EVALUATION OF FINANCING OPTIONS FOR PUBLIC SECTOR PROJECTS:

A STUDY OF SELECTED PROJECTS IN IMO STATE.

BY

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CERTIFICATION

We hereby certify that this project is the work of Johnbosco U. Ogomaka, Reg. Number 20004154288, and it has met the requirement for the award of degree of Masters of Business Administration in Financial Management Technology of the Federal University of Technology Owerri.

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This work is dedicated to

Ezinne Cecilia Ijeoma Ogomaka.

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ABSTRACT

This work evaluated the extent to which various sources of funds are used in financing public sector projects in Imo State. The study was motivated by the ever increasing cases of inadequate project financing and financial management, which has created problems of illiquidity, insolvency and abandonment in the public sector. The objective among others, is to assess the extent to which mixed-financing options can be used to enhance the availability of both short and long term funds to public projects, through the formal and informal financial system. In carrying out this investigation ten (10) public sector projects were sampled. The opinion of twenty (20) cost engineers participating in the projects as either representatives of main contractor, sub contractors, consultants, suppliers or vendors were sought through the questionnaire. In all, fifteen (15) of them actually returned their questionnaire. Their responses were coded and quantified. The quantified response was analysed using the coefficients of correlation (R), the coefficient of determination (R^2), the F-test, the t-test and a linear regression model. The results of the analysis among others, show that increased use of capital market funds (development bonds and debentures), money market funds (medium term bank loans) as well as informal sector funds (lease, supplier credits, etc) have more likelihood of leading to successful financing of public sector projects as opposed to much reliance on governmental budgetary allocations, but for this to be possible government must provide the enabling environment. The study therefore recommends for increased use of public-private sector financing structure for public sector projects in Nigeria.

Key words: *Public Private Partnership, Project finance, Leasing, Build-own-operate-Transfer, Overdraft, Long-term loan, Bond, Debentures.*

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The immediate postcolonial period witnessed increased government participation in development-oriented projects. Two factors primarily accounted for this - the urge to induce development by investing in projects with high sectorial linkages. Secondly, to fill the gap created by the absence of a vibrant private sector which could have made fund available to investors through intermediation. At this period the central government played key role in the economic development of the country by sponsoring such projects as construction of roads, bridges, hospitals, schools, industries and the like.

The federal structure of administration in Nigeria placed unique responsibilities on the Federal, state and local governments respectively. While the Federal Government provide economic and social infrastructural facilities, state and local governments are principally responsible for the provision of certain facilities/ infrastructure in their jurisdiction. These include roads, sewers, potable water, public transportation, housing, education and

healthcare facilities. Added to these, is the fact that state governments are the main employers of labour in their jurisdiction.

The boom in the sales of crude oil in the 1970s provided the needed fund to the Nigerian government. The statutory allocation to the three levels of government from the federation account was enough to cover the cost of the services provided. However, the oil glut of the 80s and the attendant recession in the world economy took a downward toll on the economy of Nigeria. The dwindling revenue of the government and the ever-increasing debt obligations drastically reduced the fund available for capital project investment.

This paucity of fund created the need for project financing in the public sector. Project finance schemes assist the federal, state and local governments to execute projects with large capital outlays that will transform the socio-economic circumstances of the people, especially in such critical areas as agriculture, transportation, housing, hospitals and school projects.

1.2 STATEMENT OF PROBLEM

In the most recent time lack of basic amenities (road, water, electricity, hospitals, schools and shelter) has assumed a dangerous dimension in most Nigerian cities to the extent that access to each of

the above by citizens has fallen far below the United Nations minimum standard. The above situation has remained critical indicators of poverty in Nigeria. Efforts made so far by government at different levels to develop or maintain existing ones have not been successful due largely to improper financing strategies. Public funds have remained the main source of funding to public development projects. This is not without high-level of inefficiency. Another angle to the matter lays in the fact that debt owed local contractors have remained a very significant component of the domestic stock portfolio of government. Also much of the non performing loan portfolio of commercial banks in the country are as a result of facilities granted to local contractors for financing development projects for which government have failed to pay for works done. This has been the source of distress in the banking system. At the present, given the ever increasing need to finance the development and maintenance of public oriented development projects, there is urgent need for a public-private sector partnership in the financing of public development projects, hence the need for this study.

This work attempts to statistically evaluate the effects of financing options on successful public projects financing.

1.3 OBJECTIVES OF THE STUDY

The central objective of this work is to explore the extent to which non-public sector financing options can be used to improve the efficiency level of public project financing in Nigeria using selected projects in Imo State as case studies. To this extent the specific objectives of this study includes the following:

- To access the opinion of project management professionals as it relates to their preference of the various financing options to public projects.
- To access the contribution of each of the financing options to successful public project financing.
- To recommend on possible financing strategies to improve access to finance by public projects at cost effective rates.

1.4 RESEARCH QUESTIONS

Effort is made in this study to provide answers to the following questions:

- To what extent can the use of capital market funds enhance the success level of public project financing?
- To what extent can use of money market funds improve the success level of public project financing?

- To what extent can the use of informal market funds enhance the success level of public project financing?
- To what extent is the use of public sector funds (Government budgetary provisions) critical to successful financing of public projects?

1.5 RESEARCH HYPOTHESES

In order to arrive at valid conclusions in this study the following hypothetical postulations are tested:

H_{01}: There is no significant relationship between capital market funds and success in public project financing.

H_{O2}: There is no significant relationship between money market funds and success in public project financing.

H_{03}: There is no significant relationship between informal market funds and success in public project financing.

H_{O4}: There is no significant relationship between government budgetary funds and success in public project financing.

1.6 SIGNIFICANCE OF THE STUDY

In the recent past, high linkage and capital-intensive projects are synonymous with government finance. This work will bring to focus

the efforts of alternate finance schemes in realizing development-oriented projects in today's private sector driven economy. It will also extend the existing body of knowledge in the relevant areas of project finance and management.

1.7 SCOPE OF THE STUDY

This work evaluates finance options for capital projects with emphasis on the public sector. Selected projects studied were drawn from Federal, State and Local Government levels of governmental administration in Imo State. Though this work primarily used projects selected from Imo State, it could be used to improve the level of public project financing in other States of Nigeria.

1.8 LIMITATIONS

This research was carried out under a limited time frame. Several calls were made to reach and obtain data relevant to the research topic. Repeat calls were made to administer the questionnaires and in some cases oral interview was used to explain the questions so as to obtain useful information from the respondents.

Public servants were very reluctant to provide required information to the researcher. Despite these restrictions, data relevant to the analysis was obtained.

1.9 ORGANIZATION OF THE WORK

This work is presented through five chapters. Chapter one is the introduction. Existing literature on the topic were reviewed and presented in chapter two. The statistical method of analysis used for the study was presented in chapter three. The data collected by means of the questionnaire were analyzed and the findings stated in chapter four. Chapter five is the summary, conclusion and recommendation of the work.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 PROJECT FINANCING CONCEPTS

Finance is concerned with instruments involved in the transfer of money among and between individuals, businesses and government (Nzotta: 1999). For an economic unit, finance directs the smooth flow of activities and smooth operations of the organization. It plays a key role in preserving solvency and in taking advantage of emerging opportunities for growth and profitability.

In this light, project financing refers to the funding of capital projects by a project sponsor, financier or funding agency. The emphasis in project financing is the sourcing of funds for capital projects. This however is preceded by evaluation and appraisal of the project to determine its viability and after deciding on the acceptability of the project.

