

Research Article

AN APPRAISAL OF INTERNAL RATE OF RETURN ON CASH FLOWS OF PRIVATE CAPITAL INVESTMENT IN NIGERIA

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ABSTRACT

This study was conducted to appraise internal rate of return on cash flows of private capital investment in Nigeria. To achieve this objective, research questions were raised, hypotheses were formulated and tested with the simple percentage, Pearson correlation test and multiple regression test; and relevant literatures were reviewed. The sample size for this study was 399 staff of Nigeria Agip Oil Company (NAOC) ranging from management staff, audit, finance, Quantity Surveying and project management, budgeting and control departments. Simple random sampling technique was used to select members of the sample frame. The questionnaire, which was administered to the respondents, was the major data collection instrument employed in this study. From the results of the analysis, the following findings were made: there is a significant relationship between IRR and Cash flow of Private capital investment in Nigeria. It clearly reveals that IRR increases private equity returns but does not reflect the annual yield on an investment of the underlying cash flows. IRR calculations can mislead investors who are trying to compare the returns of different fund managers. Furthermore the results revealed that internal rate of return (IRR) aid private capital investment in Nigeria to evaluate the desirability of investments or projects by recognizing the time value of money by using cash flows. The following recommendations were made: management of project organizations should ensure the use of discounted capital investment techniques, and allow financial managers free hand in investment/project evaluation and selection. Identified strategies for improving an effective use of IRR for investment analysis should be adopted by Project Organization in order to achieve the desired results of maximum returns on investment.

Keywords: Internal Rate of Return (IRR), Cash flow, Capital Investment.

INTRODUCTION

Background to the Study

Project evaluation takes an important role in capital expenditure decision. Normally an organisation continuously invest its resources in new plants or machinery or any other capital assets for expansion of its operations or replace the capital assets for its continuous operation and improving its efficiency (Maheswari 2014). Hence the main objective of the project evaluation is to maximize the organisation's profits and optimizing the return on investment. In order to achieve this objective, the revenues can be increased or costs can be reduced. Thus, the factors which are affecting capital investment decisions should be taken into account. Capital investment appraisal accepts the assumption that the objective of a firm's manager is to maximize firm value, that is, the wealth of its shareholders (Afonso & Cunha, 2009). Therefore, the financial manager must be concerned with the capital investment appraisal and cost of capital estimation decisions. In this process, it becomes crucial for management to use accurate methods that will result in the maximization of shareholder wealth (Ryan & Ryan, 2012). In fact, managers must undertake capital investment projects only if they add to the value of the firm, which implies that managers should identify and undertake all projects that add value to the firm so as to maximize shareholder wealth (Gilbert, 2015). According to Remer & Nieto (2015) profitable capital investment results in the growth and prosperity of an economy. If profitability is low, investment will decline. To correctly predict the profitability of the proposed investment, the investor needs analytical tools. Several tools that can improve the capital investment decision making process of companies have over the last four decades been proposed by the

academic community (Farragher et al., 2011), to help managers and investors to make wise economic decisions. Few of these techniques are summarized below. Afonso & Cunha (2009) identified two broad categories of capital budgeting techniques to include the discounted cash flows method and the non discounted cash flows method. While the discounted cash flows method considers the time value of money, the non discounted cash flows method does not. The internal rate of return (IRR) is that discount rate that equates the present value of cash outflows with the expected value of cash inflows. It is widely used because it employs a percentage rate of return as the decision variable (Steiner, 1996). The IRR is determined by calculating the discount rate for which the NPV is zero. The basis for a decision on the acceptance or rejection of a proposed investment is by comparing the IRR with the opportunity cost of capital (Femi & Oluwale, 2008). Thus, only projects whose IRR exceeds the opportunity cost of capital should be accepted and undertaken. According to Akalu (2001), the IRR has the advantage of being simple to interpret (as it shows percentage benefits from the given investment) and it is easier to apply than other discounted cash flow methods given that the discount rate need not be computed in the application. On the other hand, Brealey & Myers (1998) identified the existence of multiple IRR for non-conventional cash flows, the case of mutually exclusive projects where NPV and IRR methods can lead to different conclusions about what project should be accepted as well as the underlying unrealistic assumption that the cash flows that are being generated by the project during its economic life are reinvested at the IRR (Afonso & Cunha, 2009).

