Study of the impact of Capital Budgeting Decisions on Performance of Companies in Balkh Province

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Abstract: The capital budgeting decisions have been a very typical issue in the sustainability of a company. Companies in Balkh province particularly have to set up capital budgeting decisions in order to manage their limited resources effectively and efficiently. However, some companies did not develop an enduring technological base that can support their growth. Also their investment decisions are not usually well articulated. For instance, it is found that only some large scale companies even by using informal method of capital budgeting decisions could generate projected returns but some companies could not derive expected benefits from the budgeting and this leads to inefficient performance and losses. Based on these common problems in companies and the effect of environmental factors, it is important to use effective methods of capital budgeting before making any investment decisions. Capital budgeting is extremely important because the decision directly impacts the companies' future growth. The traditional methods commonly used for capital investment appraisals by most companies are the, Net present Value, Payback Period, Discounted Payback Period and Internal Rate of Return, Profitability Index and Accounting Rate of Return. The research was to study the impact of capital budgeting decisions on Performance of companies in Balkh province. The analysis was on the basis of various research works that have been done on capital budgeting, and different sources are being used as secondary data to obtain the result. Primary data is collected using questionnaires which was developed to get the opinion of finance specialists working in universities and offices in Balkh province. Using One Sample T Test and Regression Analysis the results obtained from 30 finance specialists show that the implementation of the IRR method in capital budgeting decision is positively correlated with performance of companies followed by three other methods except for the Discounted Payback Period and Accounting Rate of Return method that were negative and insignificant.

Keywords: Capital Budgeting Decisions, Company Performance, Net Present Value, Payback Period, Return on Assets(ROA)

1. INTRODUCTION

capital budgeting in manufacturing firms is the most important decision taken by finance managers. Decisions like purchase of new equipment, replacement of machinery, investment in research and development and expansion of existing facilities are helpful in improving the smoothness of the production system and deliver high quality products. On the other hand, expansion decisions are aimed to utilize the existing opportunities in the market and lead to the firm's growth.

With the advancement of technology in improving the methods of production, companies invest large amount of money every year in new machinery, equipment, facilities and other productive assets. Optimal allocation of capital to various investments is one of the duties of financial managers in today's world, which includes decisions to use the company's current capital in long-term assets. Decisions made in relation to capital budgeting greatly affect the success of the organization in achieving the predetermined goals. Therefore, capital budgeting plays a major role in the long-term success of these units.

Managers of some companies use simple and non-discounting techniques to execute their projects, such as payback period or even individual judgment, and others use precise criteria such as NPV. Managers' decisions can increase or decrease the value of investments and the value of companies' shares, and according to agency theory, can affect the company's agency costs. Agency theory states the existence of a conflict between shareholders and managers. That is, the shareholder seeks to reach the highest value of the investment, and the manager seeks to increase his wealth in the first place, so it is likely that the manager will not act in the interests of the shareholder.

As a result of today's increasing competition due to rapid changes in technology, managers in manufacturing firms undertake extensive capital budgeting decisions, while most of the managers without deeply analyzing the effect of these decisions on the profitability of the firm. On the other hand, managers in the firm propose and compete to have their capital projects funded even without adequately assessing the effect of this project on profitability of the firm. however, the fact remains that decisions made actually affect the goal of the company's growth. Akuru (2007). The objective for capital budgeting decisions are to earn satisfactory returns on investments. Larson wild & chiappetta (2002). But they require careful analysis because they are usually the most difficult and risky decisions that managers make. Weygnad, Kieso & Kimmel (2002), the involvement of top management and board of directors in the process demonstrates the importance of capital budgeting decisions. These have significant impact on the company's future profitability. In fact, poor capital budgeting decisions can cost a lot of money to the firm. Such decisions even lead to the bankruptcy of some companies.

Most acquisition and disposal impacts on the statement of cash flow because most acquisitions are immediate use of cash and the amount paid at the acquisition is deducted in the statement. Disposals of long term assets usually create immediate receipt of cash. When they do they are reported as source of cash, Wild (2002).

