well as to the output that was achieved and the outstanding accrued revenue.

d. Personnel

Personnel turnover during the year and the probable causes. The aim is to minimise the personnel turnover. This is to maintain harmony between management and the workers.

However, being a construction company the turnover, is usually high. This is due to the fact that at the end of any particular project. There is a tendency that generally labour, personnel are retrenched. But the question is how does it compare with the labour market within the construction industry.

3.1.8 Organisational Structure

Fig 2 depicts the organisational structure of New Nigeria Construction Company Limited (NNCC). It is in seven parts comprising the chief executive, the marketing department, finance department, technical department and the production centres. Each department has a head who is accountable direct to the chief executive. These form the management of the organisation that make decisions for the board and for the running of the organisation in general. There is a general coordination meeting usually once a month between the management and the production managers of the various sites.

Generally, the control is central with most departmental heads reporting direct to the chief executive. Being a construction organisation, there is horizontal integration of the functional units towards the achievement of organisational purpose as well.

There are subcommittees. These are basically the following-;

a. Subcontract committee. This is headed by the chief Quantity Surveyor.

b. Financial matters headed by the financial controller of the organisation.

ORGANISATIONAL STRUCTURE OF NN..C LTD.

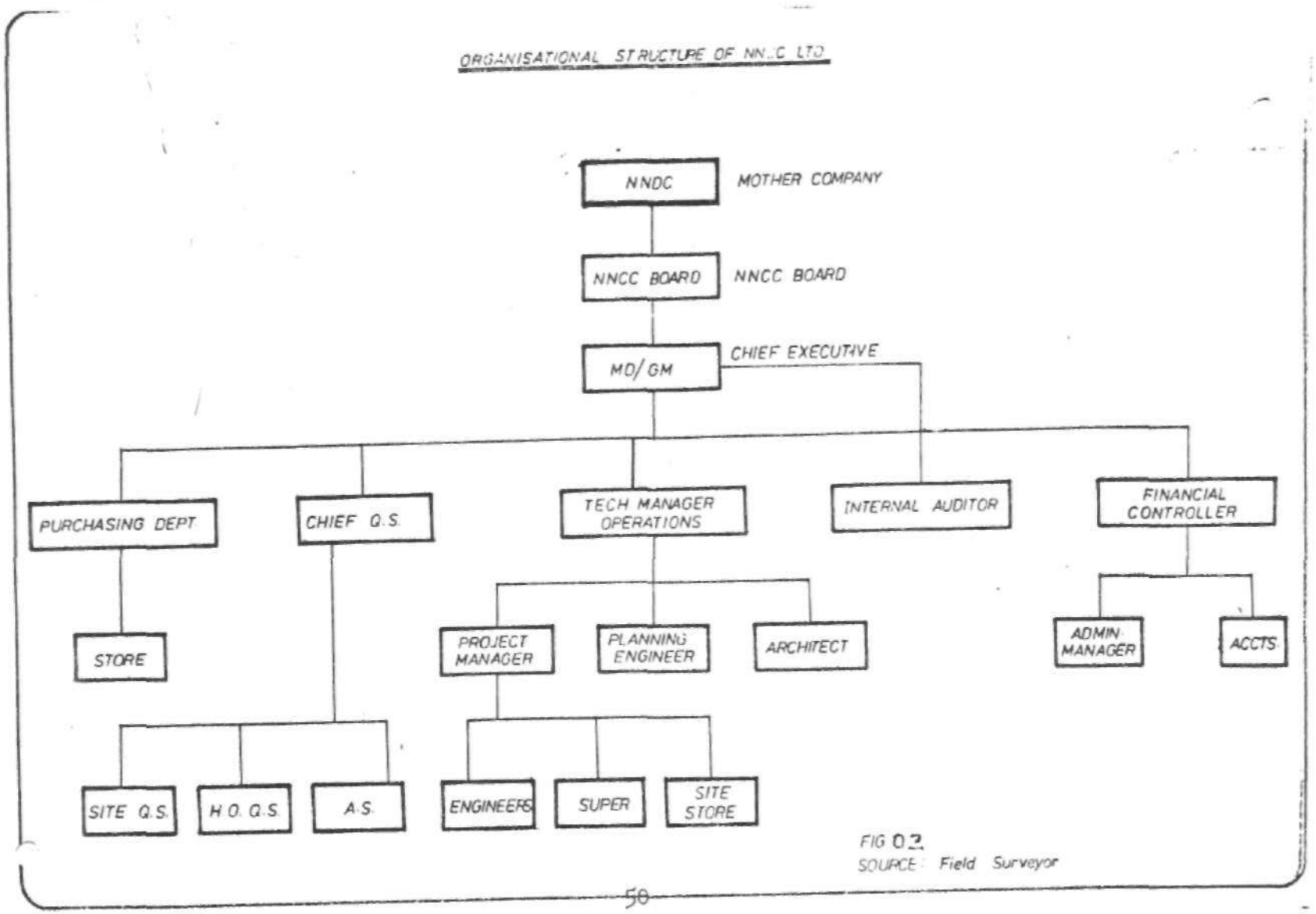


FIG 02
SOURCE: Field Surveyor

3.2 Contracts, types and Provisions

3.2.1 Contract

The concern of this project is with contracts of construction works. There are, however, various other types of contracts. These include contract of exchange, a contract of sale of goods, a contract of gift, a contract of loan or the security of goods, a contract of hire purchase, a contract for skill and labour a contract for labour and materials and a contract of agency.

"Chetty - on contracts" defines a contract as a promise or set of promises which the law will enforce. In the case of a contract in the construction industry, put simply, it implies an offer by a contractor to carry out certain work as described in drawing and Bills of Quantities for a certain sum of money (Consideration) which the employer has accepted: the offer, acceptance and consideration being evidenced in most cases in writing with provisions for penalties for default by either party to the contract. This broad fromat is applied to most forms of contracts in the construction industry whether they be for buildings or for civil engineering, and electrical/mechanical engineering works; or indeed for the supply of labour and materials or other miscellaneous construction contracts.