Statement of the Problem

Private capital investment in every economy serves as an engine for economic development, yet the sector in Nigeria has continued to suffer abuse and wrong application. This trend can be traced to

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miscalculated and wrong investment evaluation which has discouraged proper return on investment of capital projects undertaken in the past by private firms in Nigeria. The situation is further complicated by poor exposure of financial analysts, managers and project evaluators to capital budgeting systems especially as it relates to the Nigerian environment. Also, the problems of predicting events with certainty in an uncertain economic environment; the complex nature of capital budgeting application and method of computation; the sophistication of the capital budgeting evaluation techniques and risk measurement devices; and inadequate infrastructure and manpower, affect private capital investment. These problems also militate against efficient utilization of IRR for investment analysis in most private organizations in Nigeria. However all these necessitate the relevance of this study and its immediate solution through literature and empirical methods.

Objective of the Study

The general objective of the study is the appraisal of internal rate of return on cash flows of private capital investment in Nigeria. However, the specific objectives are to:

1. Ascertain the impact of IRR on the cash flows of private capital investment in Nigeria
2. The role of IRR in determining the time value of money for private capital investment in Nigeria.
3. Find out the constraints to effective use of IRR for investment analysis and decision of private capital investment in Nigeria.
4. Determine the strategies for improving on the effective use of IRR for investment analysis.

Significance of the Study

The findings of this study would assist project managers and investors alike, in taking realistic investment decisions. Analysis of the investment evaluation criteria, especially with regards to environmental risks, would enable investors and managers minimize the errors of investing wrongly on capital assets. It would also sensitize project organizations that wrong procurement of capital assets might lead to capital underutilization which could plunder a firm into adverse business consequences. Specifically, both the management, and the financial managers would be made to understand that investment decisions are more realistic when taken based on strategic management information and capital investment evaluation techniques. The findings would equally assist management in choosing and allocating resources to capital assets that would boost the profit base of the company. Efficient use of outsourcing in execution of tasks and functions which cannot be effectively handled in-house would reduce cost and boost project organization's earning. The findings of this study would significantly be beneficial to researchers, teachers and students of Quantity Surveying, Accountancy, Financial Management and Project Management in tertiary institutions in Nigeria. It would aid researchers generate base information for their research work, as well as aid further investigation on ways of improving on capital investment to obviate the mass winding-up of companies in Nigeria. Curriculum planners of Quantity Surveying and Project Management would use the facts of the findings in curriculum planning and review. Students would be placed in the right frame of mind to actualize their dreams of investing wisely, also being successfully employed as financial analysts or in the least being self employed after graduation. Finally, the knowledge that would be embodied in this study will aid policymakers and public authorities responsible for the formulation of investment policies and regulatory measures, make formidable policies and rules that would protect and promote project

organizations to foster the economic development it is meant to achieve.

Scope of Study

The research was conducted in Nigerian Agip Oil Company. The study concentrated and stayed within the purview of appraisal of internal rate of return on cash flows of private capital investment in Nigeria. This research with its case study is believed to have coverage of the south-southern part of oil and gas firms in Nigeria.

