Determinants of Choice of Appraisal Methods for Investment Appraisal by Firms in Ghana: A Study of Selected Firms, In Kumasi

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Abstract: **The purpose of the study was to examine determinants of choice of appraisal methods for investment appraisal by firms in Ghana using some selected firms in Kumasi.The study specifically sought todetermine whether investment decisions are appraised and determine the reason for the choice of a particular method of appraisal.The study adopted a quantitative approach using a descriptive survey design, focusing on ten (10) selected companies in the Ashanti region of Ghana. The target population for the research comprised all employees of the finance departments of ten (10) selected companies in the region. A sample size of fifty (50) respondents, representing over 10% of the total population was used. Purposive and random sampling techniques were used to select these fifty (50) respondents from the companies of the population. The study showed that indeed investments decisions are appraised in Ghanaian companies. This was confirmed by 40 respondents representing 80% of the sampled population. The study further revealed that, Viability and Profitability of any Investment Project was the most popular reason for choosing a particular type of appraisal method. This was evidenced in the overwhelming confirmation it received as a viable reason for picking an appraisal method.**

***Keywords*: Appraisal Methods, Investment Appraisal, Ghana**

I. INTRODUCTION

With the continuous improvement of the global securities market, the market competition is unprecedented activity. In the aspect of investment appraisal decision support system, there is an urgent need to continuously absorb new information strategies and improve the scientific and standardization of decision-making, so as to achieve the goal of improving investment decisions and appraisal efficiency in order to stabilize investment returns. Businesses thrive on making the right investments decisions that involve current outlays of money in return for a stream of benefits in future years. This means that, firms' expenditures are made in an anticipation of realizing future benefits. According toBaird, Su,Tung (2021), investment decisions may be defined as the firm's decisions to invest its current funds most efficiently in the long-term assets in anticipation of an expected flow of benefits over a series of years. The long-term assets are those that affect the firm's operations beyond the one-year period. The firm's investment decisions would generally include expansion, acquisition, modernization and replacement of the long-term assets. Sale of a division or business (Divestiture) is also as an investment decision.

An investment decision often requires a significant period elapsing between the outlay and the recoupment of the investment. Investment decisions also require the commitment of significant amounts of company funds making it a major decision fora company to make. In making such a decision, companies often appraise the viabilities and the potential profitability of each of the types of investments using various appraisal methods. In Ghana, choice of appraisal methods often adopted by companies is dependent on certain determinants which are considered key to the accounting objectives of the companies. In the quest to achieve accounting objectives based on the above-stated determinants, many companies have adopted bad and unrealistic appraisal methods which have tended to fail. Although arguable, many cases could be made of the erstwhile Bank for Housing and Construction and Piram Limited. A failure in appraisal methods could prove disastrous to almost any company.

Appraisal methods considered in this study are tools for decision making and have been defined in the literature as the methods and techniques used to evaluate and select an investment project (Kroos, Schabus,Verbeeten,2021). Some of these methods are very simple, for example payback period; while others are particularly sophisticated and complex, for example Net Present Value, Real Options Reasoning and others. Simpler methods do not consider the time value of the money and do not include the risk dimension.

The researcher sees many Ghanaian companies running bad appraisal methods which needs to stop. There is a challenge to assess the problem of companies selecting wrong appraisal methods to run their businesses. A credible empirical analysis must be conducted to unravel these challenges of knowing the right determinants in investment appraisals which this study seeks to do. The empirical studies on the determinants of choice of appraisal methods for investment appraisal by firms in Ghana using Ghanaian companies as case studies are scarce. There appears to be research gap which this paper aims to fill. The Webster's Dictionary (2011) defines appraisal as an act of assessing the viability of a project or activity or someone or an expert estimate of the value of something. Appraisals helps in evaluating key parameters for making informed decision especially in the financial sector. The basic purpose of appraisal is to achieve better spending decisions for and current expenditure on schemes projects and programmes. Kim & Yasuda (2020), contended that decision-making is increasingly become more complex today because of uncertainty. Additionally, most projects involve numerous variables and possible outcomes. For instance, estimating cash flows associated with a project involves working requirements, project risk, tax considerations, expected rates of inflation, and disposal values. Puspitasari (2021), states that it is necessary to understand existing markets to forecast project revenues, assess competitive impacts of the project, and determine the life cycle of the project. Investment Appraisal is therefore more than the identification and evaluation of suitable projects. It includes consideration of timing and the identification and balancing of risk. In order to make good investment decisions, there is always the need for some form of critical appraisal using correct financial accounting methods. (Fabinu, Makinde& Folorunso,2017).Investment decisions (IDs) are the decisions on investments which have substantial effects on the long term financial and operational performance of companies, and which have a big impact on the competitive advantage of firms (Anthony, 2017). Investments generally have influence on the product or service sets of companies, and geographical scope and dispersion of their operations (Khaled, 2020). Company acquisitions and mergers, the introduction of new product lines, the installation of new manufacturing processes and business technologies are typical examples of Investment decisions. The investment appraisal process includes the generation of ideas, assessment and authorization, implementation and control of the project (Young, 2007). Investment appraisal is influenced by the fact that external shareholders and potential investors have access to accounting data and make their estimates of firm's economic rate of return with accrual-based accounting numbers. As a result, there is a continuing history of research analyzing and relating accounting rate of return and economic rate of return concepts. Accounting information affects investment appraisal in many ways (Ferracuti&Stubben,2019).