3.2.2 Types of contract

There are many and varied forms that contracts of construction works can be executed. Some that are practiced in Nigeria include:

i. Turn Key Contract - These forms of contracts involve only two parties, the building owner and the selected contractor. In this situation, the contractor receives brief on the client's requirements. Then proceeds to produce a design that satisfies the client's requirements functionally and financially when the work is completed he hands over the keys to the client. The method for payment is subject to negotiation and agreement between the parties. Here no/or few consultants are instrumental to the execution of the contract. This is more in practised in the U.S.A.

ii. Contractor finance contract. This may take the shape of the the Turn Key contract if no consultants are involved in the production of the contract documents. The main difference is that the contractor does not receive any payment at all until the project is completed, even then, payment may not be immediate upon completion. Not many Nigerian contractors can undertake such contracts on a large scale basis because of financial contraints.

iii. Open - ended contracts Their nature is the situation where the extend of the work is not known before work starts. Therefore, the basis for payments, usually, is on a pre-prepared schedule of [illegible] rates. The works are valued as itprogresses using the rates as basis for payments. The total contract sum is only ascertained at the completion of the project.

This situation arises mostly in civil Engineering construction which are usally undertaken under uncertain situations of site conditions and the extend of the volume of the works.

iv. "Lump Sum" Contracts. Most people tend to have the erraneous impression that "lump sum" contract refers to a situation where the contract sum is not variable. Yes, it would be the case if the terms governing the contract are such that the situation of varying the specifications of the materials at a later after signing the contract are made. It would be the case if the scope of the works are not subsequently increased or decreased. It would be the case if there are no causes for delays with its attendant costs implications and if there is no inflation for the period of the construction or any breach of the contract by one of the parties to the contract.

This form of contract is the most common in Nigeria. It is this type that our study here is based on. That which NNCC is operating with the Federal Government and other private clients.

3.2.3 Contractual Basic Provisions

There are many important provisions in a typical contract document. Particularly, the Joint Contract Tributal (JCT) But the attention of this duty is drawn to those with immediate financial implications.

i. The first striking provision is that the names of the parties must appear on the contract documents and with signatures of both parties, Contractor and client and witnesses with the date of signing the contract.

ii. There will be a stated contract sum and the contract period for the completion of the works and the handover of the completed project.

iii. One of the most important provisions is that of valuation (assessment) of the work executed by the contractor for the purposes of interim (periodic) payments or settlement by the client. The importance of this provision cannot be overemphasied.

It is here that the non compliance with the financial obligation causes frustration. The highlights of the clauses are:

a. Period of interim certificates - Monthly

b. Period for honouring of certifications usually is 21 days of presentation to the client, the payment Certificates

The implication of this condition is that a contractor plans and projects his cash flow every 21 days after the preparation of a payment certificate in line with his liabilities to his creditors and workmen.

Where work is executed and materials have been purchased on a 30 days credit facility granted to the contractor and with the responsibility to pay workers at the end of the month, then the contractor will not be able to perform if there is a lapse of payment over a month.

ASHIR
AHMADU BELLO UNIV
ARIA, NIGERIA.

Most other financial institution's provide overdrafts on similar understanding to the stated cash flow of the projects.

iv. On the other hand contractors encurr additional costs for failure to complete projects in time. A typical provision is the "liquidated and Ascertained Damages" which is usually an agreed amount or percentage of the value of the contract that is chargeable against the contractor for the failure to complete the works on schedule. The basis for the charge is the cost of an alternative cost of rental per period - per week or month.

The total charged is the number of weeks/month multiplied by the length of the period of the delay for non completion.

v. Extension of time provisions. This provision in these contracts enable the contractor to request for the completion period to be extended under certain conditions such as:

a. 'Force majeure'

b. Increment weather

c. Loss or damage do to fire outbreak storm et cetera

d) Civil commotion et cetera.

e. Architects instructions that increase scope of the works or delayed the progress of the works.

f. Lack of required detailed information

g. Delay by others engaged in the same project and appointed directly by the client.

The implication of these include:-

a. Increase construction period and therefore, inflationary trend and increase costs to the project.

b. Increase costs due to other claims arising, usually termed, "loss and expenses caused by disturbance of regular progress of the works" by often, Architects by workers such as unions, beyond the control of the contractor.

3.2.4 Competence

The above section has highlighted few areas among many provisions, the knowledge of which is necessary for both parties entering into contract.

Most indigenous contractors and clients do not understand these vital provisions because these provisions have been inherited from Britain where the level of such knowledge is relatively high.

Perhaps that explains one of the constraints the Nigeria construction industry is facing. There is usually a wide disparity in the tenders returned as to make the entire exercise suspect. Event in the case of large expatriate firms which can afford to retain professionals who understand the form of contract, it is not wonder that tenders are usually and consistently pitched very high (when compared with construction costs in European and North American Countries) in order to cover for ignorance and uncertainties.

In a society where unit costs are reasonably constant or at least varifiable and where both the employer and the contractor by virtue of the availability of qualified personnel can understand the contract provisions, the inherited forms are useful but in our situation it is not practical for the time being.

3.3 Contract Financing

Contract financing has been a difficult problem, particularly for the indegenous contractors. They are not in position to complete and or perform within the contractual period as their foreign counterparts. Therefore, the Government has a concern and have identified the difficulties.

"The difficulties encountered by our indigenous contractors have led Government to experiment with several forms of assistance to ensure that Nigerians participate meaningfully in the construction industry.

These difficulties arose from the reluctance of local Banks at the time they were predominantly under foreign control, to give credit to Nigerian enterpreneurs including contractors. The banks required them to provide security for the credit. It was impossible to build up bankable security without being given the opportunity to perform. So it was the hen and egg affairs. To break this circle, Government developed a system of paying "mobilisation advance" to enable the contractor to take off. In the civil engineering construction business, a paralled development was the "plant advance". The abuses which these efforts Suffered in the the hands of unscrupulous contractors are too well known to need recounting. Government has already stopped the issue of mobilisations. Banks have been largely indegenised in the sense that Government at least has controlling interest in all the banks which were hither - to foreign owned or Nigerian are in business owned. But the banks, whether foreign owned or Nigerian are in business to make profit and most operate within the framework to acceptable commercial practice. The questions then are: How can these normal banking rules be tailored to suit our conditions and solve our problems: How can honest and capable but indigent contractors be encouraged; and the dishonest affluent and inefficient contractors be discouranged? It is possible to envolve a system of mobilisation advance that will not be abused?1.