In replacement decisions the costs and accumulated depreciation associated with the old components can be identified, it can also be eliminated from the accounts and gain or loss may rise. If the result is loss, it reduces the profit of that particular period. Chasteen, F laherty & O'Connor (l 998).

To earn profit is the goal of business enterprise. Companies use measures that indicate profitability in the firm. First profit margin tells the decisions makers how much profit is generated. Second return on asset is an indication of the profit per dollar of assets. Finally, return on equity quantifies how well stockholders did the year by providing measures of productivity of their investments. Finch (2003).

The effect of capital budget decision on financial performance is one of the central questions in both financial management and development. This effect matters not only for the evaluation and design of investment policy, but also for thinking about firm performance. Making a capital budgeting decision is one of the most important policy decisions that a firm makes. A firm that does not invest in long-term investment projects does not maximize stakeholder interests, especially shareholder wealth. Optimal decisions in capital budgeting optimize a firm's main objective – maximizing the shareholders' wealth – and also help the firm to stay competitive as it grows and expands. These decisions are some of the integral parts of overall corporate financial management and corporate governance. A company grows when it invests in capital projects, such as plant and machinery, to generate future revenues that are worth more than the initial cost (Ross M. 2011; Shapiro 2005).

Capital budgeting is extremely important because the decision made directly affects the organization future growth. One of the traditional methods commonly used for capital investment appraisals by some Organizations is the Payback Method, although this method is criticized by academicians as it does not include the time value or future value of cash flow & do not measure profitability. The wide acceptance of this method has called for a discussion that why this method is still popularly used in the organizations.

Even if many companies are using the Payback Period, Net Present Value (NPV) Internal Rate of Return (IRR) as capital budgeting methods to improve the organization's performance there is much inefficiency equivalence in capital budgeting and performance of the firm that affect its expansion.

Resource-allocation efficiency is not merely a matter of adopting sophisticated, theoretically superior investment techniques and procedures but consideration must also be given to the fit between the corporate context and the design and operation of the capital budgeting system. But capital budgeting decisions of some companies in Balkh province have been a very typical issue in their sustainability as a result they lack standard methods of making investment decisions and liquidated due to wrong capital budgeting decisions they made at a particular point of time.

Capital budgeting decisions are used to make investment decisions so as to increase shareholders value. But due to limited resources of the developing countries, their capital budgeting decisions are intended to manage the limited resources effectively and efficiently. However, some companies did not develop an enduring technological base that can support their growth. Also their investment decisions are not usually well articulated. For instance, it is found that only some large scale companies even by using informal method of capital budgeting decisions could generate projected returns but some companies could not derive expected benefits from the budgeting and this leads to inefficient performance and losses. Based on these common problems in companies and the effect of environmental factors, it is important to use effective methods of capital budgeting before making any investment decisions.

The research looks out to Study of the impact of Capital Budgeting Decisions on Performance of Companies in Balkh Province.

Research Objectives

General Objectives

The aim of the research is to Study of the impact of Capital Budgeting Decisions on Performance of Companies in Balkh Province

Specific objectives

The study is set to achieve the following objectives:

1. To determine the methods adopted by companies in Balkh Province for Capital Budgeting Decisions.
2. To study difficulties faced by companies in Balkh Province while making Capital Budgeting Decisions.
3. To study the Capital Budgeting Methods adopted by companies in Balkh Province on the basis of type of investment.
4. To study risk factors considered by companies in Balkh Province for Capital Budgeting Decisions.

Research Questions

Research main question:

How do capital budgeting decisions affect performance of companies in Balkh province?