According to Chrystie (2001), project financing is an innovative and timely financing technique, that has been used on many high-profile corporate projects. Employing a carefully engineered financing mix has long been used to fund capital projects. Increasingly, mixed-

financing is emerging as the preferred alternative to conventional methods of financing public sector projects and other large scale private projects worldwide.

Andrew (2000), project financing discipline includes understanding the rationale for project financing, how to prepare the financial plan, assess the risks, design the financing mix and raise the funds. In addition, one must understand the cogent analyses of why some project financing plan have failed, while others have succeeded. A knowledge-base is required regarding the design of contractual arrangements to support project financing; issues for the host government legislative provisions, public/private infrastructure partnerships, public/ private infrastructure financing, credit requirements of lenders and how to determine the project's borrowing capacity; how to prepare cash flow projections and use them to measure expected rates of return; tax and accounting considerations; and analytical techniques to validate project's feasibility.

Project finance is finance for a particular project such as a mine, toll road, railway, pipelines, power station, ship, hospital or prison and resort/business villages, which is repaid from the cash flow of the project. According to Nzotta (2002), project finance is clearly not a

new part of banking and examples of project finance deals exists as far back as the end of the 19th century, if not before. In the early part of the 20th century, there were numerous examples of infrastructure projects been developed around the world. These projects were largely funded by injections of capital from entrepreneurs wishing to make some potentially high-yield (albeit high-risk) investments.

Due to its increasing importance and use as a funding vehicle for large projects, project financing has been attracting a great deal of academic interest. The innovative deals being crafted in project finance revolve around financial packages that offer risk opportunities for testing core financial theories. The large number of financial contracts that characterize project finance must be able to solve basic agency problems between sponsors and creditors.

According to Ambrish, (2002) recent research have achieved theoretical breakthroughs in the analysis of the use of various financing options such as equities, debt, credits, mortgages and leases as distinctive feature of project finance. The maturity structure of debt contracts, the choice between private debt (bank loans) and public debt (bonds and notes), the role of covenants and collateral in debt contracts, the optimal design of securities, and the

monitoring role of financial intermediaries have yielded important insights into project finance structures.

According to Chrystie and Fabozzi (2001), project finance is different from traditional forms of finance, because the financier principally looks to the assets and revenue of the project in order to secure and service the loan, in contrast to ordinary borrowing situation. In project finance, the financier usually has little or no recourse to the non-project assets of the borrower or the sponsors of the project. In this situation, the credit risk association with the borrower is not as important as in an ordinary loan transaction; what is most important is the identification, analysis, allocation and management of every risk associated with the project.

Ekineh (2003) illustrated that the history of project financing, can be traced as far back as 1299, when the earliest known transaction took place. The English Crown negotiated a loan from a leading Italian merchant bank of that period to develop the Devon Silver Mines. Under the loan contract, the lender would be able to control the operations of the mines for one year. He was entitled to all the unrefined ore extracted during the contract period, but had to pay all the operating costs associated with the extraction. There was no provision for interest, nor did the Crown guarantee the quality or

quantity of silver that would be extracted. In current parlance, this transaction would be known as “production payment loan”.

Since the 1970s, when project finance was used on a large scale to develop the North Sea Oil fields, this financing techniques have been extensively associated with the several financial and telecommunication projects. Equally, spectacular have been some recent financial failures, the Dabhol Power Project (India) and Iridium (the USA). In spite of these failures, which have attracted considerable public attention, the market for project financing has been growing worldwide.

Nzotta (1999) is of the view that in project financing assets, contracts, inherent economics and cash flows associated to projects are separated from their promoters or sponsor in order to ensure a critical credit appraisal and loan to the project independent of the sponsors. Project finance has become a popular means of financing capital projects in the Nigeria public sector.

According to Benjamin (2000), leasing option is the best means of acquiring assets needed urgently. He said this is especially important during this time when many experience leanness in their financial

capabilities due to the need for many to procure many assets and there is a squeeze of cash.

Public project is also found to be in such urgency of acquiring resources to meet up with **cost**, **time**, and **quality** specifications and standards of project execution and delivery. Therefore there is a need to evaluate how the various financing options can be used as alternative sources for financing such projects in Nigeria.

2.2 CHARACTERISTICS OF PROJECT FINANCING

The major characteristics of project financing are listed below:

Project financing involves the creation of a separate project entity to handle the implementation of the project. This entity will provide the necessary linkages with all aspects of the project cycle including the project conception, project package, financing, implementation and evaluation.

It involves either debt financing or equity financing from sponsors or a mixture of the two options.

Most project financing packages are highly leveraged financing packages since the debt component is usually high.

The project funding and the associated cashflows are separated from the project sponsors financial affairs.

The servicing of debt obligations and the installment repayments, depend entirely on the cash -flows generated by the project.

The project's assets are often used as collateral for the exposure in addition to other forms of collateral securities acceptable to the financier or the funding agency.

The risks of the project are usually shared by the sponsors, the government, and other stakeholders as the case maybe

Project financing takes into consideration the economic justification of the project, the commercial viability and the technical feasibility of the project. These critical issues are appraised in the project package or feasibility study of the project (Pandey: 1999).

- **THE PUBLIC SECTOR AND CAPITAL PROJECTS**

The public sector has been defined as that part of the economy in which the state acts as entrepreneur (Hanson 1977). The government in this instance decides what to invest, when to invest and how to invest. In line with the above view; Blunt emphasized the importance of the public sector as a catalyst to economic

development (Blunt 1977). To him any development conscious economy must make use of public enterprises on a considerable scale. From the ideological view however, Blunt posits that nationalism has been of great importance as a driving force in the process of economic development in general and of public enterprise in particular.

On the other hand, Okigbo postulates that the evolution of the role of the public sector in the economy often takes one of two directions. It may have its origin as a local response or adjustment to adhoc situations, or it may be the result of a carefully thought out body of ideas. In the first, the approach is casual and empirical, in the later, it is a synoptic doctrinaire. In the earlier position, some developments in the economy may lead to outcries and demand of the citizens for the public authorities to act and intervene. Specific but sustained shortages, bottlenecks and scarcities, flagrant abuse of monopoly or oligopoly power by a group of producers, manipulation of the market or the failure of the market to exist for certain goods and services are some of the situations that may lead to a demand for or a justification of the intervention of the public.

The second approach which is synoptic doctrinaire requires the issues to be defined in advance and their dimensions be articulated and stated. In reality, it follows two strands. The first postulates that the primary interest of the government is the welfare of the governed. The society is thus organized to satisfy the wants of its members. Some of these wants can best be satisfied by means of public goods, ie goods produced or provided by the public authorities for the use of any or all the citizens. The second strand postulates public ownership of the means of production and distribution in order to eliminate exploitation of the generality of the citizens (Okigbo 1987). However the two main approaches, namely, the serial and synoptic doctrinaire, meet through the concept of market failure and imperfections. In either case, the need arises for public intervention to create markets, reduce imperfections or to reduce the inequalities in distribution between persons and between factors.

Public sector emergence can be justified by the following reasons:

i. Existence of public goods such as schools, roads and hospitals.

ii. Existence of goods with externalities. The market externalities arise because we are living in a world with limited natural

resources. Thus our activities tend to “crowd in” on the range of activities available to other people (Quirk 1976).

iii. Market failure arising from the emergence of imperfect market as monopoly power and existence of natural monopolies due to economies of scale.

iv. Incomplete information regarding the various actors in the economy.

v. Insurance market failures hindering investment in certain economic sectors and

vi. The need for economic stabilization and normal growth.

Capital: to an ordinary man is simply money or cash. He stresses cash because it enables him buy any asset such as building, fixtures, fittings and stock of merchandize required to get a business started.