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1 Dr. Alex Ekweme, 1979, Journal nigerian Institute of Quantity Surveyors Vol. 1, Jan. 1981

The long quotation above indicates the Government concern in encouraging indigenous contractors in the construction industry towards the enhancement of the nations's economic growth.

From this part of the speech three issues come to mind:-

1. The unwillingness of foreign-owned banks to grant credit extension to the indigenous contractors because they lack bankable securities.

2. That the Government - controlled banks are also not willing to extend credit facilities to the indigenous contractors because "the banks, whether foreign owned or Nigerian are in business to make profit and must operate within the frame-work of acceptable commercial practice.

3. That the Government developed a system to encourage the indigenous contractors through the system of "mobilisation advances" to building contractors and or "plant advances" to civil engineering contractors. These were abused.

3.3.1 Mobilisation fees

The issue of "mobilisation advances" or "plant advances" and the attendant abuses have been studied widely by the academicians, contractors, professionals and the ordinary man. But what is mobilisation?.

Mobilisation is money paid by the client as a loan to the contractor at the beginning of a contract. The intention is to enable the contractor purchase those major materials that have no steady availability and may likely disppear in the market during the course of the contract duration.

It is also to forestall inflation of practice with time.
It is also meant to assist young firms to go into the construction business as Ekweme puts it ..... "to ensure that Nigerian's participate meaningfull in the construction industry".
Infact, it was agreed that the payment of mobilisation was the only means by which a Nigerian contractor could be able to compete with the foreign companies who are backed up by the parent companies abroad or large commercial banks because of their banking security.

3.3.2 Abuse of Mobilisation

Mobilisation was introduced in Nigeria in 1973 to aid the indigeneous contractors to execute projects awarded to them particularly from the Government with the aim to increase the technological base of Nigerian's and to compete with the multinational aided counterparts. Unfortunately, the good intenti intention was grossly abused.

The abuse stems from the non-recognition of the fact the mobilisation is a LOAN to be fully recovered from the contractor from the contract sum. The Government functionaries see it as a hand out, the large portion of which is to be handed back to them in the form of "KickBacks" and the less informed contractors might see it as a windfall for the acquisation of a new car or wife. [1]

1 V.B. Attah Paper presented to NIQS launching Kaduna Chapter, April 1986.

Thus' mobilisation advances' abuse was both by the Government and the contractors while the Government provides the advances for a good intention, the implementors of the advances have auterior motives while the receipient contractor behaves as if the advance payment is a windfall. The money, therefore, is to be shared. When this is being deducted at the duration of the contract, he finds himself unable to complete the works.