Research Hypothesis

Research Main Hypothesis

It seems that capital budgeting decisions have a positive effect on performance of companies in Balkh province

Research sub hypothesis:

1. It seems that usage of Net Present Value(NPV) have a positive effect on Return on Assets(ROA) of companies in Balkh province.
2. It seems that usage of Payback Period(PBP) have a positive effect on Return on Assets(ROA) of companies in Balkh province.
3. It seems that usage of Discounted Payback-Period(DPBP) have a positive effect on Return on Assets(ROA) of companies in Balkh province.
4. It seems that usage of Internal Rate of Return(IRR) have a positive effect on Return on Assets(ROA) of companies in Balkh province.
5. It seems that usage of Profitability Index(PI) have a positive effect on Return on Assets(ROA) of companies in Balkh province.
6. It seems that usage of Accounting Rate of Return(ARR) have a positive effect on Return on Assets(ROA) of companies in Balkh province.

2.Theoretical Framework

Capital Budgeting

As all we know that finance is the life blood of every business. In this competitive era the optimal usage of finance is crucial issue. Almost in every business huge amount of funds are required to purchase various assets and for the expansion of business. So before investing huge funds, every organization must know in advance the viability of the assets/projects. Capital Budgeting techniques are used to evaluate the profitability/viability of the concerned projects.

Capital budgeting is a process in which a business determines whether projects such as building a new plant or investing in a long term venture are worth or not. Most of times, a prospective project's lifetime cash inflow and outflows are assessed in order to determine whether the return generated meet a sufficient target. Capital budgeting is also known as Investment Appraisal. Ideally, business should do all those projects and opportunities which enhance shareholders value. Generally, businesses prefer to study a project before taking it on, as it has a great impact on the company's financial performance. Capital budgeting is an important tool. One important duty of a financial manager is to choose investments with satisfactory cash inflows and rate of return. A financial manager should be able to decide if an investment is worth undertaking and should also have the ability to choose intelligently given other alternatives.

Financial management largely concerns with financing, dividend and investment decisions of the firm. Corporate finance theory has developed around a goal of maximizing the market value of the firm to its shareholders, which is also known as shareholder wealth maximization.

Financial decision deal with the firm's optimal capital structure in terms of debt & equity Investment decisions deal with the funds raised in financial market are employed in productive activities to achieve the firm's overall goal, or we should say, how much should be invested and what assets should be invested in. (Don Dayananda et al 2002).

In reality, many firms have limited borrowing resources that should be allocated among the best investment alternatives. Many people would argue that a company can issue an almost unlimited amount of capital stock to raise capital. Increasing the number of shares of company stock will serve only to distribute the same amount of equity among a greater number of shareholders.

Capital Budgeting Decision

According to Dayananda et al (2002), the capital budgeting decisions are used to make investment decisions so as to increase shareholders value. Capital budgeting is primarily concerned with sizable investments in long-term assets, Brealey& Myers (2003). These assets may be tangible items such as property, plant or equipment or intangible ones such as new technology, patents or trademarks.

Dayananda et al (2002) argued that irrespective of whether the investments are tangible or intangible assets, a capital investment project can be distinguished from recurrent expenditures by two features. One is that such projects are significantly large. The other is that they are generally long-lived projects with their benefits or cash flows spreading over many years. Sizable, long-term investments in tangible or intangible assets have long-term consequences. This implies that today's investment will determine the overall corporate strategic position over many years. These capital investments also have a considerable impact on the future cash flows of the organization and the risk associated with those cash flows. Capital budgeting decisions thus have a long-range impact on the strategic performance of the organization and are also critical to its success or failure. Most companies have many more potential projects than can actually be funded. Hence, managers must carefully select those projects that promise the greatest future return. How well managers make these capital budgeting decisions is a critical factor in the long run profitability of the company. Brian Bushee, (2004)

Capital Budgeting Process

There are different sequential stages in the capital budgeting process. The capital budgeting process is a multi-faceted activity. The sequential stages of a capital budgeting process can be depicted in a simple flow chart below:



Figure 1: Stages of a capital budgeting process

Source: Don Dayananda et al 2002

Capital Budgeting Techniques

To assess investment projects and select the one that maximizes wealth, cash inflow and reduces cash outflows there are six methods to be applied for relevant information and analysis of capital budgeting decisions has lined a series of models to assist the organization in to use their resources best. Popular methods are:

1. Net Present Value Method. (NPV)
2. Payback Period Method. (PBP)
3. Discounted Payback Period Method. (DPBP)
4. Internal Rate of Return Method. (IRR)
5. Profitability Index Method. (PI)
6. Accounting Rate of Return Method. (ARR)

Company Performance Measures

Financial ratios have been widely used to measure performance, and financial effectiveness. The most frequently used accounting performance measures are output related factors such as change in sales and change in profits over a specified period. Noted was the fact that financial ratios present a good idea of the accounting performance measures. (Axelsson, Jakovicka, Kheddache, 2003).

Return on Assets (ROA)

Return on Assets (ROA), is defined as the ratio of net income or earnings after interest and tax (EAIT) to total assets as expressed in equation 5 (Firer et al., 2012). The key advantage of this measure is that it gives an indication of how well managers use the total assets to generate income and profits for the company (Firer et al., 2012). Because it measures the profit per unit of money of assets, it reflects the operating performance of the company.

Equation 4: Return on Assets (ROA) (Firer et al., 2012).

$$\textbf{ROA} = \frac{\text{Net Income (EAIT)}}{\text{Total Assets (TA)}}$$

3.Literature Review

Regarding the subject of the study " Study of the impact of Capital Budgeting Decisions on Performance of Companies in Balkh Province" in Afghanistan, unfortunately, no research has been done that shows the relationship between the mentioned variables. Therefore, this issue has no internal research background; But a lot of research has been done abroad which are as follows:

Previous studies on the preference of firms, managers and officers for capital budgeting techniques have revealed varying results. Over the years, studies on this subject have revealed the dynamic nature of firms' preference for capital budgeting techniques, changing from one to the other. The study done on US major firms in 1977 revealed the preference was more on IRR, as opposed to the NPV in evaluating projects (Gitman & Forrester, 1977). The analysis was based on 103 firms which were then categorised by industry class, asset size, annual capital size and project size (Gitman & Forrester, 1977).

A survey of how CFOs make capital budgeting and capital decisions by Graham and Harvey (2002) sampled the Fortune 500 companies' CFOs and the CFOs who are members of the Financial Executive Institute (FEI) in the United States of America (Graham & Harvey, 2002). The survey revealed that IRR and NPV were the most used capital budgeting techniques from the sample of 392 CFOs who participated in the survey. IRR is mostly used, and is mostly used by 75,7% and 74,9% always used NPV (Graham & Harvey, 2002). The study further highlights the fact that managers had never been in agreement on which specific method is the best and most superior to use. It also appeared that sometimes the choice of the method used is determined by the ease and lower complexity of the method, and not necessarily the best technique (Ryan & Ryan, 2002).

Ryan Patricia A and Ryan Glenn P. (2002) had evaluated the capital budgeting decision methods used by the 800 manufacturing companies. According to him, most of the companies preferred NPV as capital budgeting tool, which represents alignment between corporate theory and practice. Firms with larger capital investment budgets tend to favor NPV and IRR. PBP is used at least half of the time by 73.7% of the respondents. Fourth in popularity was the discounted payback model used at least half of the time by 58.9% of the companies. Finally, at least half time usage was reported for the three models as follows. PI ranks fifth at 43.9%, followed by ARR at 32.3% and finally, IRR at 24.7%.

Yao et al. (2006) compared the use of capital budgeting techniques and their impact on performance in Netherlands and China. They compared 250 Dutch and 300 Chinese firms. The response rates were 87 firms responded in total. Out of these 42 and 45 were Dutch and Chinese companies, respectively. Notably, these results suggested that 49% CFOs Chinese firms use the NPV method against 9 % who use traditional investment decision methods. In Dutch, 89% of the firms use NPV investment decision method while traditional investment decision methods took 11%. Their study used return on assets to measure performance which was used in a regression model as a dependent variable and measured against the various investment decision techniques. The results indicated that in both countries, sophisticated capital budgeting techniques mostly NPV and IRR had a positive relationship with return on assets (ROA) while the traditional methods showed an insignificant relationship.