There are several techniques for the appraisal of investments. The study considered the most popular ones which include payback, accounting rate of return, internal rate of return, net present value, analytical methods, discount rate, benefit cost ratio, discounted payback, scenario analysis, sensitivity analysis, switching values and distributional analysis. The purpose of the study was to examine determinants of choice of appraisal methods for investment appraisal by firms in Ghana using some selected firms in Kumasi. The study specifically sought todetermine whether investment decisions are appraised and the reason for choice of a particular method of appraisal

Effective and efficient investment appraisal has a significant impact on the company's prospects (profitability). Not, a lot of literature has been written on the topic, company financial managers continuous to lay more emphasis on the best way to invest the company's financial assets, on that score, the researcher intends to find out the gap that exist between investment appraisal techniques and accounting factors that determine these techniques.

II. METHODOLOGY

The study adopted a quantitative approach using a descriptive survey design, focusing on ten (10) selected companies in the Ashanti region of Ghana. The target population for the research comprised all employees of the finance departments of ten (10) selected companies in the region. A sample size of fifty (50) respondents, representing over 10% of the total population was used. This sample was made up of five (5) employees from each of the ten selected companies. Of the five (5) respondents from each selected company, three (3) were from management and two (2) from staff. Purposive and random sampling techniques were used to select these fifty (50) respondents from the companies. The primary data were generated from questionnaires while secondary data were obtained from official documentations (end of year accounts, financial journals, newspaper and internet publications. Data collected were analyzed using the, Statistical Package for Social Scientist (SPSS) and Microsoft Excel.

To obtain the sample size for management employees, purposive sampling method was used whereas to obtain the sample size for administrative staffs of the selected 'companies, the researcher used the `random selection" method (Ärlebäck&Frejd, 2021) to pick the required number of twenty (20) administrative staffs, two (2) from each selected company.

III. ANALYSIS AND DISCUSSION

This section sought to analyze data collected from respondents. A sample size of fifty (50) respondents was chosen. Tables, pie charts and histogram were used to present the data for the study.

Investments Decisions Appraised in Ghanaian Companies

The study set one of its objectives to critically analyze and reveal as to whether investment decisions are appraised in Ghanaian companies. These have been described under different key statements obtained from the respondents. The statements have been ranked in terms of their means and standard deviations so as to deduce meaning out of the results. Details were therefore presented in the descriptive statistics shown by the values of the respective means and standard deviations of the key empirical references in table 1.

Table 1: Investments Decisions Appraised in Ghanaian Companies

Percent							Mean	SD
	N	1	2	3	4	5		
Acquisition	50	8	13	8	29	42	3.83	1.33
2. Merger	50	8	8	21	38	25	3.63	1.20
Investment in assets	50	6	13	23	29	29	3.63	1.21
Investment in personnel	50	10	12	15	38	25	3.63	1.38
Investment in new market	50	8	19	13	29	31	3.56	1.34

As observed from Table 1, the respondents agreed that Ghanaian companies appraise investment decisions during acquisition with a mean value of 3.83. This showed that they generally agreed about the existence of investment appraisal decisions. However, the corresponding standard deviation revealed a significant value of 1.33. This also showed that there was a clear variation in the responses provided by the respondents about the existence of investment appraisal decisions. This finding was in correlation with that of Gitau (2013) who sees company acquisitions and mergers, the introduction of new product lines, the installation of new manufacturing processes and business technologies are typical examples for Investment decisions. Given the importance of investment decisions, it is the opinion of the researcher that there is proper screening of investment proposals for vast sums of money can be easily wasted if the investment turns out to be wrong.