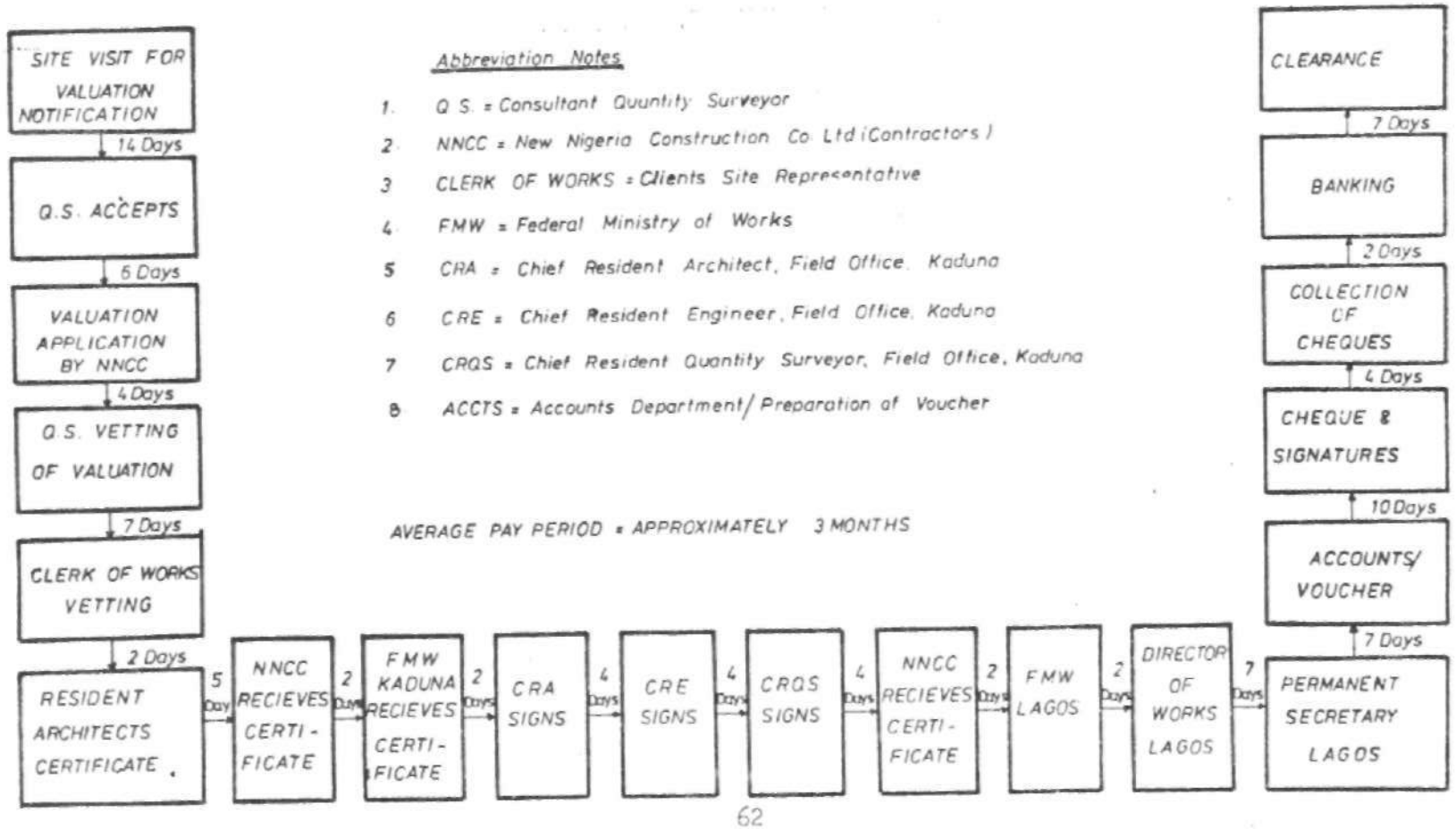
3.2.3 Government Pay system

The Government pay system is so beauracratic that contractors become frustrated. It takes a long time to go through the system before payment is made to them for the execution of the works. The resultant effect is that works are either delayed or suspended since the contractor is incapacitated to finance the.construction. Works are supposed to be self financing while in progress and once the contractor is not regularly paid promptly as stipulated within the provisions of contract, there are bound to be lagging in the completion of the project.

The resultant effect will be increse costs to the client and probable relative loses to the contractor. Fig 3 - A flow diagramme of the various stages through which NNCC has to undergo before securing payments for work executed.
Between the period of valuation application by the contractor and the time payment is made and matured for use has been put to averaging three months. In most cases longer, at times up to six months.

FIG 3

20 No STEPS PAYMENT SYSTEM



Abbreviation Notes

1. Q.S. = Consultant Quantity Surveyor
2. NNCC = New Nigeria Construction Co. Ltd (Contractors)
3. CLERK OF WORKS = Clients Site Representative
4. FMW = Federal Ministry of Works
5. CRA = Chief Resident Architect, Field Office, Kaduna
6. CRE = Chief Resident Engineer, Field Office, Kaduna
7. CRQS = Chief Resident Quantity Surveyor, Field Office, Kaduna
8. ACCTS = Accounts Department/ Preparation of Voucher

AVERAGE PAY PERIOD = APPROXIMATELY 3 MONTHS

"Before a cheque would be raised and issued, the minimum period from submitting a certificate and receiving a cheque is three (3) months"1.

3.2.4 Irony of Encouragement

It is ironical for Government to have recognised the need to encourage indigenous contractors for capital. Envolved a cash flow system of mobilisation advances in aid of the contractors but failed to honour payment certificates as when due in order to articulate the necessary cash flow needed for the construction. The standard contract provision is clear on this requirements on the part of the client/Government.

"At the period of Interim Certificate in the appendix (monthly) to these conditions the Architect shall issue a certificate stating the amount due to the contractor from the employer, and the contractor shall, on presenting such certificate to the employer be entitled to payment thereof within the periodfor honouring certificates named in the appendix (21 days) to these conditions"2.

---

1 Yusuf Mukkadas, NNCC QS, interview, 1877

2 JCT, 1968

3.3.5 Implications

Failure to honour certificates by the client distabilises the contractor's cash flow or liquidity position. The contract provides that such a failure could lead the contractor to:

a) Abandone the works and or determine the contract

b) Proceed to arbitration

3.3.6 Local Approach

Most Nigerian contractors including NNCC donot often take such drastic actions with employers particularly on Governmentproject

This is because the Government is the biggest client they depend. Instead, they choose to take any of the following actions:

a) Suspend work still payments are received before they re-mobilise to site.

b) Make claims due to bank charges for their money sunked into the project but payments pending with the client for the period of delayed payment plus any overhead charges they encurr for demobilising from and remobilising to site.

c) Lobby their way through the payment channel in order to get their pay through in time. This cost money.

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

4.1 SUMMARY

It is obvious that parties to construction need to operate within the provisions of the contract. This has proved not to be exactly so. Management Skills have to be in interplay.

"The one certainty the times ahead is that managers will have to work and to perform is that there will be turbulent times and in tubulent times the first task of management is to make sure of the institutions' capacity for survival to make sure of its structural strength and soundness of his capacity to survive a blow to adapt to sudden change and to avail itself to new opportunities".

Peter Drucker on
"Management in Turbullent times".

The above quotation summarises the challenges to management while managing under uncertainty. The industry is full of uncertainties.

4.1.4 Importance of Construction

Construction Industry is of a high significance in the National economic development in Nigeria. For example, good roads mean greater mobility and faster distribution of goods, better houses and environmental conditions have positive effect on living standards. All these foster productivity and is an indicator of civilisation.

4.1.2 Finance Impact

Certainly, there is a definate and undisputable correlation between finance and the successful construction implementation. Finance speedsup progress of work and access to it means that projects are completed on schedule and within initial cost estimates since cost increases through inflation, extension of time, interest charges and other claims are eliminated.

4.1.3 Problems of Finance

Sources of soft financing are not readily available. Local and Foreign commercial banks always charge high interest on such loans and demand colaterials which is a constraint to the young indigenous construction firms. The Government effort to provide 'mobilisation advances' and 'plant advances' have been frustrated through the acts of somes unscrupulous contractors who abscond with such monies.

4.2. Government and the construction Industry

The Government is expected to play a leading role to encourage the construction industry for the economic growth of the Nation . The Government is the major financier of construction works and, therefore, the performance of the industry will highly depend on Government policies in this direction.

We recognise the efforts of the Government towards the encouragement of the indigenous contractors through, for example. by Drecree No.7 of 1977 which transformed the

former Nigeria Building Society into the Federal Mortgage Bank of Nigeria with the aim of providing long term credit facilities for housing development. Also,initiation of 'mobilisation advances' and 'plant advances'.

However, the effort of the Government is also frustrated through its own actions, through its bureaucratic pay system that takes on the average of three months.