Pettway (2009) surveyed a random sample of 310 business firms. Questionnaire were sent to companies through mail engaged in retailing, manufacturing transportation, land development, entertainment and public utilities to study the capital budgeting process and the methods used to adjust for risk. He concluded that firms considered the Internal Rate of Return technique to be the most important technique for decisionmaking. He also conclude that the most of firms enhanced their profitability requirements to adjust for risk and uncertainty in the given project and determining the future cash flow projections as the most important and most difficult stage of the capital budgeting process.

Lawrence G. and Forrester (2010) analyzed the responses of 125 manufacturing firms that reported as having the greatest stock price growth over the 2004-2009 periods. The survey containing questions related to techniques used in capital budgeting process, the division of responsibility for capital budgeting decisions, the most important and most various difficulties faced in implementation of capital budgeting techniques, the cutoff rate and the various methods used to evaluate the risk factor. They reported that the DCF techniques were the most popular methods for evaluating projects, especially the IRR. However, many firms still used the PBP method as a backup or secondary approach. The most of the companies that responded to the survey indicated that the Research and Development and Finance Department were responsible for evaluating the capital budgeting projects. They conclude that most of the respondent found difficulty in the project definition and cash flow estimation and they considered these as most critical stage of the capital budgeting process. The most of the firms had a cutoff rate between 11% to 16%, and they most often adjusted for risk by increasing the minimum acceptable rate of return on capital projects.

Klammer (2013) investigated the association between capital budgeting techniques and firms' performance. His sample included 369 manufacturing firms. The response rate was about 50%. The aim of study was operational return rates as adequate measure of the firms' performance. Capital budgeting techniques were used to test the payback method and the discounting techniques. Linear regression analysis was carried out to test various hypotheses. These results pointed out that despite of a growing adoption of sophisticated capital budgeting methods no consistent significant association between performance and capital budgeting techniques were apparent. This implies that mere adoption of various analytical tools is not sufficient to bring about superior performance. The other factor such as marketing, product development, executive recruitment and training, labor relations deserve sufficient attention.

Many companies seem to prefer the payback method and net present value to accounting rate of return and internal rate of return respectively. In the literature, it has been argued that the use of capital budgeting practices may be related to improved financial performance. A number of arguments to support this have been cited. Some of the studies indicated that sophisticated capital budgeting techniques mostly NPV and IRR had a positive relationship with return on assets (ROA) while the traditional methods showed an insignificant relationship. However similar studies reported a negative relationship of the capital budgeting techniques and financial performance. The studies have indicated that, despite a growing adoption of sophisticated capital budgeting methods, there is no consistent significant association between performance and capital budgeting decision.

Furthermore, a study of capital budgeting techniques and firm performance of the Jordanian listed service firms, reveals no relation between firm performance and capital budgeting sophistication (Alzoubi & Alazawi, 2010). The study surveyed 63 service firms listed on the Amman Stock Exchange and received 32 usable replies (Alzoubi & Alazawi, 2010). The results of the survey showed that PBP is more dominant and the preferred capital budgeting technique, followed by NPV, PI, ARR and IRR was the least preferred method. (Alzoubi & Alazawi, 2010).

4.Conceptual Framework

The relationship describes the association between the independent variables and the dependent variables. The framework presents a suitable model to explore how performance of companies (measured by return on assets (ROA)) in Balkh Province is affected by capital budget decisions such as, Net present value, Payback period, Discounted Payback Period, Internal Rate of Return, Accounting Rate of Return, Profitability Index.