LITERATURE REVIEW

Capital Investment

Capital investment which is the main concentrate of this work is defined according to ICAN (2016) as, the firm's decision to invest its current funds most efficiently in long term activities in anticipation of an expected flow of the future benefits over a series of years. It is the process of planning expenditure on assets whose returns are expected to extend beyond one year. Pandy (2006) pointed out that investment decisions of the firm on capital assets are commonly referred to as capital investment, capital expenditure management, capital expenditure decisions, capital or long term investment decision, or management of fixed assets. It is the planning, evaluation, and selection of investment in fixed asset proposals, which involves a huge current outlay of cash resources in return for an anticipated flow of future benefits. Investment in fixed assets have a long gestation period, from conceptual and procurement stage, to when it starts to yield some stream of cash flows. Such investment should be capable of yielding a reasonable rate of return so that the business could meet its financial obligations to providers of capital (financiers) and pay dividend to shareholders, or in a nutshell, maximize the wealth base of the company. According to Hilton (2004) capital investment is, "the decision making process by which firms evaluate the purchase of major fixed assets, including buildings, machinery and equipment. It also covers decisions to acquire other firms common stock or groups of assets that can be used to conduct an ongoing business". Capital investment as described here involves the formal planning process to invest the company's capital in the procurement of fixed assets, or otherwise in the buying-up of an existing business (company) or its fixed assets, purposefully to enhance the viability of the investing company through enhanced business activities. Warren and Fess (2016) defined capital investment as, 'the process by which management plans, evaluates and control capital expenditure decisions'. They stated further that it maximizes the profit base of a company when handled proficiently and may lead to liquidation when neglected. The implication is that, the management and control of capital budgeting to a very large extent determines the company's viability and survival or otherwise, its failure. According to Philippalys (2013), capital investment is concerned with the allocation of firm's scarce financial resources among the available market opportunities. The consideration of investment opportunities involves comparison of expected future streams of earnings from a project with immediate and subsequent streams of expenditure on it. This assertion presupposes that capital investment consists of the planning and development of available capital for the purposes of maximizing the long-term profitability of the company. In other words, the system of capital investment is employed to evaluate expenditure decisions which involve current outlays, but likely to produce benefits over a period of time longer than one year. The benefits referred to, may be either in the form of increased revenue or reduction in costs. In essence, capital expenditure decision includes in addition, disposition, modification and replacement of fixed assets.

The basic features of capital budgeting according to Pandy (2006) include, potentially large anticipated benefits; a relatively high degree of risk; and a relatively long time period between initial outlay and anticipated returns. These features Pandy further stated are of paramount importance in financial decision-making and as such, care should be taken in making such decisions on account that,

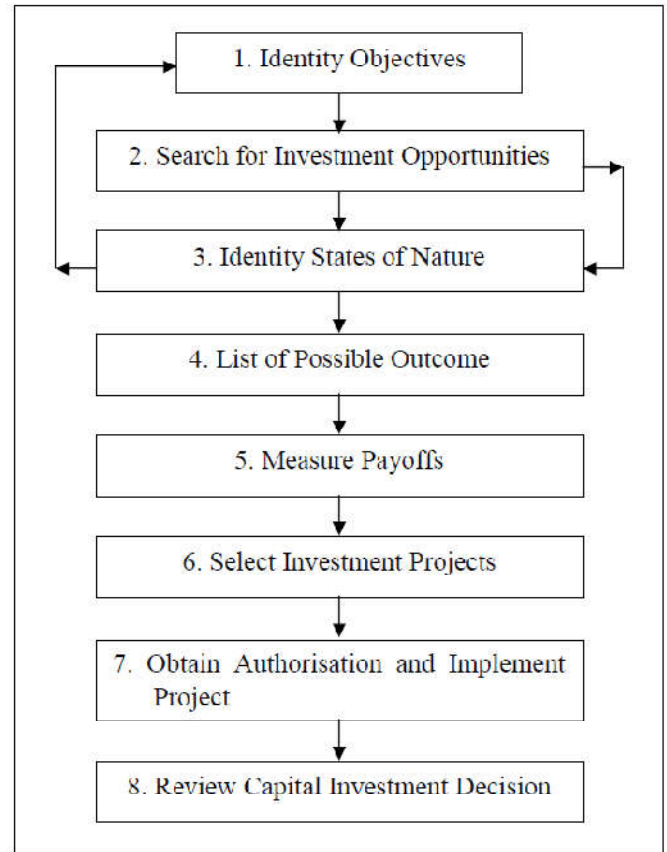
- Such decisions affect the profitability of the firm and also have much bearing on the competitive position of the enterprise;
- The future destiny of the company lies on capital budgeting decisions;
- It has its effect over a long time span and inevitably affects the company's future cost structure;
- Capital investment decisions once made are not easily reversible without much financial loss to the firm;
- Capital investment involves huge cost and the majority of the firms have scarce capital resources;
- Over or under capacity should be in constant check as both results to waste; and
- Investment decision though taken by individual concerns is one of national importance because it determines employment, economic activities and economic growth.