4.2.1 Constraints and Failure of Construction Industry

The Nigerian construction Industry suffers lack of accuracy in the preparation of contract costs. This is due to the lack of available statistical data of cost variable such as materials,plants, labour and government policies towards importation of these factors of cost. The instability of prices on a daily basis leaves the 'professional' with guesstimating' rather than estimating cost of projects.

Most abandoned projects are due to client's actions because the most desirable preplanning requirement is more often than not ignored.

Quite often the client rushes the consultants to prepare contract documents and award contracts on not so detailed contract documents. This situation leads to unprecedented cost escalations and projects abandonment.

Political instability and the attendant changes in government policies is yet another factor.

The general down trend in the economy and the inflationary trend are factors that frustrate contract completion. Cash flow (finance) is a serious cause for these contract abandonment. Inadequate cash flow creates:-

i. Slow pace of works and this goes with inflation
ii. Increase in interest costs.
iii. Claims for lack of turnover.

There is a need for a comprehensive reappraisal of resource allocation such that the conception, formulation and execution of projects will ensure a self-sustaining growth within this very vital sector of the economy.

NNCC experiences an average money collection period of 3 months of work done. The monthly average turnover is said to be ₦500,000.00 for their major projects.
Teaching Hospital worth each over ₦50, million.

It is therefore, difficult to finance two of such projects for over three months. This means the tied down is well over ₦3 million apart from the overhead costs.

4.2.2 Bank charges

Government and Government parastatals have a tendency of avoiding increase cost payment even when the cause is due to their negligence. The local contractors are also shy or afraid to loose future patronage and therefore, have a tendency of quietness only to abandone works.

Contractors should start considering that on signing a contract adequate provisions be made for the period payments are delayed at prevailing bank rates. This is one source of contract cost escalations. I have not been privileged to know the findings of Ministerial committee on high cost of Governmentby the former President Alhaji Shehu Shagari headed by professor Essang the then Minister of Finance in 1981. I believe, however, this is one area of cost escalation / project from Government in Nigeria. The provision of Bank charges into a contract will make clients honour their obligations with despatch.

4.2.3. Corruption

It is very difficult to categorically state that the construction industry does not or is involved in practices that are not legally acceptable to the generality of populance. In which case NNCC may not be divorced of the practice because they as others are operating within the same industry and environment.
The apparent high percentage of overheads of the organisation is likely to arise from this source also. This should be discouraged.

"Contractors must stop dangling "carrots" in front of the employer's agents in their effort to win a contract and must also control their management desires to help themselves, their friends and relations out of the project cost.

Those in authority need to show examplary leadership by being honest, fair and be seen to be above board.
"One shining act of bold selfless leadership at the top such as unambiguos refusal to be corrupt or tolerate corruption at the foundation of authority, will radiate powerfull sensation of well being and pride through every nerve and artery of national life[1]."

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1 Chenne Achebe 1983

CONCLUSIONS

4.3 Problems and recommendations

4.3.1 PROBLEMS

Construction projects are full of uncertainties. These uncertainties include the following:-

a) Professional incompetence

b) Clients unpreparedness for the financing of projects and this affects the contractor's cash flow.

c) Socio-political consideration which gives rise to contracts being awarded to ill - equiped contractors.

d) Contracts are started without due consideration to adequate financing up to the completion of the scheme.

e) In-flationary trend which most of the times are hard to predict particularly in Nigeria.

f) Lack of materials cost indices for use in the industry.

g) High level of "Kick - backs" that accompany award of contracts thereby, increasing cost to the project. This is more of the rule for public projects than exceptions.

h) The insistance, particularly by Government and Government parastatals to use overseas professionals for the design and construction of projects.

j) Diversion of funds to other sectors of the economy from another

4.3.2 Recommendations

Having identified the problems, it is possible to identify the probable solutions as follows:-

a. Projects should not be embarked upon without adequate finance. Provision should be made for the client to indemnity

contractor on his cash flow on a monthly basis. The client's bankers to agree to a continous flow of payments on a monthly basis based on payment Certificates.

The problem arising from inadequate or irregular contractor's cash flow has let to not only cost escalations but also the the problem of abandoned projects. This is also one of the main reasons why many proposed new projects are not able to take off.

> "It would be senseless for the state governments to embark on new projects. When some started by past administrations over ten years ago has not been completed."[1]

The New nigerian Construction Company Limited has financial cash flow problem as the genesis of its problems.

Salaries are hard to come by. This is not to talk about allowances and rents. There is no money for short term loansfor staff members of the organisation. The Management complains of lack of payments from the clients. These clients are mostly the Governments. In many cases it takes more than three months before money is received.[2]

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1 Governor Umaru Kano State, Concord News Paper 30/12/86

2 Yusuf Mukkadas, WQ NNCC

NNCC handles mostly Government projects and with the arrival of the austere measures or the variation in the exchange rates SFEM/FEM payments, to the organisation it has become a major problem. The resultant effect is delays in the completion of the projects.

4.3.3 Planning

Most clients tend to be in such a hurry that as soon as they have made up their minds to execute a project. Little is devoted to proper plan for the scheme. The design team are rushed to prepare a design instantly. With immediate effect. When NNCC was awarded a Contract to construct a Teaching Hospital at Ilorin, Kwara State at a cost of ₦32 million, as soon as Mr. President Usman Aliyu Shehu Shagari appended his signature for the award, work was to start with immediate effect.

Jimmy Jimco, a steel company, was appointed by NNCC as a sub-contractor for provision, bending and fixing of steel for the concrete structures - beams, slabs,columns et cetera. Jimmy Jimco was given a day's notice to travel from Kaduna, procure steel, cut and bend for a ₦32 million Teaching Hospital at Ilorin. This was because Mr. President was to visit the site and to lay the foundation of the Hospital. The resultant effect was to hurridly construct the structures. After, Mr. President left for Ajaokuta steel rolling Mills. This contract was awarded in 1979 to be completed within 132 weeks but has not been finished 320 weeks now.[1]

4.3.4 Specifications

The specifications for construction works should as much as possible to be for the use of locally available materials and expertise. Anything short of this, calls for increase costs in importation. It would lead to delays in the continous and deligent progress of the works and lost in the return on investment due to delays.

