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Impact of Capital Budgeting Techniques in Project Evaluation (A Case Study of Borno State Ministry of Commerce and Industry, Maiduguri Nigeria)

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Abstract: *The study was conducted to examine the impact of capital budgeting techniques in project evaluation. To achieve the aim, the study identified research questions and formulated hypothesis and tested with chi-square. The study's population was employees of the ministry of commerce and industry Borno State Nigeria. For sampling, the study chose simple random sampling technique and questionnaires were distributed. According to the statistical analysis, the chi-square showed that, the capital budgeting techniques is not an ideal way of evaluating capital projects in the organization and therefore, there is no reason to accept the H_O, which states that capital budgeting is effective and ideal way of evaluating capital projects in the organization. The study concluded that, capital budgeting techniques is not an effective way of project evaluation in the selected ministry. However, the study noticed some reasons behind it ineffectiveness as few or absence of competent and dedicated staff toward project appraisal. Therefore, the study recommended that the government should train the existing staff through regular relevant workshops and also to employ competent staff that can handle the areas effectively.*

Keywords: *Budgeting, Capital, Chi-Square, Evaluation and Project*

1.0 Introduction

Capital budgeting is one of the most important decisions that face the financial manager. Prior studies spanning the past four decades show financial managers prefer methods such as internal rate of return or non-discounted payback models over net present value; the model academics consider superior. Capital budgeting refers to the process we use to make decisions concerning investments in the long-term assets of the firm. The general idea is that the capital, or long-term funds, raised by the firms are used to invest in assets that will enable the firm to generate revenues several years into the future. Often the funds raised to invest in such assets are not unrestricted, or infinitely available; the firm must budget how these funds are invested. Capital budgeting decisions are crucial to a firm's success for several reasons. First, capital expenditures typically require large outlays of funds. Second, firms must ascertain the best way to raise and repay these funds. Third, most capital budgeting decisions require a long-term commitment.

Finally, the timing of capital budgeting decisions is important. When large amounts of funds are raised, firms must pay close attention to the financial markets because the cost of capital is directly related to the current interest rate. Capital budgeting is therefore the making of long term planning decision for investment and financing. An important element of capital budgeting is the selection and these are state where actual choose between the line alternative is made and must be effective formula for evaluation the profitability of the available investment opportunities is the investment appraisal techniques. [14].

Capital budgeting techniques investment opportunities have to be appraisal in order to assess their viability or otherwise. Assessment of these investment opportunities will required necessary and sufficient fact that could be handle in specified manner for effective decision making. Budgeting techniques procedures have over the years presented a lot of problems to all concerned. Because of changing native of the profession recruitment promotion retirement dismissal and death in organizations budgeting techniques changes based on the above mentioned attributes. It is therefore imperative to keep up to data techniques of budgeting through absolute budgeting techniques. [1]. this work focused on the impact of capital budgeting techniques in project evaluation in the ministry of commerce and industry Maiduguri Nigeria. Capital budgeting is the one of the important notion in commerce and industry techniques investment opportunities. The objectives to find out the applicability of these techniques in a real situation, find out what a profitability activities is and how it is being determined the use of capital budgeting techniques in the ministry of commerce and industries Borno State and the intensity of the efforts exerted on this study will result in presenting facts and ideal about government capital project for potential investors and for public consumption in general. [5]

2.0 Literature review

Capital budgeting processes and Wealth Maximization objective, the study reveals that the proper identification and selection becomes necessary using capital budgeting techniques and processes, adopting these projects that would maximize the wealth of the owners through value addition to the capital of the firms. The study also reveals that there is significant relationship with wealth maximization objectives of firms in Nigeria, and also there is no significant relationship between project evaluation and capital budgeting proposal and wealth maximization objectives of firm in Nigeria [2]. One of the issue in decision making is capital budgeting investment decision that has been a very typical issue in the sustenance of the company, because several company have liquidated due to particular set up capital budgeting decision in order to manage the limited resources efficiently [13].

An examine method of capital budgeting used by industries in India and other areas in the world was examine using a large number of empirical studies. Only few randomly selected analyses has been done on this topic for an Indian companies using purposive convenience sample which represent different industries showing method of capital budgeting [5] Capital budgeting is considered as a possible area in which firms can contribute to mitigating these various socio-economic problems, but such projects must be assessed with new techniques that incorporate not only financial measures, but social and environmental metric as well. [8]. Association between strategic variables and use the payback period (PBP) in evaluating the capital budgeting decision from the perspective of managers and investors in Oman, two difference sample working in the same companies where test (energy and oil and gas sectors). Correlation and regression analysis was used to test to examine the association between the six

independent variables and dependent variables and also Mann-Whitney analysis was used to test difference between mangers and investors to use the PBP techniques. The findings indicate that there is positively statistically relationship on the variables and at 5% level of significant the regression model also shows statistically significance. [10]. A new technique of capital budgeting that is both theoretically correct and sensitive to the special financing needs of the small business was developed. A sufficient amount of cash flow must remain after debt obligation are met to compensate the equity investment [11]