The point worthy of note in these features and care as is elaborated is that a company which carefully plan the allocation of its resources to capital assets, evaluates available alternatives, ranks properly the alternatives; and then decides on which best alternative to undertake using the available capital investment techniques, will always stand competitive through increased sales, profit and dividend, and ultimately increase the value of its share price. Capital investment refers to the total processes of generating, evaluating, selecting and following-up on capital expenditure alternatives. The company allocates and budgets financial resources to new investment proposal. It is unlike investing in stocks and bonds, where one is required to approach the securities market and based on established forecast, invest. A company has to be proactive while investing in capital assets since it has to take the very first step of planning for such asset acquisition (Brigham and Weston, 2012). The authors further stated that, because the company has to take the initial action (has to be proactive) in allocating or budgeting financial resources to new investment proposal, it might be confronted with three types of capital decisions. They include;

1. Accept or Reject Decision: The fundamental decision in capital investment is to accept or reject a project proposal. This decision is often based on, accepting proposals which yield a rate of return which is greater than a certain required rate of return or cost of capital. By this application, all independent projects are accepted. Independent projects are projects that do not compete with one another in such a way that acceptance of one precludes the possibility of the acceptance of another. This entails that all the independent projects that satisfy the minimum investment criteria are implemented.

2. Mutually Exclusive Project Decision: Mutually exclusive projects are that which compete with other projects in such a way that the acceptance of one will exclude the acceptance of the other projects. Alternative projects are mutually exclusive when each project is a perfect substitute of the other. It may be noted that the mutually exclusive projects' decision are not independent of accept/reject decision. Mutually exclusive project decisions acquire significance when more than one proposal is acceptable under the accept/reject decision. As such, it then implies that some techniques (capital investment techniques) have to be used to determine the best one. The acceptance of the best alternative automatically eliminates the other alternatives.

3. Capital Rationing Decision: Capital rationing refers to a situation where the firm is constrained for external, or self imposed reasons, to obtain necessary funds to invest in all investment projects with positive Net Present Value(NPV). In a situation where a company has unlimited funds, capital budgeting becomes a very simple process since independent investment proposals yielding a return greater than some predetermined levels are accepted. However, this is not the situation prevailing in most of the business firms of the real world.



A decision making process for capital investment decision

Adapted: Dam C.V. (2005); Trends in Financial Decision Making, Planning and Capital Investment Decision.

The Planning Steps of Capital Investment:

CIMA4 identified the following steps in the process of developing a new programme of capital investment.

1. Identification of an investment opportunity.
2. Consideration of the alternatives to the project being evaluated.
3. Acquiring relevant information
4. Detailed planning.
5. Taking the investment decision:

The identification of an investment opportunity is the most difficult part of the capital investment process. Indeed for many business, and particularly small ones, it is the only stage. Projects are undertaken without any form of sophisticated investment appraisal. The different investment alternatives ought to be identified and compared. Because, normally, there are two or more investment projects are available. Acquiring the relevant data to form the basis for an informed decision is one of the most important aspects in practice. Large capital investments that turnout to be unprofitable can usually be abandoned only at a substantial loss, and therefore the time and efforts spent in market research and acquiring data about relevant

costs and benefits is rarely wasted. This activity helps to focus manager's mind on the reality of the projections as they are once forecasting and so weed out poor projects at an early stage before they are subjected to intensive financial scrutiny.

Concept of Internal Rate of Return (IRR)

The Internal Rate of Return (IRR) is the discount rate that makes the net present value (NPV) of a project zero. In other words, it is the expected compound annual rate of return that will be earned on a project or investment. When calculating IRR, expected cash flows for a project or investment are given and the NPV equals zero. Put another way, the initial cash investment for the beginning period will be equal to the present value of the future cash flows of that investment. (Cost paid = present value of future cash flows, and hence, the net present value = 0). Once the internal rate of return is determined, it is typically compared to a company's hurdle rate or cost of capital. If the IRR is greater than or equal to the cost of capital, the company would accept the project as a good investment. (That is, of course, assuming this is the sole basis for the decision. In reality there are many other quantitative and qualitative factors that are considered in an investment decision.) If the IRR is lower than the hurdle rate, then it would be rejected.