It is important for feasibility study on the availability of the basic materials. The client should place order for the materials only on the advise of the construction team and

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1 Source: Research by writer

subsequently advise the contractor to place order after the award of the construction works to the firm. Here, the construction team have to do quite a lot of investigations for the benefit of the project owner. It is senseless to specify what is not available as a result of which projects are unnecessarily delayed or even abandoned. Consultants have a duty to be able to indicate in the contract documents firms that have the materials they are specifying for a project.

4.3.5 Research

Research is invitable in development. This means both the Government, private individuals institution of learning should get involved in the development of basic and necessary construction materials for the country. Failing which, reliance on imported parts and materials will continue. The result is drain on the economy. This can be averted or minimised. Research minimises cost in the long run. Also, it delves into the cases of cost indices variations of products or services. Without which the industry keeps guesstimating. This does not go well in professional and scientific approaches to business.

4.3.6 Pay System

The pay system is discouraging, particularly to the indigenous contractors. The problems with the organisation, NNCC, is the lack of continuity of cash flow. The implication of this lapse from clients is on both the clients and the organisation. Perhaps more on the client since the contractor would also take the easier course through the abandonment or suspension of the work till he is paid. The project owner looses on the return on investment for the period the works are delayed beyond the initial completion period.

ABSTRACT REPORT ON NNCC

4.4 PROGRESS OF WORKS

4.4.1 ABU TEACHING HOSPITAL ZARIA, PHASE 1

Initial Contract Sum	:	₦21 Million
Contract Sum (Approved Revision)	:	₦35,590,168
Value of work executed -		
31st March, 1989	:	₦27,366,661

As has been regularly reported in past Reports, the Builders Work content of this Project has been substantially completed for a very long time, and those elements still outstanding can best be carried out after executing of specialist services and other Architects instructions for which details are still awaited on roof walkway, sanitary wares fixing, ventilation system improvement, ironmongery and metalworks selection, mosquito and burglar proof design approval, etc.

Since April, 1984, we have had to confine our activities to the fabrication and fixing of timber doors (which has since been completed) and some attendance.

4.3.2 Payments:

A meeting was held in March, 1986 in which Federal Ministry of Health Officials indicated that the Revised Contract Figure of ₦35,590,168 has been accepted.

It was also agreed that subsequent Certificate should incorporate the full amount of ₦2,100,000 losses and expenses claims we submitted and that efforts would be made towards settling the amounts still outstanding from this claim.

4.4 NNIL OFFICE COMPLEX

Initial Contract Sum	₦3,100,000.00
Final Contract Sum :	₦5,391,587.98.
Initial date for Completion	July, 1980
Date of Practical Completion	1st March 1983

The dispute over the sum of ₦ 296,042.30 withheld by NNIL from the Final Ammount figure of ₦634,866.69 is still unresolved.

Some of the subcontractors affected have started legal proceedings but indicate their preference to a solution through NNDC mediation. The Executive Director, RECABS, NNDC has undertaken to arrange a meeting with the new Chief Executive of NNIL with a view to resolve this long outstanding matter equitably.

4.5 NNPC REFINERY HOUSES

Initial Contract Sum		₦3,255,075.00
Revised Contract Sum	:	₦8,775,912
Value of Work executed at		
31st March 1985	:	₦8,775,912 - 100%

This project was substantially completed before the end 1983, and we handed over all the 66 units to the client

Our application for the release of the retention money, of which ₦103,000 is still outstanding has not been considered. The Consultants indicate that since substantial repairs to roof leakages were carried out, they will only entertain our application whenever they consider that the repairs have been adequately tested by the rains.

4.6 ILORIN TEACHING HOSPITAL

Initial Contract Sum		₦32,000,000.00
Revised Contract Sum	:	₦34,332,727.

A full report was given in the Report for December, 1985 detailing the problems on this Project necessitating a temporary closure of the Site and cessation of construction activities with effect from December, 1985.

The Site remains closed.

We have retained the Project Manager and 14 personnel to ensure adequate security for the works, equipments, and materials.

4.7 ABU TEACHING HOSPITAL ZARIA, PHASE 1A

Initial Contract Sum		₦21,000.00
Contract Sum (Approved Revision)	:	₦34,580,522
Value of Work executed -		
31st March, 1986	:	₦ 9,889,080

Very little work has been carried out since the beginning of the year, due to the adverse cash flow, and the uncertainties regarding the financing for the project.

The 10th March meeting with Federal Ministry of Health Officials, however, has given some confidence that some reasonable level of payments can be expected in the year. We have therefore re-examined our programme for the structural works and have accordingly completed arrangements for the supply of materials.

It is readily recognised that finance is the major constraint in the proper progress of the work in view of that if, as it is proposed, we are to complete the Project in 1988, then it is necessary that a Bank Loan be arranged with guarantee provided by the Federal Government.

4.7.1 Payments

At the Meeting held on 10th March, 1986 the Federal Ministry of Health Officials indicated that the Revised Contract Sum of ₦34,580.522 has been accepted.

It was also agreed that subsequent Certificate should incorporate the full amount of ₦1,000,000 losses and expenses claims we submitted and that efforts would be made towards payment of the amounts still outstanding from this claim.

4.8 PROFESSORIAL UNIT

Initial Contract Sum		₦1,275,000.
Revised Contract Sum	:	₦2,200,000
Value executed at 31st March, 1985	:	₦ 910,538

Work continues on the structural elements of this project.

The Electrical sub-contractor was given access to the work in mid July 1985. The Nominated Sub-contract Agreement is yet to be perfected as the Supervising Resident/Architect still awaits clarification of some points from the Client.

The Mechanical Services and Plumbing Subcontractors have similarly been appointed and given access to the Site. However, as the Subcontract Agreement has not yet been perfected the Subcontractor has refused to take possessions until the Agreement is executed thus enabling him to receive a down payment of 50% of the subcontract sum.

The completion period for the sub-Contract is 26 weeks and, as the official date of possession is not yet agreed, this would result in the anticipated completion date beyond August, 1986.