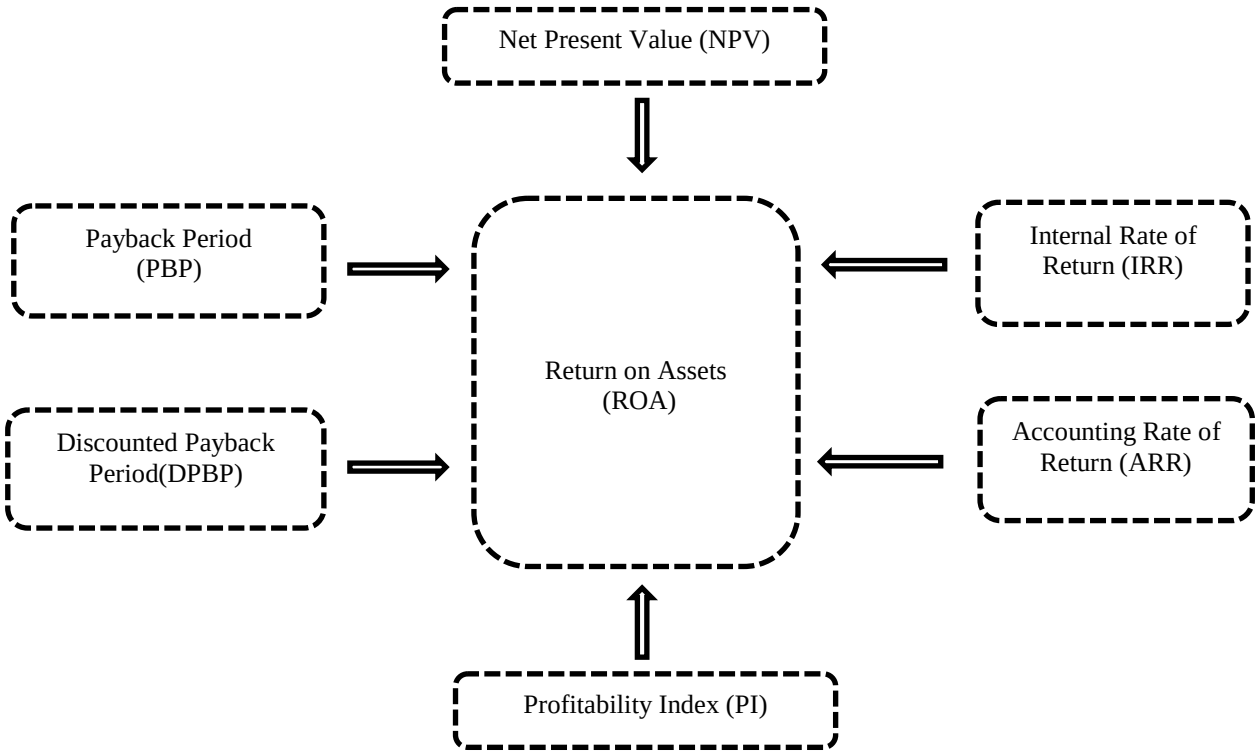


Figure 2. Conceptual framework of the hypothesized model illustrating the proposed relationship between the variables.

5.Research Methodology

This section illustrates the research methodology used for the present study. In terms of purpose the present study is applied and in terms of methodology it is categorized as correlational research. It also presents the research design, target population, collection of data tools and techniques used to study the set objective and interpretation of tools. The data will be processed using the IBM SPSS 25. Along with that the mix of appropriate analytical tools and techniques including statistical tables, simple frequency tables, percentages, arithmetic mean, one sample T Test, and regression are used to analyze the data and address the research problem. The questionnaire was comprised of 32 questions which were mainly close ended. Most of the questions were multiple choice questions based on Likert scale.

Study Population

The study focused on the Finance Specialists working in Universities and Offices in Balkh province.

Sampling Procedure

From the population 35 finance specialist were randomly selected using the simple random sampling technique to participate in the study. During the study, 35 questionnaires were dispatched, but only 30 were returned resulting into a response rate of 85.71%.