The IRR formula is as follows:

$$0 = CF_0 + \frac{CF_1}{(1+IRR)} + \frac{CF_2}{(1+IRR)^2} + \frac{CF_3}{(1+IRR)^3} + \dots + \frac{CF_n}{(1+IRR)^n}$$

Or

$$0 = NPV = \sum_{n=0}^N \frac{CF_n}{(1+IRR)^n}$$

Where:
 CF_0 = Initial Investment / Outlay
 $CF_1, CF_2, CF_3, \dots, CF_n$ = Cash flows
 n = Each Period
 N = Holding Period
 NPV = Net Present Value
 IRR = Internal Rate of Return

Calculating the internal rate of return can be done in three ways:

1. Using the IRR or XIRR function in Excel or other spreadsheet programs (see example below)
2. Using a financial calculator
3. Using an iterative process where the analyst tries different discount rates until the NPV equals to zero

Concept of Cash Flow Statement

Every big and small firms performs cash transactions. Cash transaction refers to cash inflows and outflows. Cash inflows and outflows help to review success, failure of a firm and its ability to meet maturing debts. Such review and evaluation are possible if the statement of cash flow is prepared. Accounting standard Board (ASB) at international level in 1996 suggested every firm to publish the statement of cash flow along with the final accounts. Since then the statement of cash flow is getting more recognition than funds flow statement. The statement that shows cash inflows and outflows of a firm for a specified period is called the cash flow statement. Cash flow statement demonstrates where the cash has come during the period and what the firm has done with the available cash. Therefore, cash flow statement shows a picture of cash movement occurred in and out from a firm during a year in a summarized form. Cash flow statement gives a picture of sources and applications of cash of a firm for a year.

Objectives of Cash Flow Statement

1. To provide information about the cash inflows and cash outflows from operating, financing and investing activities of the firm.

2. To show the impact of the operating, financing and investing activities on cash resources.
3. To tell how much cash came in during the period, how much cash went out and what the net cash flow was during the period.
4. To explain the causes for changes in cash balance.
5. To identify the financial needs and help in forecasting future cash flows.

Related Empirical Studies

Few empirical studies have been conducted in the area of the present study. Nnoli (2004) conducted a study on appraising capital investment decisions for small-scale industries in Nigeria, and found out that: 1) there is a positive relationship between capital investment project appraisal and the viability of small scale industries; 2) the viability of projects are based on the reports of the feasibility studies that are conducted; 3) investment appraisal techniques form the bedrock of the feasibility studies that are conducted; 4) most of the small scale industries conduct feasibility studies before they embark on capital investment projects; 5) inflation and taxation do not impact or affect the investment appraisal for capital investment decisions. The present study is related to Nnoli's study in that both focus the assessment of capital investment decisions of industries. However, the previous study was on small scale industries across some selected south Eastern states of Nigeria while the present study centred on project organization in Rivers state. Also, while the previous study was examining the extent small scale industries appraise their capital investment decisions, the present study focused on the appraisal of Internal Rate of Return on cash flow of private capital investment. Oyedele (2007) who also adopted a survey design conducted a study on budgeting and budgetary control: tool for economic development of small and medium scale industries in Rivers state of Nigeria. It was found that budgeting and budgetary control procedures in small and medium scale industries have not quite attained a sufficient level to enhance total accomplishment of the industry's objectives; and that small and medium scale industry's success was not as a result of corrective actions taken when budget variance exist, rather as a result of proper planning and control of budgeting and budgetary practices. The present study is related to Oyedele's study in that both discusses investment analysis and decision practices in Nigerian companies. Conversely, the two studies differ in that while the present study focused an aspect of project evaluation (IRR) as a tool for optimum investment analysis, Oyedele's study was on budget (both operating and financial) as a tool for economic development of small and medium scale industries. Enweluzor (2006) studied assessment of capital budgeting techniques and model and its effect on organisations profitability: an accountant approach, a case study of WINCO foam manufacturing firm, Anambra state. 40 accounting officers were used for the study. The major purpose of the study was to observe and assess capital budgeting techniques and models, and its effect on company's profitability. It was found that: 1) company's profitability is influenced by the capital budgeting model adopted; 2) capital revenue and profit are related as while capital revenue is entirely charged to profit, capital expenditures are not; 3) Nigerian companies do not assign capital budgeting full time to a staff but to a committee when faced with such decision; 4) NPV technique is the most widely used amongst Nigerian companies. The present study is highly related to this study in that both focused the use of capital investment. Consequently, Enweluzor's study assessed the influence of capital budgeting on manufacturing company's profitability. Specifically, the major areas of difference include: Enweluzor's study was on manufacturing company, WINCO; 2) the present study assessed IRR as an investment analytical tool, Enweluzor's study concentrated

on the effects of capital budgeting techniques in application on company's profitability; 3) the present study will use frequency counts, percentages, multiple regression and correlations in its analysis, Enweluzor's study used simple percentage.