To the Accountant, capital consists of the assets (money and non-monetary) contributed by owners to get a business going. The accountant emphasizes the sacrifice involved in raising capital. Hence, he distinguishes between authorized capital and paid up capital.

Ambrish, (2002) sees capital as the monetary and non-monetary assets contributed both by the owners of an enterprise (equity capital) and by creditors (loan capital). Financers stress total productive capacity available to an enterprise irrespective of the source of such productive capability. They further distinguish between long-term and short or intermediate term capital. Thus financers include all the sources of fund available to the enterprise when drawing its capital structure (Okafor 1983).

From the economists' viewpoint, capital is any output of past productive activity that has been saved for the purpose of aiding further production. This comprises durable assets such as buildings, machinery, equipment etc which aid production for long periods.

2.4 DEFINITION OF PROJECT

The term project has been variously defined as follows:

a. The use of one or more scarce resources during a specific time period for the purpose of producing some economic return or output at a later time;

b. A capital investment to develop facilities to provide goods or services;

c. The consumption in the near future of scarce or at least limited resources in the hope of obtaining in return over a long period, some benefit (Kayode 1979).

The above definitions imply that projects are investments in physical goods. However, it has been observed that projects are not limited to physical goods but embrace other functions. For instance, sales promotion and population planning programmes have been found to involve the use of economic resources with the hope of reaping some benefit, though both may not involve physical works or goods. Hence they are rightly classified as projects.

In the light of the above, a broader view of 'Project' encompasses physical works and non-physical commitment of resources. Project is an optimum set of investment-oriented actions by means of which a defined combination of human and material resources is expected to cause a determined amount of economic and social development. This view was established after examining some of the interesting changes in the concept of a project as reflected in the World Bank's experience. Project therefore refers to that investment activity where a group of interrelated assets provides facilities capable of completing

a production or service process. Investment projects are such that the facilities provided by the component assets can only be effective if operated as a unit. Hence, the component assets must necessarily be accepted or rejected as a set.

Contrary to popular expectation, the basic difference between projects and single asset investments does not lie in the value of the investment outlay. The cost of a single turbine in a hydro-electricity generating plant, for example, could be many times the total investment outlay in a corn-grinding mill. In terms of our definition, the latter is a project because it can complete a processing circle. Outlay on the hydro-electricity generating turbine is not by itself a project.

The features of capital or investment projects are as follows:

3 They are undertaken in anticipation of benefits which are not expected to accrue concurrently with the investment outlay. As a result of this inevitable time lag between outlay and benefit, almost every investment involves some risk, the risk that anticipated benefits may not ultimately be realized.

4 They can be made in real or financial assets. Irrespective of the media, all investments can be measured in terms of the total outlay of funds.

5 Since investment benefits accrue overtime, there is the expectation that the asset in which any investment is denominated shall be retained by the investor for some reasonable period. Hence the value of the asset should be carefully established at the time the investment is made.

6 Every investment involves someone forgoing some current capability for consumption. As a result of this feature, economists usually expect an identity between the level of savings and investment.

7 Three standard activity stages of projects are identified as: the project idea, project appraisal and operation.

Some key projects provide greater linkages in the economy. They ginger other sectors of the economy towards growth; provide more opportunities for employment and enhance social well-being of the people. Where such projects are resource consuming with low returns, the public sector provides the investment.

2.5 OPTIONS FOR FINANCING PUBLIC PROJECTS

Identified means of project finance in the public sector include:

i. **Government Revenue:** The three tiers of government namely, federal, state and local government derive their revenue from diverse sources. These include statutory allocation from the federation account, statutory allocation from value-added tax pool and grants from the Federal Government to finance specific projects. Table 2.1 below shows details of revenue sources federal, state and local government areas.

Table 2.1: Distribution of Revenue Sources

Federal	State	Local
1. Statutory allocation from the federation account.	1. Statutory allocation from the federation account	1.Statutory allocation from the federation account
2. VAT	2. VAT	2. VAT
3.Independent revenue: Personal income tax of armed forces personnel, external affairs officers, FCT residents; dividends from investments in publicly-quoted companies, rents on government property, interest on loans to states and parastatals.	3.Independent revenue: Personal income taxes of persons resident in the states; capital gains tax; stamp duties; pools betting, lotteries and casino taxes, fees for registration and licensing of vehicles; charges related to land matters; business premises registration; development levy; street name registration fees (state capitals); certificate of occupancy fees (state capitals); market levies (where state finances are involved).	3.Independent revenue: Property tax, licenses for bicycles, trucks (other than mechanically propelled trucks). Canoes, wheel barrows and carts, radio and television, & domestic animal; fees for right of occupancy, market and motor park, merriment and road closure, public convenience & refuse disposal, and advertisement.

Source: Bullion; CBN Publication Vol 27 No. 1 April – June, 2003

As shown above, matters of mainly local interests have been assigned to the lower-level government.

The designers of our fiscal federalism obviously felt they had done enough to ensure the tiers of government were adequately funded, especially given the numerous list of sources of independent revenue provided. However, available data shows the revenue sources have performed poorly over the years and failed to provide adequate fund for capital projects. A critical assessment of revenue performance of state governments from 1997 – 2004 for example, portrays dismal performance.

Table 2.2: Revenue Performance of State Governments - 1997-2004 (₦m)

Year	Total Revenue (₦'000)	Statutory Revenue including VAT (₦'000)		Independent Revenue (₦'000)		Grant & Others (₦'000)
		Amount	% of Total	Amount	% of total	
1997	96,962.6	65257.1	67.30	27368.2	28.23	4337.3
1998	1432025	82510.8	57.62	29213.9	20.40	31477.8
1999	168,990.1	128,329.4	75.94	34109.0	20.18	6551.7
2000	359072.4	287994.6	80.21	37788.5	10.52	33289.3
2001	573548.2	456067.8	79.52	59416.0	10.36	58064.4
2002	669,817.7	440926.7	65.8	89606.9	13.3	129,714.4
2003	854,997.1	601067.8	70.3	118,753.5	13.8	134,179.3
2004	1,113,943.7	873403.6	78.40	134,195.3	12.04	104344.80

Source: CBN, Annual Report and Statement of Account, 2004.

This poor performance is attributed to inadequate revenue opportunities due to the subsistent nature of the economy; poor work attitudes of both the authorities and workers at state level manifesting in poor planning for and organization of revenue mobilization; and limited administrative capacity emanating from lack of relevant knowledge and skill for effective performance of tasks.

(ii) Loan from commercial banks:

The public sector often resorts to the commercial banks for loans. However, such facilities are short-term credits which vary from overnight loans to those not exceeding one year. This is a temporary finance required to cover operating cost or used for early project planning until permanent financing arrangements are put in place. Funding capital projects from this source is a mis-match of term funds and leads to high default.

(iii) External Borrowing:

The federal and state government have in past contracted several external loans to finance their capital projects. In most cases the terms and duration of these loans are unfavourable when matched with the structure of the project being financed. External borrowing exposes the debtor to the risk of currency depreciation. The

depreciation of the national currency of the creditor increases the debt stock of the borrower. This partly explains the high foreign debt overhang of the Nigerian government until recent move of president Obasanjo administration to pay off our debts.

Table 2.3: STATE GOVERNMENT DEBT PROFILE (1999-2004) ₦m

Item	1999	2000	2001	2002	2003	2004
Internal Loans (₦'000)	4,479.9	3,834.9	19232.1	32451.7	71,030.9	4396.9
External Loans (₦'000)	295.2	156.0	1,410.2	15,879.3	14,680.4	0.0
Opening cash balance (₦'000)	n.a	n.a	4,936.8	5,092.0	13,005.0	0.0
Other Funds (₦'000)	(5,869.1)	(3,392.7)	(478.7)	1,292.5	13,005.0	0.0

Source: CBN Annual Report and Statement of Account Dec, 2001, 2003 and 2004.