4.9 Iloring Central Bank Houses

Initial Contract Sum – ₦2,957.65

Revised Contract Sum: ₦3,776,561.96

Work executed at 31st March 1986: ₦3,314,760.94.

Every efforts is being made towards completing this project within the extended completion date which is now 15th May, 1986.

We are currently negotiating with the Consultants on the rates for the application of externals paints, which constitutes a variation on the Contract. As soon as this is satisfactorily concluded, we are confident of achieving the completion date.

Four of their main projects were completed. They are as follows:-

	PROJECT	INITIAL SUM ₦	FISAL SUM	DIFFERENCE ₦	% DIFFERENCE
1.	ABU Teach Hosp. Phase 1	21.00million	50million	29million	138.10
2.	NNIL Office Com.	3.10million	5.40	2.30	74.19
3.	NNPC Housing	3.00	9.00	6.00	200.00
4.	Central Bank Housing Ilorin	1.70	4.20	2.50	147.06
			TOTAL	₦57.80	559.35%
	Average percentage increase Table 06			=	139.84%

Observations

By 1986 projects/ cost escalations in the organisation was on the average 139.84% over and above the signed contract sums. From interview with the Managing Director, the Chief Quantity Surveyor of the organisation as well as with Chief Architect Ministry of Health Lagos, apart from the accompanying delays, the cost escalations were due to:

a. Irregular payments to the contractor
b. Variations in the works
c. Inflation in general and
d. Government beaureaucratic procedures.

4.10 Further Research

The need to manage our financial resources prudently cannot be over emphasied. If by 1986 the average projects cost escalation experienced by NNCC Ltd is 139.84%, taking SFEM/FEM into consideration, it is a huge percentage of 978.88%. This is of a gre concern to all. Further areas for research, therefore, is recommended as follows:-

a) Financing System of Construction works.

b) Procedures of project awards

c) Socio-political consideration of contracts (cost implications).

d) Construction methods and finance

e) Legalisation of "Kick-backs" in the construction industry.

f) Role of Financial Institutions in projects financing

g) The Financial silient points of Direct Labour in Construction.

h) Benefits of Financial cost indices to Construction Works.

BIBLIOGRAPHY

1. Agbaroji, P.C, "Price Data and Regional variations In Construction industry". The Nigerian Quantity Surveyor journal Jan. 1981 Vol. 1

2. Bromilow, F.J Building Contract cost performance Building Economist Australia, February Vol.9 Feb.1972 126-138.

3. Abba, Alkasim, Yahaya, Abdullahi, Abubakar, M.S. Kwanashie, M. Mohammed A.S. Oculi, O. Tijjani and Usman, Y. B. on: The Nigerian Economic crisis. Causes and solutions published by the Academic staff Union of Universities of Nigeria Zaria, 1986.

4. Achebe Chinna - "The trouble with Nigeria", 4th Dimention publishers Enugu, 1985.

5. Bromilow, F.J. The nature and extend of variations to Building Contracts. The building Economist Vol.9 No.3 Nov. 1970 PP 93 - 104.

6. Major General Mohammed Buhari (rtd) Maiden speech by the former head of the Federal Military Government and commander in - chief of the Armed Forces of the Federal Republic of Nigeria, New Nigeria Monday January 2, 1984 page 3.

7. Cartilidge Duncan P. "Cost planning and Building Economic, Hutchinson Educational Ltd - 1973.

8. Ekweme Alex Construction Contract Forms, need for Revision published in journal of the Nigerian Institute of Quantity Surveyors, Jan. 1981 Vol. 1

9. Giwa, Shehu Then president of the Nigerian Institute of Quantity Surveyors. Journal Vol. 4 Sept., 1986 1986 PP4.

10. Giwa Shehu L. "Sources of funding Building Development Seminar at Kaduna of Common wealth Association of Surveyors and Land on 14th - 17th March, 1985.

11. Goodcare Peter E. "A critical look at final Account" carried in The Quantity Surveyor fournal London, May/June 1984 Vol. 30 No. 6

12. Inglis T.L. "Glasglow role in Nigeria" published in the Chartered Quantity Surveyor, February, 1989 PP 262.

13. Joints Contract Tribunal (JCT) Standard Form of Building Contract 1983 private Edition with Quantities - RIBA Publications Ltd.

14. Luder, Owen ON "The professional Role - The Architects" report of one - day conference on future Development - The Clients Dilemma Part I Quantity Surveyors London Feb. 1978 Vol.38 6 PP 90 - 91

15. McCanlis, E.W Tendering Procedures and contractual arrangements research and information group of the Quantity I Surveyors Committee - The royal Institution of Chartered Surveyors London 1971 PP 10

16. Mosaku, Timothy Olusoji A System approach to effective project management control. Ahmadu Bello University Department of Building PH. D. Thesis 1982.

17. N I A Foward to the Nigerian Institute of Architect programme Journal on the Annual General Meeting and Seminar: Theme standard from of Agreement for the Construction Industry in Nigeria Nov. 1984.

18. Oloko, Prof. Olatunde — Whether Nigeria 20 Basic problems yet unsolved. Times press Apapa 1982.

19. Osemanan, C. A — Paper on why construction project are abandoned and use of direct labour in construction industry presented at the formal inauguration of the NIQS Lagos chapter at Eko Holiday Inn Lagos 12th Nov. 1986

20. Owete O.W.E — ON "Coping with inflation in the construction industry in nigeria. Construction - Journal of the Federation of building and Civil Engineering contractors Vol. 5 No.1 January, 1988.

21. Turner, Dennis F, — Quantity Surveying, Practice and Administration 3rd Edition, Pitman Press Ltd Bath UK.(1983)

22. Umar, Wing Commander — Mohammed - Kano State Military Governor Address to Dodan Barracks Correspondents - National concord Dec. 30th 1986 Page 14.

23. Wahab, K. Ade — On Alternative stratigies for project execution construction "The Journal of the Federal of Building and Civil Eng. Contractors Vol.4 No.3 Sept 1987.