Moreover, from table 1, respondents also agreed that Ghanaian companies undertake investment appraisal decisions during mergers as reflected by the mean value of 3.63. However, a significant standard deviation of 1.20 suggests varied responses regarding appraisal of investment decisions in Ghanaian companies during merger. Besides, the results as reflected in table 1 depicted a mean value of 3.63. This implies that respondents agreed to the statement that investment in assets call for investment appraisal in companies. Nevertheless, the corresponding standard deviation of 1.21 suggested that respondents had a significant variation in responses on investment in assets as a source of investment appraisal.

Based on the investment in personnel, respondents agreed that it is a critical factor in every organization which calls for thorough appraisal. This was reflected by a mean value of 3.63 in table 1. Even though, there were variations in responses to this test as revealed by the standard deviation of 1.38. However, the variations in responses did not show a big movement from the mean. This finding was in line with Rao (2010)'s statement that hiring of human resources, in terms of their quality and quantity demands critical appraisal since in both short and long term, they represent significant investment decisions. Finally, from Table 1, respondents agreed with statement regarding investment in new market as a source of investment appraisal decisions in companies as reflected by the mean value of 3.56. However, a significant standard deviation figure of 1.34 revealed varied responses from the respondents on the same, implying that they have different opinions about this statement.

Reasons for the Choice of a Particular Method of Appraisal

Research question two sought to determine the reasons for the choice of a particular method of appraisal. In identifying reasons for the choice of a particular method of appraisal, respondents were asked to confirm or reject the applicability of the following factors as reasons for the choice of a particular method of appraisal. Details are presented in table 2.

Table 2: Reasons for the Choice of a Particular Method of Appraisal

Percent (%)								
	N	1	2	3	4	5	Mean	SD
Risk and Uncertainty	50	10	12	13	42	23	3.54	1.27
Limitation of Payback	50	10	12	15	38	25	3.54	1.29
Viability and Profitability	50	5	20	21	35	19	3.48	1.09
Certainty of cash flow	50	0	27	20	29	24	3.40	1.09
Better Spending Decisions	50	12	18	19	25	26	3.17	1.31

Results in Table 2, showed that viability and profitability of any investment project were the most popular reason for the choice of a particular investment decisions appraisal method. This was evidenced in the overwhelming confirmation by a mean value of 3.48 as a viable reason for picking an appraisal method. Though, mean was not the largest among all the means, but, it corresponding standard deviation of 1.09 was an indication that viability and profitability of any investment project gives less risk to potential investors who want to invest in any projects by using the above variables as indicators or benchmark. A high standard deviation means the project is prone to high degree of risk as compare to low standard deviation which has a low risk of comparable degree. This was followed by certainty of cash flow, which has the same standard deviation as viability and profitability of any project, but it has lower mean of 3.40 which means that, the average cash flow to the project during its lifetime will be lower than that of viability and profitability. The rest could be ranked as follows risk and uncertainty, limitation of payback and better spending decisions.

The study went further to conduct mean analysis to identify the central location of the data (average). Standard deviation analysis was also conducted to measure variability and the spread of the data set and the relationship of the mean to the rest of the data. This finding correlates with the frequencies of responses and the findings of other studies. Kengatharan (2017) contends that in order to deal with risk and uncertainty in investment decisions, many methods and approaches have been suggested by researchers, such as adjusting discount rate, adjusting forecasted cash flows, using computer simulation Andreo (2018), certainty equivalents, beta analysis (CAPM), sensitivity analysis, scenario planning, probability analysis (decision trees), real options model and fuzzy sets (Frynas&Mellahi, 2011). Although some of these approaches are deemed more scientific, such as beta analysis, practitioners insist on using simpler and less sophisticated approaches, such as adjusted Required rates of return, shortened payback periods and probability analysis.