Table 2.3 shows a summary of state governments debt profile from 1999 – 2004. Internal loan for year 2003 stood at about N71b while external loan stood at over N14b

(iv) Special Levy

Special levy are patterned in the form of poll tax. They are levied in equal proportion on the generality of the people in order to fund a specific project. This is peculiar to states and local governments. In the 1980's for example, the then Imo State government introduced Airport levy. The fund so generated was used to construct the Sam Mbakwe Airport Located at Owerri, Imo State.

2.6 REASON FOR INCREASE IN COST OF PROJECTS

There has been a dramatic increase in the cost of capital projects in Nigeria, today when compared with the immediate post colonial period and the 1970s. This increase can be attributed to the following factors:

i. Unindustrialized Economy

Nigeria had the resource potential in men, material and money to lay a solid foundation for a socio-economic revolution in black Africa as enshrined in the second national development plan 1970 – 1974 (Alkasum 1986). However, this assertion could not be met years after, as the discovery of crude oil and the boom in the sales of 1970s completely diverted the attention of policy makers from diversifying the economy. The gain recorded in Agriculture and the harnessing of solid minerals was lost as all attention was focused on crude oil with its easy money. Today, billions of dollars earned through sales of oil are wasted on importation of both consumer and industrial goods often at a high price, accounting for general increase in project cost in the country.

ii. Recession in Global Economy:

According to Padmalatha (2005) over the last decade, there has been recession in the global economy. The economy of European and

North American countries has been facing serious challenges leading to one reform or the other. The introduction of a common currency 'Euro' for most European countries 1999, was one of such reform policies aimed at reversing the recessive economy. Increase in sales price became a common survival strategy for most manufacturers of industrial goods. This artificial increase accounts for increase in project cost in Nigeria.

iii. Depreciation of the Naira.

The introduction of the Structural Adjustment Programme (SAP) 1986, had a direct effect of depreciating the value of the Naira against world's major currencies. From a pre-SAP exchange rate of N2:$1, the Naira currently exchange at the rate of N116:$1. This wide depreciation of the local currency has led to increase in the local cost of industrial goods as these are often imported from developed economies with stronger currency.

iv. Fraud in the Polity:

The place of corruption in the activities of the public sector of the country has become legendry. Nigeria currently ranks the second most corrupt country in the world due to the actions of some public officials. Cases of over inflation of contract values have constantly led

to increased cost of capital projects over the years. It has been established that cost of government owned projects in Nigeria are often inflated by over 300 percent (EL Rufai 2002).

v. Hyper- Inflation:

According to Stefanie and William (2001) with a poorly developed industrial sector, less developed economies have become import dependent. Where industrial goods are sourced from countries whose manufacturing sector operates above the long run average cost (LAC) due to inefficiency in the system, we are simply importing inflation into our own economy, hence increased project cost.

Given the inadequacy of orthodox sources of project finance and the increasing cost of projects, the public sector has resorted to other sources in order to meet their responsibilities to provide amenities to citizens. This alternative source of finance is normally provided by a project sponsor or funding agency who is usually interested in the viability of the project as specified in the financial projections, technical and commercial feasibility.

2.7 PROJECT EVALUATION CRITERIA

The evaluation of a project is important in the decision to accept or reject the project and form a basis for the funding decisions. The

essence of the appraisal is to measure the economic worth of the project to ensure it contributes to the welfare of the society or the maximization of the shareholders wealth. According to Nzotta (2002), the major characteristics of sound investment criteria include the following:

i. The appraisal method should provide objective criteria of separating viable projects from unviable ones.
ii. It should consider all cash-flows from the project to determine its true investment worth.
iii. The appraisal method must assist in the ranking of the projects according to its investment worth.
iv. The method should help to choose the most viable among mutually exclusive projects. Here we must choose the project which maximizes the shareholders wealth or societal welfare.
v. The method should recognize that in a project, larger cash flows are preferable to smaller ones and that early cash flows are preferable to later ones. This form the basis for ascertaining the liquidity of the project (Nzotta 2005).

It follows therefore that a comprehensive project plan is necessary in the public sector since funds for capital expenditures are appropriated only after the final selection of the project proposal.

The evaluating techniques commonly used to aid project finance decisions can be grouped into two viz:

a. Non Discounting methods

b. Discounting methods

2.7.1 Non Discounting Method

The non-discounting methods in use consist of the payback method, the ranking by inspection and the accounting rate of return.

The payback method tells us the number of years needed to recover the initial capital outlay. The shorter the payback period, the better for the sponsor. Thus, for two mutually exclusive projects, we must choose the project that has the shortest payback period.

In ranking by inspection, values are assigned to identified criteria. The project that has the highest cumulative ranking value is preferred.

The accounting rate of return is equivalent to the ratio of net profit to the initial investment cost. It is determined by dividing the net cash receipts by the initial investment outlay. The project that yields the highest ratio is preferred.

2.7.2 Discounting Method

The discounting method takes account of the time value of money and also the profitability of the project. This technique is superior to the non-discounting method as it results in better decisions.

The primary discounting methods in use include;

The Net Present Value method

Internal Rate of Return

The benefit cost ratio method

The Time Adjust Net Present Value

It is important to note that in the discounted cash flow method, the timing of costs and benefits of a project are highly taken into consideration.

2.8 ALTERNATIVE SOURCES OF PROJECT FINANCE

Having established the limitations of the orthodox means of project finance, the various governments at the federal, state and local levels could avail themselves of the opportunity offered by other options of project finance. These dynamic alternatives include;

Long-term loans, bonds, lease financing and special project financing arrangement.

2.8.1 Long-Term Loan:

Capital projects investment involve large financial outlays and long construction time. The public sector could raise loan of long-term nature for such development project. Long-term loans are sourced for periods in excess of five years. They are amortized in fixed installments and the interest rates on the loans are market driven. The loan contract are governed by some covenants usually specified at inception of the loan. The lower risk exposure makes the rates lower than all other market rates.

Long-term loans are sourced from various Development Finance Institutions such as;

i. The Banks of Industry (BOI)
ii. Federal Mortgage Bank of Nigeria
iii. Nigerian Agricultural, Cooperative and Rural Development Bank
iv. Urban Development Bank.

The bank of industry resulted from the merger of the Nigerian Industrial Development Bank (NIDB), the Nigeria Bank for commerce and Industry (NBC) and the Nigerian Economic Reconstruction Fund (NER FUND). The bank provides long-term loans and technical assistance for industrial development. It also funds various small and medium scale enterprises in the country.

The Federal Mortgage Bank of Nigeria is the apex bank in the mortgage industry. It also manages the National Housing Fund scheme. The FMBN provides loans for estates, housing and housing development in the country. The federal, state and local governments could source long-term funds for various housing schemes from the bank.

The Nigerian Agricultural, Cooperative and Rural Development Bank resulted from the merger of the Nigerian Agricultural and cooperative Bank (NACB), the Peoples Bank of Nigeria and the Family Economic Advancement Programme (FEAP). The bank focuses on the development of agriculture and agro allied enterprises, cooperatives and cooperative development and all forms of rural development schemes.

Its central focus is to ensure that the agricultural sector which is often equated to the rural sector is sufficiently galvanized and made more productive. The various governments of the public sector could borrow from the bank to fund capital projects in agriculture and agro allied enterprises.