24. Wainwright W.H. and Wood A.A.B — Variations and Final Account procedure Hurchion Educational Ltd London 3rd Edition 1979.

25. Wallace, Duncan I.N — Hudson's building and Engineering contracts 10th Edition - Sweet and Maxwell London 1970.

26. Giwa Shehu L. — "Bandonement ofbuilding projects in Nigeria causes Effects and solutions." Seminar paper presented to Dept. of Building ABU Zaria January, 1987.

APPENDICES

APPENDIX 'A' 1

SOME PAST AND PRESENT PROJECTS OF NNCC

No.	PROJECT	INITIAL CONTRACT SUM	PRESENT WORTH	COMMENT
1.	ABU Teaching Hospital Zaria Phase 1	₦21 million	₦50 million	Complete
2.	NNIL Office Complex	3.1 million	5.4 million	Completed
3.	NNPC Housing Complex Kaduna	3 million	9 million	Completed
4.	Ilorin Teaching Hospital	32 million	51 million	Yet for completion
5.	ABU Teaching Hospital Phase 1A	21 million	40 million	Yet for completion
6.	Professionrial Unit ABU -.Zaria	1.5 million	3 million	Ditto
7.	Ilorin Central Bank Housing	1.7 million	4.20 million	Ditto

Source: NNCC CO. Ltd.

APPENDIX 'B' 1

QUESTIONNAIRE ON DELAYS AND COST OVERRUNS ON CONSTRUCTION PROJECTS

DIRECTIONS FOR COMPLETION OF THE QUESTIONNAIRE

This questionnaire is an attempt to solicit information on delays in project completion, and increase in construction cost after commencement.

1. Data is desired on projects from your company's records which you have handled or are handling. The selected projects should be typical of your normal operations.

2. The questions are straight forward and require short, direct answers.

3. I enclose herewith ten number questionnaires for completion, one for each project you have handled or are handling.

4. The aim of this questionnaires is to contribute to improve performance of financial management of construction works in Nigeria by identifying the major constraints in general .

5. To highlight in the case in study and similar cases of their problems in their performances within the industry.

APPENDIX 'B' 2

DEPARTMENT OF BUSINESS ADMINISTRATION
AHMADU BELLO UNIVERSITY ZARIA.

For the given project from your records i.e 'PROJECT X, State:-

1. Original contract sum ₦.....
2. Final Contract sum ₦.....
3. The contingency sum in the original contract sum ₦.....
4. Original contract period ..... weeks.....
5. Final contract period ..... weeks .....
6. Each of the Events listed below are possible causes of increased construction cost and/or construction period, when they occur on site. In table 1 below Please indicate the number of times each Event occured on 'PROJECT X', and say how often it normally occurs on most projects in your experience.

EVENT	EVENT DESCRIPTION	FREQUENCY OF OCCURANCE	
		ON 'PROJECT X' IN	YOU EXPERIEN
Example	Severaly bad weather	3	2
EVENT	EVENT DESCRIPTION	ON 'PROJECT X' IN	YOUR EXPERIEN
1	Severely bad weather		
2	Fluctuations in interest rates		
3	Difficulty of labour supply		
4	Material shortages on site		
5	Major equipment breakdown/non-availability		
6	Large Variation of construction works/errors in B.O.Q		
7	Problems caused by norminated contractors and suppliers		
8.	Jurisdictional disputes		
9	Difficulty/mistakes in design implementation		
10	Delays in paying/pay system		
11	Negotiation mistakes or non-adherence to contract provi-tions.		
12	Changes in Government policy		
13	Obtaining shop drawing/inspections and approvals from architects		
14	Delays in valuation of work executed by consultants		
15	Any other		

APPENDIX 'B' 4

For each Event (1 - 15) indicate the approximate percentage of cost overrun under each of the given components of the contract sum

Table 2

EVENT	Description	Cost overrun by this event on 'PROJECT X'	CONTRACT SUM BREAKDOWN			
			Plant Labour	Materials	Preliminaries (site on costs	Profit/ overhead
1	Weather					
2	Fluctuations					
3	Labour					
4	Materials					
5	Equipments					
6	Variations					
7	Subcontractors					
8	Disputes					
9	Design					
10	Payments					
11	Contracts					
12	Government					
13	Drawing					
14	Valuation					
15	Any other					

APPENDIX 'B' 5

For each Event (1 - 15) indicate the approximate percentage of delay under each of the given components of the contract period.

EVENT	Description	Delay by this event on 'PROJECT X'	Mobilization	CONTRACT PERIOD Main Contract	Demobilizatio
Example	Weather	5 weeks	30%	50%	20%

Table 3

EVENT	Description	Delay by this Event on (PROJECT X'	Bobilization	CONTRACT PERIOD Main Contract	Demobilizatio
1	Weather				
2	Fluctuations				
3	Labour				
4	Materials				
5	Equipment				
6	Variations				
7	Subcontractor				
8	Disputes				
9	Design				
10	Payments				
11	Contracts				
12	Government				
13	Drawings				
14	Valuations				
15	Any other				

Describe briefly the characteristics of 'PROJECT X' which should be typical of your normal operations. Mention if it is a building or civil engineering project and of what type. Also state if it is industrial, commercial, public or residential, commercial, public or residential, and show the extent e.g. for an office block, state the number of floors.

Tick the profession that applies to you below

1. Chief Executive
2. Architect
3. Quantity Surveyor
4. Builder: Construction Manager
5. Contractor Foreman/Supervisor
6. Engineer Other (please specify)

How long have you practised professionally? .....

.....

Any other information

No.RC. 11,420

FEDERAL REPUBLIC OF NIGERIA

Certificate of Incorporation

I HEREBY CERTIFY that

NEW NIGERIA CONSTRUCTION COMPANY LIMITED

is this d ncorporated under the Companies Decree 1968 and that the Company is Limi

Given under my hand at Lagos this 10TH day of MAY One thousand Nine Hundred and SEVENTY-THREE

Fees and Deed Stamps ₦115.00.

Stamp Duty on Capital ₦3,750.00.

OLU. AWOTESU.
Registrar of Companies