RESEARCH METHODOLOGY

Research Design

In view of the scope, the strategy adopted involves the use of descriptive and cross-sectional survey. The questionnaire administered consists of multiple-choice question. This is in agreement with Baridam (1995) observation that multiple — choice question are quick and easy for the interview to handle. It is easier to analyze statistically than using the opened question.

Population of the Study

The population of the research, the entire group of people that, the researcher wished to investigate (Sekaran 2003). It comprised a cross section of the workers of Nigeria Agip Oil Company (NAOC) limited, with a working force of 4568 people (94 managers, 638 supervisors and 3836 workmen). The study found out that the institution had four departments relating to the study, thus; the Project Management/Quantity Surveying, Audit, Accounts/Finance and Budget and Control. Due to the cumbersome nature and the complex burden of reaching out to all the staff, a considerable number is used and which serve as the sample size.

Sampling Size

Sampling design and sample size are highly relevant to establish the representativeness of the sample for generalizability (Berg, 2007). Sampling is a selected group of element drawn through a definite technique from a particular population. The sample size was determined by Yaro Yamani formula as follows:

$$\left(n = \frac{N}{1 + Ne^2} \right)$$

Where, n = sample size,

N the total population

e² = margin of error (5%)

A sample size of 399 respondents determined at 5% level of significance for sample error, using Yamane's formula.

Sampling Technique

The non-probability design was employed in this study and to be specific stratified random sample technique was employed. This sample study are made public which give every respondent equal opportunity to express opinion and ensures reliability of information obtained and randomization sampling technique which was used in obtaining information from sample, which helps us to eliminate all elements of bias for a particular section of people.

Sources of Data Collection

As should be evident from the subject of this research the needed data were obtain from primary and secondary sources.

The data for this study were obtained through two main sources namely:

- primary sources
- secondary sources

Primary Sources

The primary data were collected through questionnaires and oral interview in the area of study. Different staffs in the relevant departments were served the questionnaires. Here the questionnaires were distributed in accordance with the sample size.

Secondary Sources

Secondary data was obtained from relevant websites on the topics, related works of authors and researchers who had earlier written on the related topics. Other sources includes: journals, articles, texts books etc. the information gotten from these sources were used in framing the working hypothesis and designing of the questionnaire.

Instrument of Data Collection and Measurement

The instrument used in data collection and measurement are questionnaire and interview.

Questionnaire Design and Administration

The questionnaire was designed based on both 2 likert (Yes and No) five likert point scale for research question three . The structure of the scale from the respondent indicates their opinion which is any of the following: Strongly disagree = 1 point, Disagree = 2 points, Neutral = 3 points, Agree = 4 points and Strongly agree = 5 points

These were designed and administered to the staffs of selected departments at Nigerian Agip Oil Company (NAOC). The major aim for this questionnaire was to ensure that exact information is gotten as more people are reached, more opinions gotten. In all 399 questionnaires were designed and self-administered. The self-administered questionnaire was employed to elicit responses and collect data from the respondents. The rationale for using the self-administered questionnaire was to give respondents the liberty to answer the questions at their spare time in the comfort of their homes and not be intimidated by the researcher or any superior. In all there was no instrument mortality, bringing the total of correctly filled and returned questionnaires to 399. Aside the questionnaire the study again utilized the interview as an instrument to collect data from management. Management was quizzed on issues concerning capital investment and cash flows of the firm. The rational for the interview was to give the researcher the opportunity to adapt the questions as and when necessary, clarify doubts or issues that were so clearly dealt with by staff and establish friendly relationship with management.

Data Analysis Method

The methods used are simple percentage and multiple regression and correlation method. The simple percentage method helped in analyzing the demographics of respondents and other relevant questions answering research objectives. The data analysis techniques used for the test of hypothesis are multiple regression and correlation method. In economics and business, the natures of problem encountered in real life, are often expressed in more than two variables. All activities of man revolve around more than two variables. Multiple regressions approximate these real-life problems, where it measures the relationship existing between three or two variable. The multiple regressions help to understand the complexity of the interaction in business world.