The Urban Development Bank finances all aspects of urban development, urban transport and urban housing. Project finance

could be sourced from this bank for the purpose of providing transport facilities for the masses, for urban planning and provision of infrastructural facilities (Nzotta 2005).

2.8.2 BOND

Bonds are fixed income securities which provide specific rates of return to the holders and usually have a definite maturity date. They constitute a good source of long-term fund for a project. When issued by various types of business organizations we refer to them as corporate bonds. Those issued by Federal and state government are called government bonds while the local government issues municipal bonds.

Bonds are governed by a specific loan contract called the bond indenture and a trustee is usually established to protect the interest of the investors in the bond. A sinking fund which facilitates the prompt retirement of the bond is usually provided.

Two types of bonds are commonly issued in the public sector. These are the revenue bond and the general obligation bond.

The revenue bond is issued to finance a specific project with the income from the project being the exclusive source of interest and

principal payments. Projects funded through revenue bonds are expected to be viable such that income generated could service and liquidate the bond.

General obligation bonds are secured by the full faith and credit of the issuing entity. A government which is unable to generate adequate revenue through statutory means, tax and other avenues may be constrained from issuing general obligation bonds. Such bonds may be suitable for financing important but non-viable project (Ekineh 2003).

CONSIDERATIONS FOR USING BONDS AS A SOURCE OF FINANCING

The public sector official must consider the following factors in deciding to use bonds as a source of financing;

i. **The earning record of the business:** This is important because bonds have a fixed interest payment. If the earnings are high and stable then the risk of the fixed interest payment on bonds will be eliminated.

ii. **The capital structure as existing presently:** In cases where the debt/equity rate is already very high, then it is not advisable to use bonds in financing.

iii. **The economic situation in the country:** During periods of economic boom, it might be advantageous to use bonds since incomes are expected to be steady or even rise in the future. Thus it would be easier to meet interest payments unlike in period of economic downturn.

iv. The restrictive provisions in the bond indenture must be properly studied and considered in using bond financing (Nzotta 2002).

2.8.3 LEASE FINANCING

This is another important source of capital project financing. Lease financing makes provision for assets acquisition without the restrictions usually imposed by ordinary lending arrangements. Thus, with little or no initial capital, needed capital asset could be procured for use.

A lease could be defined as a negotiated contract between the owner (lessor) of the property, allowing the firm (lessee) the use of the asset for a specific period of time at a specific rental. Lease arrangements have covenants which specify the rights, duties, obligations and liabilities of the parties (lessee and lessor) to the lease arrangement.

2.8.4 THEORITICAL FRAMEWORK OF LEASING

Optimal financing strategy

According to Nzotta (2002) the initial mix in capital outlay should be necessary, taking into account the purpose for the finance, the state of the interest rates applicable to the capital market, the relative cost and availability of the different sources in order to enhance the objective.

Equity financing may be cheaper, however loans financing are comparatively easier to obtain. In effect, appropriate leverage representing optimal relationship between loan and equity capital outlays is usually sought in order to achieve optimal financing strategy especially under fluctuating economic conditions.

In these circumstances, the proactive manager examines as many options in corporate financing as possible before taking a final decision on which financing strategy to adopt.

Leasing sources and suppliers

Leasing grew rapidly during the 1970s and trading accounts for about 20 purchases of new assets being placed in use by business firms. The single largest example of the use of leasing was the Anaconda corporations leasing of a new aluminum manufacturing

(smelting) mill during the early 1970s ushering an account in execution of 100 million Tonnes in volume.

Compatibility of leasing and Purchase arrangement

There are legal differences between lease, hire purchase and outright purchase. The right to use the property involved in all the above instances is the same, while the right to ownership varies. In a lease, the title to ownership of property only passes to the leasee at the end of the lease period/term, while the right to use is only effective during the economic life of the asset. On the other hand a purchase can either be on a hire purchase or outright purchase. In outright purchase, the ownership right moves to the holder whether payment is in full on in part, while in a hire purchase, the ownership right only moves to the holder when the final payment is made irrespective of whether the economic life of the asset has elapse.

However, a strong agreement for capitalization can be made for leases that are on reasonable conditional sales arrangement. Of course, this type of leases would not be considered true lease in the eye of the law. Even in law however, the distinction is not always clear between a true lease and sale. Also tax authorities interpret some lease as conditional sale agreement with respect to legal nature

of the transaction rather than with their superficial resemblance to credit sale in case of bankruptcy or default.

On the other hand in credit and installment payment purchase, the seller simply offers use of asset as well as ownership of the asset to the buyer on credit. A secured credit sale gives the seller a preferred claim or lieu on the asset in event of default.

Under bankruptcy, the seller under conditional sales agreement has a legal right to receive the property because title has not been transferred. However, the seller has a possessive right of claim for any difference between the unpaid obligation and the asset value if the holder wants ownership to be transferred. A lessee claim is limited to provable danger which the lessor must mitigate either through sale or replacement of the endangered property.

Determination of lease contract

The lessor and the lessee enter into lease finance contract and are both subject to environmental features that can jeopardize the relationship. Defaults in lease financing are possible either way and each party seeks to satisfy necessary pre-contract evaluations for safety sake before signing on a contract. Traditional banks and

money lenders lend on collateral essential to secure their investment. Lessors and lessees apply various evaluation yardsticks to enhance their willingness to sign on a financing contract.

These elements of measurement may be wanted differently in different situations.

- The clan of lease provided
- The nature of clan of asset financed
- Repair and maintenance capacity of the lessor
- Financial capacity of the lessee
- Level of flexibility offered
- Reputation of the industry
- Type of equipment to be financed
- Age of equipment to be financed
- Lease terms and conditions
- Collateral requirements
- Cash flow and profit loans
- Income statement progression
- Balance sheet projection
- Capital structure
- Liquidity failure
- Nature of business
- Managerial capacity
- Credit policy of lease
- Replacement schedule
- Past banking habit / record

- Statutory laws and regulations
- Existing competitions
- Social status
- General and specific risk elements in the investment
- The appraisal by the parties to the annulment, that best serve their individuals interest.

Information on which decision may be taken is obtained through correspondence, enquiry visits to prospective lessor/lessee locations, interviews, discussions and published secondary data.

Lease financing could be grouped into two viz:

a. Operating lease

Operating leases are short-term cancelable lease arrangements, which give to the lessee the right to use an asset for a specified period without transferring ownership risks. Operating leases cover periods which are shorter than the useful life of the asset and as a result more than one lessee is available during the useful life of the asset.

b. Finance Lease

Finance leases, also known as capital leases are long-term non-cancelable lease contracts, which do not transfer ownership risks and rewards to the lessee. The lease covers a substantial part of the

useful life of the asset and provides a purchase option for the lessee at the end of the lease period. Other variants of finance lease include;

Direct Lease

This arises in a situation where a potential user of an asset approaches a leasing company for an asset(s). The later if satisfied with the arrangement would purchase the asset and subsequently leases it out to the user for a specified period of time at a rental. The lessee is given the option of purchase of the asset at the end of the lease period.

Sale and Lease Back

In a sale and lease back arrangement, an economic unit with cash flow problems cold sells a strategic asset to a financial institution who in turn lease it back to the unit immediately after the sale. The sale and lease back arrangement is very commonly used when the economic units require large capital resources than they presently have.

Leverage Lease

Another type of finance lease is the leverage leasing. This involves three parties, namely; the lessee, the lessor and the lender. In this

type, the long-term creditor usually a bank, pension funds administrator or insurance company provides a substantial part of the equity (say 60%) needed to finance an asset/equipment under a legal mortgage. The remaining portion (40%) is provided by the lessor. The lessee agrees in writing to make periodic payments as rental for the leased asset through the creditor. In this case the creditor who is a finance house (Financing Organisation) will always demand that the account of the project be domiciled with it.