Trigeorgis and Tsekrekos (2018), see limitations with Cash flows after payback stating that payback fails to take account of the cash inflows earned after the payback. Cash flows ignores, payback is not an appropriate method of measuring the profitability of an investment project as it does not consider all cash inflows yielded by the project. Cash flow patterns, payback fails to consider the pattern of cash inflows, that is, magnitude and timing of cash inflows. In other words, it gives equal weights to returns of equal amounts even though they occur in different tie periods. Administrative difficulties, a firm may face difficulties in determining the maximum acceptable payback period. There is no rational basis for setting a maximum payback period. It is generally a subjective decision. Inconsistent with standard value, payback is not consistent with the objective of maximizing the market value of the firm's shares. Shares values do not depend on payback periods of investment projects. On cash flow and better spending Hadi(2017), urges the discounting of cash flows and then calculating the payback. The discounted payback period is the number of periods taken to recover the investment outlay on the present value basis. The discounted payback periods still fail to consider the cash flows occurring after the payback period. Discounted payback period for a project will be always higher than simple payback period because its calculation is based on the discounted cash flows. Discounted payback rule is better as it discounts the cash flows until the outlay is recovered. But it does not help much. It does not take into consideration the entire series of cash flows.

IV. SUMMARY OF FINDINGS

The purpose of the study was to examine determinants of choice of appraisal methods for investment decisions by firms in Ghana using a study of selected firms in Kumasi. The summary of the findings are:

To determine whether investment decisions are appraised

The first research objective was to determine whether investment decisions are appraised. The study showed that indeed investments decisions are appraised in Ghanaian companies. This was confirmed by 40 respondents representing 80% of the sampled population. However, a coefficient of variation analysis showed that though a unanimous majority of respondents accepted the fact that investment decisions are appraised, total conviction about its presence seemed to be lacking. To further probe the matter, the subject of which type of investment decisions are appraised was put forward. The study revealed that mergers and acquisitions were the most appraised decisions in Ghanaian companies. This was attested to by the majority of respondents, thereby creating a high coefficient of variations figure. These two variables were followed by investment in personnel and investment in assets. Investment in new market/ person was shown by the study to be the least appraised investment decision in Ghanaian companies.

To determine the reason for the choice of a particular method of appraisal

Research objective two was to determine the reason for the choice of a particular method of appraisal. The study showed that Viability and Profitability of any Investment Project is the most popular reason for choosing a particular type of appraisal method. This was evident in the overwhelming confirmation it received as a viable reason for picking an appraisal method. This was followed by risk and uncertainty and then limitations of payback. Better Spending Decisions and Increased Certainty of Cash Flows. To further understand the findings and to determine the relationship between the variables (Reasons for Choice of Appraisal Method), a Pearson correlation test was conducted. The correlation test showed that such variables as Increased Certainty Cash Flows and Better Spending Decisions have significant correlations with Risk and Uncertainty. Limitations of the Payback also correlate with Viability and Profitability of any Investment Project whilst Increased Certainty Cash Flows and Better Spending Decisions correlate with each other as well. This finding indicated that the choices of certain reasons for appraisal methods are strongly influenced by other reasons. For instance, choosing an appraisal method on the basis of increased certainty of cash flow, the individual conducting the appraisal is also more than likely to consider better ways of spending the increased cash flows, thereby creating a correlation between the two variables.

V. CONCLUSION

This paper has investigated the determinants of choice of appraisal methods for investment decisions in Ghanaian companies.Vast sums of money can be easily wasted if the investment turns out to be wrong. A lack of investment appraisal can serve as a recipe for disaster for most companies. Companies selection of the right method of investment appraisal depends on the investment to be appraised and the objectives of the appraisal. Each appraisal method has its advantages and disadvantages, thereby rendering it appropriate for some investment appraisals but not appropriate for others.The study presents the recommendations for further studies.

VI. RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

Treat Investment Appraisal More Seriously

Given the importance of investment decisions, it is essential that there is proper screening of investment proposals. The study therefore recommends that all companies in all industries take Investment appraisal very seriously since it determines the financial sources of the firms' budget and ultimately defines the level of the shareholders' wealth.

AREAS FOR FURTHER RESEARCH

The study recommends that companies take time to conduct further research in order to throw further light in the study area and increase literature. This is important to increase the spread of knowledge and aid companies to thrive. Furthermore, the study sought to examine determinants of choice of accounting methods for investment appraisal by firms in Ghana using a study of selected firms. Through the review of related literature and the analysis of data, the findings and recommendations of this study is empirically reliable and therefore recommended for adoption by not just the companies sampled in the study, but all other companies as well. To ensure a more reliable generalization of the findings of the study, further studies should concentrate on getting data from a larger pool of respondents and a more diverse mix of companies in a widely spread-out geographical area.

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