Decision Rule

The test was conducted at 5% level of significance. A computer software based multiple regression analysis called statistical program for social science (SPSS) version 21 was used in the data analysis.

The decision rule is thus if power of text (p - value) or significance is less than α , the null hypothesis is accepted, and the alternative hypothesis rejected, but if the other way round, therefore, the test is therefore said to be significant.

The age group of the respondents' shows that majority of the respondents are between the age range of 30-39 years, followed by 40-49 years.

DATA ANALYSIS AND DISCUSSION

Response of distributed data

DATA ANALYSIS

SOCIO-DEMOGRAPHIC CHARACTERISTIC OF THE RESPONDENTS

Table 4.1 Gender of respondents

GENDER	FREQUENCY	PERCENTAGE (%)
Male	324	81.2
Female	75	18.8
Total	399	100

Source: Field data, 2019

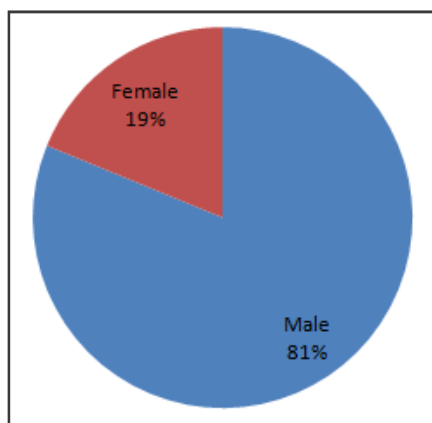


Fig. 4.1: Chart for gender of respondents

The sex of the respondent shows that 81.2% (324) of the respondents are male while 18.8% (75) of the respondents are female. This shows that the majority of the respondents are male during the survey, this also goes a long way to prove that fact the male sex are the dominant sex in the Nigerian oil and gas industry.

Table 4.2 Age group of the respondents

AGE GROUP	FREQUENCY	PERCENTAGE (%)
20-29 years	65	16.3
30-39 years	129	32.3
40-49 years	123	30.8
50-59 years	45	11.3
Above 59	37	9.3
TOTAL	399	100

Source: Field data, 2019.

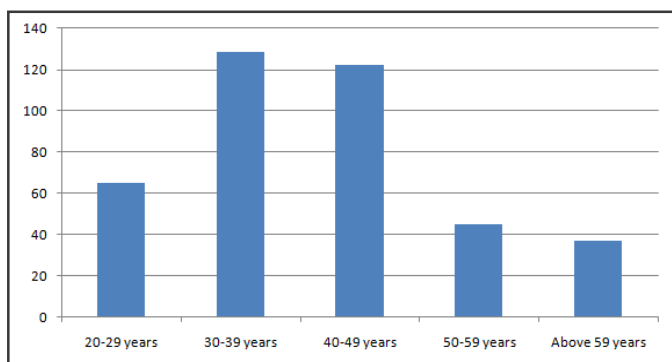


Fig. 4.2: Chart showing Age group of respondents

Table 4.3 Departments of Respondents

DEPARTMENT	FREQUENCY	PERCENTAGE(%)
Project Management/Quantity Surveying	20	5.0
Audit	65	16.3
Accounts/Finance	197	49.4
Budget and Control	117	29.3
TOTAL	399	100