Syndicate Lease

Syndicate lease implies where two or more lessors pool resources together to finance asset with high capital outlay which would have otherwise not been affordable by one single financier. The syndicated lease contracts set out the ratio at which risk and returns are to be shared. In a situation where lessors have joint interest in the same asset, then permission has to be sought from the Federal Ministry of Industries to recognize the Joint Ownership for the purpose of capital allowance.

In Nigeria since the deregulation of the financial market, leasing has been used extensively in the financing of projects.

Unlike a hire purchase arrangement, no initial deposit is required, the insurance and maintenance of the facility during the lease remains the responsibilities of the lessor. The lessee can equally apply for a change in facility at any point of the lease. The fact that the lessor provides 100 percent financing for the acquisition of a facility for project execution makes this source a very strategic option for financing of public sector projects in Nigeria.

In financing a project through lease arrangement, the lessee must ensure that the net present value of the lease is positive and exceeds the present value of the cash flow generated by an equivalent loan arrangement.

2.9 SPECIAL PROJECT FINANCING ARRANGEMENTS

Developments in the financial sector of the economy and financial engineering by finance experts have thrown up complex financing schemes, which ensure increased participation of the private sector in funding of capital projects.

These arrangements include:

i. The build-own-operate-transfer (BOOT) arrangement.
ii. The build-own-operate (BOO)
iii. The build-lease-transfer (BLT) arrangement.

The Build-Own-Operate-Transfer (Boot)

This is a special project-financing scheme which ensures private sector participation in project financing. Under the BOOT arrangement, a private company builds a project, operates it for a sufficient period of time to earn an adequate return and eventually transfers it to the govarnment.

This project finance scheme could be solicited or unsolicited. In the earlier case, the government will identify a priority project and then invite proposal from interested private sector firms. A capable investor is selected after a critical examination of the technical and financial proposal submitted. In the unsolicited case, firms may decide to submit proposals to the government on their own accord. These are appraised on their own merit to ensure conformity with the immediate needs of the society and plans of the government of the day.

Though a recent phenomenon, BOOT has been embraced by the various levels of government in Nigeria towards project financing.

Build-Own-Operate (BOO)

This is similar to the BOOT arrangement discussed earlier. However, in the BOO scheme, the project is not transferred to the government.

The original investor divests himself of the equity either entirely or up to an agreed percentage at the end of a stipulated period. This broader equity structure is made possible through the capital market.

Build-Lease-Transfer (BLT)

This is another special project finance scheme. Under this arrangement, the control of the project is transferred from the project owners to a lessee. This arrangement provides for the shareholders to retain full ownership of the project, while the host government commits itself to positive use of the output or service provided by the project. The lessor, consisting of the shareholders and financiers of the project receives the lease rental guaranteed by the host government.

The Build-Lease and Transfer (BLT) arrangement is usually employed for strategic projects with large capital outlays. Its unique arrangement further ensures the successful execution of the project.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter examines the sources of data and methods used to obtain relevant information for this work. Several steps were taken to identify and collect the relevant data for analysis. The statistical tool employed in the analysis is also stated here.

3.2 SOURCES OF DATA

Both secondary and primary sources were used to gather the necessary information. Secondary sources include Central Bank of Nigeria publications, various Journal publications, magazine and textbooks.

Primary sources used include responses to questionnaires and oral interview. Questionnaires were issued to cost engineers working either with the consulting, contractor and subcontractor firms in each of the selected projects. The researcher followed up with oral interview with the relevant personnel to clear areas of doubt as it affects specific projects. The feedback of these efforts formed the data used in the analysis.

3.3 STUDY POPULATION AND SAMPLE SIZE

This research work is on evaluating finance options for public sector projects. A total of ten (10) public sector projects were selected for study. These projects were drawn from the federal, state and local government jurisdiction.

The judgmental sampling procedure was adopted in the identification and selection of the respondents. This is based on the specialized nature of the subject matter under investigation which demands that the opinion of only those professionals directly involved in the financing planning and management of the project are sought. To this extent a total of twenty (20) of such professionals were identified and questionnaires administered on them. However only fifteen (15) of the total administered questionnaires were actually retrieved. This translated to 75% success.

3.4 METHOD OF DATA ANALYSIS

The statistical tools used in the analysis of collected data in this work include the following:

- Weighted Score Table
- Mean Scores
- Standard Deviation
- Linear Regression model

- Coefficient of correlation
- Coefficient of determination
- F-test
- t-test.

3.4.1 REGRESSION MODEL

The Multiple regression model is used in the analysis. Regression model is a statistical tool which helps to predict one variable from the other variables on the basis of assumed nature of relationship between variables. The variable being predicted is referred to as unknown or dependent variable. Its values are dependent on the values of other variables called independent or explanatory variables. Multiple regression model used here analyzes the relationship between the dependent variable Y (level of success in public sector project financing) and four identified financing options available for the financing of public sector projects (independent variables) X_1, X_2, X_3, X_4.

The relationship can be represented thus

$$Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + e \quad \ldots\ldots\ldots \quad (3.1)$$

where:

X_1 = Capital market funds

X_2 = Money market funds

X_3 = Informal market funds

X_4 = Govt. budgetary allocation

e is the random error term.

b_0 is the point of intercept with the Y axis

b_i is the rate of change in Y for each unit change in X_i, (the regression coefficients).

Equations for the computation of the estimates are:

$$b_i = \frac{n\Sigma x_i Y - (\Sigma x_i)(\Sigma y)}{n\Sigma x_i^2 - (\Sigma x_i)^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (3.2)$$

$$b_0 = \overline{Y} - b_i\overline{x}_i \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (3.3)$$

3.4.3 TEST OF SIGNIFICANCE OF THE EQUATION

When conducting test of significance of a regression equation, we make use of analysis of variance table. This divides the variation into two components as summarized in the table below.

Table 3.1: ANOVA TABLE FOR REGRESSION FUNCTION

Source variance	Sum of square SS	Degree of Freedom (df)	Mean Square MS	F-Ratio
Regression	$SSR = \Sigma Y_2 R_2$	K	$MSR = \frac{SSR}{K}$	$F = \frac{MSR}{MSE}$
Error	$SSE = SST-SSR = \Sigma Y^2(1 - R^2)$	n-k-1	$MSE = \frac{SSE}{n-k-1}$	
Total	$SST = \Sigma Y^2$	n-1		

Where $R^2 = \frac{b_l \Sigma x_l Y + b_2 \Sigma x_2 Y}{\Sigma Y^2}$ ..... (3.4)

SSR = Sum of squares of Regression

SSE = Sum of squares of Error

SST = Sum of squares of Total variance Y

k = Number of Independent variables

n = Number of observation

The above could enable us to know whether there is a significant relationship between the dependent variable Y and independent variables.

3.4.4 TEST OF HYPOTHESES

H_O: $B_l = B_2 = O$

H_I: $B_l \neq B_2$

3.4.5 TEST STATISTICS

$$F_t = \frac{MSR}{MSE}$$

Which under the null hypothesis, H_o has F distribution with K degree of freedom.

3.4.6 ACCEPTANCE

The acceptance criteria involve that H_o will be accepted at α significant level if F_t (calculated) < $F_t - \alpha$ (k, n - k – 1)

Conclusion:

We conclude that the relationship is not significant.