3.0 Research Design
This research design to set up a descriptive research question seeks to identify some phenomenon.

3.1 Study Area
The purpose of the study shall be limited to ministry of commerce and industry, Maiduguri; the ministry has a various plants all over the country but for the purpose of this, the researcher intends to limit the study to the Maiduguri plant. Which was established in January 4th 1986 by the federal government the majority of the employees are 'Babur Bura' and 'Kanuri'' while, the minorities are Hausa and 'Shuwa Arab'. The State government reduced its sized power to the cooperative division of the ministry and becomes ministry of commerce and industry.

3.2 Population of the Study
The population of the ministry of commerce and industry Borno state is 600 employees which constitute senior, mediate and junior staffs in the ministry

3.3 Sample Size and Technique
A sample size is a set of measurement taken from a series of experiments, sampling in research aimed at electing a representative unit from a total population by systematical choosing, limit number of units to represent the total ministry. Therefore, for the purpose of this research work the sample size is chosen to be employees of the ministry of commerce. While sampling is the procedure used in selecting the sample required for data collection, sampling techniques to be adopted in this research work is simple random sampling technique.

3.4 Method of Data Collection
There are many method of collecting data, but the one employ for the purpose of the research work is the primary and secondary source. The primary source used is personal interview to the target employees and those include:

   i.   Accountant of the ministry.
   ii.   The internal auditor
   iii.   Some senior personnel clerical staff of the ministry.

While the secondary source is collected by going through text book and other related material on budgeting technique.

3.5 Method of Data Analysis
To this extent, responses to research questions were carefully analyzed bearing in mind that,

what the researchers aim to achieve from the research work. The analysis is due according to the sector to which the questionnaire is divided using chi – square test. The formulas given as:

$$\chi^2 = \sum \frac{(o-e)^2}{e}$$

Where:

X^2 = Measure of discrepancy existing between the observed and expected frequencies.

0 = Observed frequency.

e = expected frequency

$\sum$ = summation

DF= (r-1) (c-1).

r = Represent row.

c = Represent column.

df = Degree of freedom.

4.0 Results and Discussion

4.1 Test of hypothesis

- ❖ H_1: capital budgeting techniques is effective and ideal way of evaluating capital projects in the organization.
- ❖ Ho: there is no sufficient relationship between Capital Budgeting Techniques and budget evaluation.

Ho: There is no significant relationship between capital budgeting techniques and project evaluation.

Actual table result

Responses	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Total
Yes	15	13	12	8	10	14	17	89
No	5	7	8	12	10	6	3	51
Total	20	20	20	20	20	20	20	140

S/N	O	E	(O-e)	(O-e)^2	(O-e)^2/e
1	15	13	2	5	0.4
2	13	13	0	0	0.0
3	12	13	-1	1	0.1
4	8	13	-5	25	1.9
5	10	13	-3	9	0.7
6	14	13	1	1	0.1
7	17	13	4	16	1.2
8	5	13	-8	64	4.9
9	7	13	-6	36	2.8
10	8	13	-5	25	1.9
11	12	13	-1	1	0.1
12	10	13	-3	9	0.7
13	6	13	-7	49	3.8
14	3	13	-10	100	7.7

26.3

Df = degree of freedom

R = row

C = column

Df = (R-1) (C – 1)

R = 2, C = 7

= 1 x 6

= 6

At 5% level of significance χ^2 at 6 of 0.05 = 12.6

4.2 Decision Rule

Since the chi-square calculated (26.3) is greater than the chi-square tabulated (12.6), we shall accept the H_1 which states that capital budgeting techniques is not an ideal way of evaluating capital projects in the organization and reject H_0, which states that capital budgeting is effective and ideal way of evaluating capital projects in the organization, that is ministry of commerce and industry.

5.0 Conclusion

Based on the findings of the research work, it indicates that capital budgeting techniques in investment appraisal is not an ideal way to the operations of the ministry of commerce and industry Borno state. From the findings of the study chi-square test was used to test the performances of the various firms under the ministry and the data collected was being analysed by computing the chi-square tabulated and chi square calculate. Since the chi-square calculated (26.3) is greater than the chi-square tabulated (12.6), we shall accept the H_1 which states that capital budgeting techniques is not an ideal way of evaluating capital projects in the organization and reject H_0, which states that capital budgeting is effective and ideal way of evaluating capital projects in the organization that is ministry of commerce and industry and conclude that there is significance difference.

5.1 Recommendations

From the research conducted some areas of weakness are discovered, such areas include project evaluation, lack of competent staff to appraise their projects, therefore the government should try and employ competent staff to handle the areas.

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