Source: Field data, 2019

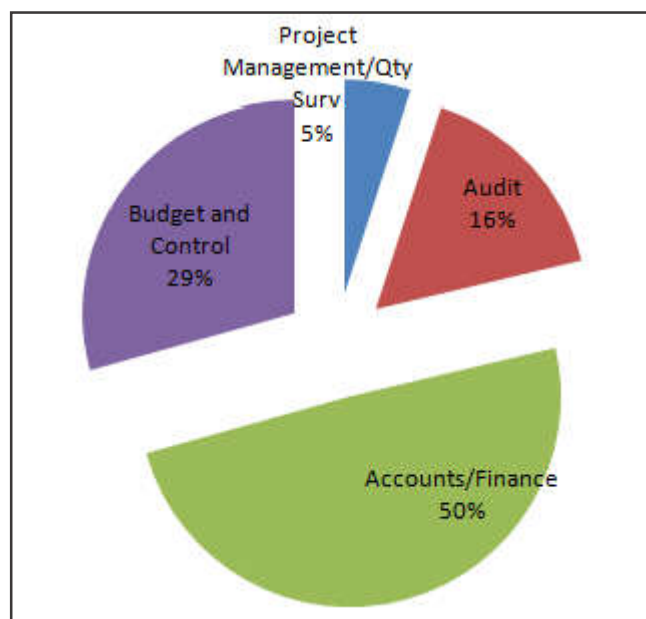


Fig. 4.3: Chart showing departments of respondents

The table and bar chart above reflects the various departments of the respondents, of which 5% (20) of the total respondents are in Project Management/Quantity Surveying Department, 16.3% (65) in Audit department, 49.4% (197) in Account/ Finance department and 29.3% (117) are in Budget and Control department.

Discussion of Findings

The discussion of the test shows that;

1. There is a significant relationship between IRR and Cash flow of Private capital investment in Nigeria.
2. It clearly reveals that IRR increases private equity returns but does not reflect the annual yield on an investment of the underlying cash flows. According to Adebayo and Lucky (2012), it is reported that the majority of the project organizations in the country, in an attempt to cover for non reflection of annual yield on an investment of the underlying cash flows, use MIRR (modified internal rate of return).
3. The result further depicts that the IRR method only concerns itself with the projected cash flows generated by a capital injection and ignores the potential future costs that may affect profit and therefore makes an implicit assumption that cash flows can be reinvested at the same rate as the IRR.
4. IRR calculations can mislead investors who are trying to compare the returns of different fund managers.

5. Furthermore the results revealed that internal rate of return (IRR) aid private capital investment in Nigeria to evaluate the desirability of investments or projects by recognizing the time value of money by using cash flow
6. Inability to Seek and obtain stakeholders support, inability to develop meaningful forecasts and plans for investment analysis, inability to establish practical standards for desired performance, management interference with the developed capital investment, lack of understanding of the risk measurement devices, personal biases in management's judgment and inflationary problems are the constraints to effective use of IRR for investment analysis and decision of private capital investment in Nigeria.
7. Focusing on cash flow instead of profit when IRR is used in investment analysis, recognizing time value for money with regards to investment's capital recovery, allocating resources to investments under sound concept of divisional and corporate strategy, Decentralizing management functions from core financial manager's functions and Interpreting investment appraisal techniques to Management are the strategies for improving on the effective use of IRR for investment analysis.

Conclusions And Recommendations

Conclusions

The following conclusions were drawn based on the findings of this study.

1. The project managers, accountants, internal auditors and budget and control staff of Nigeria Agip Oil (NAOC) agreed that analyzing investment proposals in capital assets, estimation of investment required rates of returns, conducting feasibility study and capital rationing aid corporate planning to a great extent for the long term survival of project organizations.
2. The project managers, accountants, internal auditors and budget and control staff of Nigeria Agip Oil (NAOC) are in agreement that the use internal rate of returns for investment analysis enhance the earnings of project organizations to a great extent.
3. The constraints to effective use of IRR for investment analysis included among others: Inability to Seek and obtain stakeholders support, inability to develop meaningful forecasts and plans for investment analysis, inability to establish practical standards for desired performance, management interference with the developed capital investment, lack of understanding of the risk measurement devices, personal biases in management's judgment and inflationary problems.
4. In conclusion, IRR method only concerns itself with the projected cash flows generated by a capital injection and ignores the potential future costs that may affect profit and therefore makes an implicit assumption that cash flows can be reinvested at the same rate as the IRR.

Recommendations

Based on the major findings of this study, the following recommendations were made:

1. Management of project organizations should ensure the use of discounted capital investment techniques, and allow financial managers free hand in investment/project evaluation and selection.

2. Identified problems militating against the project organizations effective use of IRR should be properly addressed by the management through the provision of adequate measures.
3. Identified strategies for improving on effective use of IRR for investment analysis should be adopted by Project Organizations in order to achieve the desired results of maximum returns on investment.
4. Project Evaluation bodies, among other roles they play, should aid its members to access cheap fund, as well as play supervisory role on their investments.

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