3.4.7 REJECTION

Criteria for rejection involve the following:

H_o is rejected if

F_t (calculated) > $F_t - \alpha$ (k, n - k – 1)

Conclusion:

We conclude that the relationship is significant.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 INTRODUCTION

This chapter is concerned with the presentation and analysis of the data collected from ten public sector projects used in the study. Questionnaires were administered to each of the ten projects which cut across the federal, state and local government tiers of government. Feedback from the questionnaires formed the data analyzed in this chapter.

The analytical tool employed here includes presentation tables and the regression techniques.

4.1 DATA PRESENTATION

Four finance options for public sector projects were identified as follows:

Capital market funds (bonds and debentures)

Money market Funds (bank loans and overdrafts)

Informal market funds (supplier credits, equipment leasing etc).

Public Sector Funds (Government budgetary provisions)

The financing requirement for the sampled projects are as shown on Table 4.1:

Table 4.1: Summary of Statistics on Sampled Projects

s/n	Name	Sponsors	Value (₦)
1	Owerri–Obowo–Umuahia Road	Federal Govt.	1,006,467,000.00
2	Owerri – Orlu Road	Federal Govt.	400,000,000.00
3	Obolo – Afor Oru Road	State Govt.	601,000,000.00
4	Orlu International Market	State Govt.	1,600,000,000.00
5	Okigwe Cattle Market	State Govt.	45,000,000.00
6	Mbaitoli Industrial Market	Local Govt.	500,000,000.00
7	Oguta Indoor Hatchery	Local Govt.	70,000.000.00
8	Ndikpa Alaenyiogwa Water Scheme	Local Govt.	10,000,000.00
9	Standard Shoe Company	State Govt.	700,000,000.00
10	Avutu Poultry	State Govt.	660,000,000.00

Source: Compiled from Project Accounts

The information in table 4.1 above is presented in a simplified tabular form in table 4.2.

Table 4.2: Summary of Weighted Scores of Importance of Financing Options to Public Sector Projects

Respondent	Y	X1	X2	X3	X4
1	39	25	14	18	23
2	38	19	17	22	24
3	40	25	17	9	25
4	38	21	12	18	24

5	41	25	16	15	22
6	38	23	16	10	23
7	38	23	13	21	23
8	38	18	23	19	16
9	40	19	17	20	18
10	27	22	5	5	21
11	39	19	16	19	24
12	36	25	13	5	25
13	32	14	9	20	19
14	40	25	13	16	20
15	43	25	19	20	24

Source: Computed from Field Data.

4.2 RESULTS OF DATA ANALYSIS

4.2.1 RESULTS OF PRELIMINARY ANALYSIS

Descriptive Statistics

	Mean	Std. Deviation	N
Y	37.80	3.858	15
X1	21.87	3.420	15
X2	14.67	4.237	15
X3	15.80	5.747	15
X4	22.07	2.712	15

Source: Result of Computer Analysis with SPSS for Windows

The descriptive statistics shows that the variable with the highest mean score is the level of public sector project financing (Y) while the variable with the highest standard deviation of 5.747 is informal

market fund (X_3). On the other hand, the variable with the least mean score of 14.67 is money market funds (X_2), while the one with the least standard deviation of 2.712 is government budgetary allocations (X_4).

4.2.2 TEST OF MULTICOLINEARITY

Correlations

		Y	X1	X2	X3	X4
Pearson Correlation	Y	1.000	.388	.769	.433	.206
	X1	.388	1.0	.041	-.456	.533
	X2	.769	.041	1.00	.384	-.1
	X3	.433	-.5	.384	1.00	-.3
	X4	.206	.533	-.110	-.265	1.0
Sig. (1-tailed)	Y	.	.077	.000	.053	.230
	X1	.077	.	.442	.044	.020
	X2	.000	.442	.	.079	.348
	X3	.053	.044	.079	.	.170
	X4	.230	.020	.348	.170	.

Source: Result of Computer Analysis with SPSS for Windows

The results show that the highest association (0.533) exists between capital market funds (X_1) and governmental budgetary allocations (X_4). On the other hand the least association (0.041) exists between capital market funds (X_1) and money market funds (X_2). The above imply that no problem of multi-colinearity exist between and among the independent variables, hence they can be used in further analysis as independent variables.

4.2.3 Results of Analysis of Contribution of Financing Options to Public Project Financing in Imo State

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.936[a]	.877	.828	1.602	2.248

a. Predictors: (Constant), X4, X2, X3, X1

b. Dependent Variable: Y

Source: Result of Computer Analysis with SPSS for Windows

The above summary result shows that the four composite options available for the financing of public sector projects indicated 93.6% relationship with the level of perceived success in financing the ten sampled projects. Also variation in the four options explains 87.7% of the perceived variation in the level of funds being made available to the sampled projects. The Durbin-Watson statistics of 2.248 shows that the error margin in the use of the data as it relates to the financing options is not significant at order 2.

4.2.4 PREDICTION MODEL FOR PUBLIC SECTOR PROJECT FINANCING

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.441	4.640		1.819	.099
	X1	.585	.168	.518	3.473	.006
	X2	.525	.115	.577	4.569	.001
	X3	.322	.094	.479	3.424	.007
	X4	.172	.189	.121	.908	.385

a. Dependent Variable: Y

Source: Result of Computer Analysis with SPSS for Windows

The predicted coefficients show that the level of success in financing of public projects can be predicted using equation 4.1.

$$Y = 8.441 + 0.59X_1 + 0.53X_2 + 0.32X_3 + 0.17X_4 \quad \ldots\ldots \quad 4.1$$

where:

X_1 = Capital market funds

X_2 = Money market funds

X_3 = Informal market funds

X_4 = Govt. budgetary allocation

4.3 TESTING OF SIGNIFICANCE OF IMPACT MODEL

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	182.732	4	45.683	17.798	.000[a]
	Residual	25.668	10	2.567		
	Total	208.400	14			

a. Predictors: (Constant), X4, X2, X3, X1

b. Dependent Variable: Y

Source: Result of Computer Analysis with SPSS for Windows

The significance of equation 4.1 is tested using the F value as calculated. Since the F value of 17.798 is significant at 0.0001, which is far less than our chosen level of significance of 0.05, we conclude that equation 4.1 is a significant predictor of level of success in public sector project financing using four composite financing options of capital market funds, money market funds, informal market funds and government funds.

4.4 TESTING OF HYPOTHESES

All the stated hypotheses are tested using equation 4.1.

4.4.1 HYPOTHESIS ONE

H_{01}: There is no significant relationship between capital market funds and success in public project financing.

The t cal. Value of 3.473 corresponding for independent variable X_1 in equation 4.1 is significant at 0.006 level, which is far less than our chosen level of significance of 0.05. We therefore reject the hypothesis with a conclusion that increased use of capital market funds has the potential to significantly improve the success level of public sector project financing in Imo State.

4.4.2 HYPOTHESIS TWO

H_{O2}: There is no significant relationship between money market funds and success in public project financing.

The t cal. Value of 4.569 corresponding for independent variable X_2 in equation 4.1 is significant at 0.001 level, which is far less than our chosen level of significance of 0.05. We therefore reject the hypothesis with a conclusion that increased use of money market

funds has the potential to significantly improve the success level of public sector project financing in Imo State.

4.4.3 HYPOTHESIS THREE

H_{03}: There is no significant relationship between informal market funds and success in public project financing.

The t cal. Value of 3.424 corresponding for independent variable X_3 in equation 4.1 is significant at 0.007 level, which is far less than our chosen level of significance of 0.05. We therefore reject the hypothesis with a conclusion that increased use of informal market funds has the potential to significantly improve the success level of public sector project financing in Imo State.

4.4.4 HYPOTHESIS FOUR

H_{O4}: There is no significant relationship between government budgetary funds and success in public project financing.

The t cal. Value of 0.908 corresponding for independent variable X_4 in equation 4.1 is significant at 0.385 level, which is far higher than our chosen level of significance of 0.05. We therefore accept the hypothesis with a conclusion that increased use of government

budgetary allocations does not have the potential to significantly improve the success level of public sector project financing in Imo State.

4.5 DISCUSSION OF FINDINGS

Ten public sector projects were studied in this work. Finance requirements in each were established so as to enable us evaluate finance options that are critical to successful financing of the projects based on expert opinions.

Four composite finance options were identified for the public projects viz:

Capital market funds

Money market funds

Informal market funds

Govt. budgetary allocation.

Our observation based on the project accounts and the responses of our respondents shows that all the ten (10) sampled projects have one form of financing problem or the other ranging from under costing, inflation, non payment of certificates as at when due, inadequate bank support, debt owed contractors and suppliers, delay

in supply of materials due to non payment, high cost of bank over drafts etc.

Our result which identified government budgetary allocation to public projects as a non critical option for such projects as opposed to capital market funds (development bonds and debentures); money market funds (bank loans, bank overdraft and letters of credit) and informal market funds (contractor financing, supplier credits, hire purchase and leasing) as the most critical options for successful financing of public sector projects confirms the fact that governmental institutions are highly inefficient in financial management. It equally reinforces the need for private sector led economic development through infrastructure development. To this extent the government is to provide the enabling environment that will encourage the private sector to invest funds in public sector projects.

However a number of strategies that will ensure that the government moderates the possible excesses of the private sector in this regard are available such as:

Build-Own-Operate-Transfer (BOOT)

Build-Own-Operate (BOO)

Build-Lease-Transfer (BLT).

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This work started by recognizing the developmental push given by the public sector towards the growth and development of the country especially at the immediate post colonial period. The oil boom of 1970s made this public sector intervention very successful, as fund was available for development. However, the dwindling foreign exchange earnings from Crude oil export in the 1980s made it difficult for the government to continue financing public sector projects from budgetary allocations. This led to a significant gap between available public revenue and planned capital expenditure to provide basic amenities to the people through development projects.

Capital project is seen as that outlay of inter-related durable assets which provides facilities capable of completing a process that will aid further production. The orthodox methods of project finance and their inefficiencies were enumerated to include: project financing through government generated revenue which today could hardly cover recurrent expenses of states and local government areas.

Financing capital projects through commercial bank loan was seen as mis-match of term fund. This chapter also exposed the astronomical increase in the cost of projects in Nigeria and attributed this to such factors as; low level of industrialization, recession in global economy, depreciation of the Naira, fraud in the polity and hyper inflation. Given the above inadequacies, today's public sector resorted to other sources of financing capital projects. This alternative source of finance is normally provided by a project sponsor who is usually interested in the viability of the project as specified in the financial projections, technical and commercial feasibility.

The alternative sources of project finance such as; long-term loan, bonds and lease financing were discussed. Furthermore other special project financing arrangements such as; the build-own-operate-transfer (BOOT), the build-own-operate (BOO), and the build-lease-transfer (BLT) arrangements were explored.

5.1 SUMMARY OF FINDINGS

The research findings are:

- The success level of public sector project financing can be significantly improved through the use of various options of finance available as shown by the test of statistical significance

of equation 4.1 (see P. 58), thereby implying that the problem of inadequate availability of funds to public projects can be significantly reduced through increased use of a combination of capital market, money market and funds from informal sources.

- Increased use of capital market funds (bonds and debentures) has the potential of significantly improving availability of funds to public sector projects at cost effective rate and minimal risk exposures. The result of the test of hypothesis one which rejected the null version supports this.
- Increased use of money market funds (term loans, overdrafts and letters of credit) has the potential to significantly improve the success level of public sector project financing. The result of test of hypothesis two attest to this.
- Increased use of informal market funds (contractor financing, supplier credits, leases) has the potential to significantly improve the success level of public sector project financing. The result of hypothesis three test attest to this.
- Government budgetary allocations do not have the potential to significantly improve the success level of public sector project financing. As there may be lack of synchronization between the

fund flow of the government and the planned fund flow of projects. The result of the test of hypothesis four confirms this.

5.2 CONCLUSION

The importance and benefits of capital projects in a developing economy like Nigeria need not be over emphasized. Greater capital project investment is required to ginger development and reduce unemployment. Private funds for investment should be channeled into public projects using the alternative and special project financing arrangements discussed in this work. Idle funds in private and banking institutions should be channeled towards viable capital project investment.

5.2 RECOMMENDATION

The researcher recommends the following based on the results of our analysis:

- The three tiers of government should provide enabling environment for increased private sector participation in public sector project financing, this can be achieve through consistent formulation, monitoring and implementation of policies aimed at reducing the risk level of project financing.

- Project finance and management units should be established in the three tiers of government with a singular objective of interfacing with the private sector in identifying and structuring of the financing plan for viable public projects with the capacity to reduce unemployment in the polity.
- Increased use should be made of the capital market in order to meet the Long-term capital needs of public projects through such facilities as development bonds and debentures.
- Increased use should be made of the money market in order to meet the short and medium term capital needs of public projects through such facilities as bank loans and overdrafts.
- Efforts should be made by the Government to keep to terms of trade credits to ensure the confidence of the informal sector operators such as contractors, suppliers and vendors who grant credits to public projects.
- Special public-private sector partnership in project finance scheme such as BOOT should be encouraged to ensure easier funding of viable public projects that will enhance the capacity of the economy to face the ever increasing challenges of economic growth and development .

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APPENDIX 1: Questionnaire

Dear Sir/ Madam,

I am a Post Graduate student of the Federal University of Technology, Owerri, Nigeria. I am carrying out a research aimed at evaluating financing options for public projects.

Answers to the attached questionnaire will assist me in this regard.

Thanks.

J. U. Ogomaka

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI.

DEPARTMENT OF FINANCIAL MANAGEMENT TECHNOLOGY

QUESTIONNAIRE:

1. What is the nature of this project?

2. What is the value of this project?

3. What is the construction period of the project?

4. What sources of finance are available to you for this project?

5. Is the source of your financial resources foreign or domestic/local?

6. If foreign, which of these is it?

- Official Development Assistance (ODA) [ ]
- Borrowing in international capital market via sale of foreign bonds [ ]
- International bonds underwritten and solid in more than one market simultaneously. [ ]
- Euro-currency or Euro-dollar borrowing [ ]

7. If local/domestic, indicate source of industrial credit.

Banks [ ]

Non- banking financing institution (Insurance, Pension Funds, etc.) [ ]

Capital markets [ ]

Leasing of equipment [ ]

8. Is the loan tied to importation and payment for parts, raw materials or financial advisers?

9. Does your firm/company depend more heavily on savings out of profit? Yes [ ] No [ ]

10. Does your firm/organization depend more heavily on loan capital? Yes [ ] No [ ]

11. Did you use your organization or project assets as collateral for the loan financing? - - - - -
    (b) Why? - - - - -

12. What informed your choice of the project finance strategy?

13. How relevant is the project construction period in your choice of the finance strategy?

14. How much is the interest rate on the capital source?

15. How important is the interest rate on capital in your choice of finance strategy?

16. How many sources of funds are in use in this project?

17. Why did you (not) consider more sources of project finance?

18. What will be the effect of cost exceeding the estimated on the project finance source?

19. What are the cost of default in payment?

20. What is your next best alternative source of finance, outside this strategy?

21. Why would you consider this new alternative strategy?

NB: Please where the space provided is insufficient, additional leaflets should be added.