Reliability Analysis

Reliability of the questionnaire was evaluated through Cronbach's Alpha which measures the internal consistency. Cronbach's alpha was calculated by application of SPSS for reliability analysis. As shown in Table 1, the value of the alpha coefficient is 0.821. Hence It is reliable as the value of reliability is above the prescribed cut off point (0.7).

Table 1:

Cronbach's Alpha	Number of Items
0.821	32

6.Data Processing and Analysis

Demographic characteristics of respondents:

Gender

The study considered both the male and female respondents. Males made up 66.67% while females made up 33.33%. Table 2 shows the percentage distribution of respondents by gender.

Table 2:

Gender			
		Frequency	Percent
Valid	Male	20	66.67
	Female	10	33.33
	Total	30	100.0

Age

In analyzing the age of the respondents, the age is categorized in groups as follows; 21-30, 31-40, 41-50, 51 and above. Findings reveal that 40% of the respondents were aged between 21 and 30. And 60% were aged between 31-40. Table 3 shows the percentage distribution of respondents by Age.

Table 3:

Age			
		Frequency	Percent
Valid	21-30	12	40.0
	31-40	18	60.0
	41-50	0	0
	51 and above	0	0
	Total	30	100.0

Education

In the study the education level of the respondents is categorized as, Bachelor level, Master levels as well as PhD level. Findings of the study show that 73.33% of respondents had attained Master level education while 26.67% had attained bachelor level education. Hence It is clear that the study engaged educated people who were able to accurately complete the questionnaires and give relevant recommendations in relation to capital budgeting decisions. Table 4 shows the percentage distribution of respondents by education level.

Table 4:

Education			
		Frequency	Percent
Valid	Bachelor	8	26.67
	Master	22	73.33
	PhD	0	0
	Total	30	100.0

Experience

In the study the experience period is categorized in terms of years as follows: 1 – 3 years, 4 – 6 years, 7 – 9 years, and 10 years and above. Results show that 53.84 percent of the respondents had worked between 4-6 years. And 34.61 percent of the respondents had worked between 7-9 years while remaining 11.53 percent have work experience of 10 years and above. Table 5 shows the percentage distribution of respondents by years of experience.

Table 5:

Years of Experience			
		Frequency	Percent
Valid	4-6 years	18	60.0
	7-9 years	9	30.0
	10 years and above	3	10.0
	Total	30	100.0

Capital Budgeting and its Dimensions:

Methods the Companies Use

The results are shown in Table-6 ranked according to usage of the methods. according to 93.33% of respondents Personal Judgement is used by the companies. 86.67% of them believe that Payback Period Method is used. According to 53.33% of them Net Present Value Method is used. Profitability Index (46.67%), Discounted Payback Period (26.67%), Internal Rate of Return (20%) and Accounting Rate of Return (16.67%) are in remaining ranks respectively.

Table 6:

Methods the Companies Use			
		Frequency	Percent
Valid	Net Present Value(NPV)	16	53.33%
	Payback Period(PBP)	26	86.67%
	Discounted Payback Period(DPBP)	8	26.67%
	Internal Rate of Return(IRR)	6	20%
	Profitability Index (PI)	14	46.67%
	Accounting Rate of Return(ARR)	5	16.67%
	Personal Judgment Method	28	93.33%

As there are multiple responses the total per cent may exceed 100 %.

Difficulties Faced in Capital Budgeting Process

It is crucial to know what difficulties are faced by the companies in Balkh province in their capital budgeting process. In this section of the study some major difficulties are highlighted. It is shown in Table 7.

Table 7:

Difficulties faced in Capital Budgeting Process			
		Frequency	Percent
Valid	Estimating Cash Flows	25	83.33%
	Determining Discount Rate	23	76.67%
	Estimating Risk	28	93.33%
	Adjusting for Inflation	26	86.67%

As there are multiple responses the total per cent may exceed 100 %.

As we see 93.33% of respondents named Estimating Risk as one of the difficulties faced in capital budgeting process while 86.67% consider Adjusting for Inflation as major difficulty in the process, followed by Estimating Cash Flows at 83.33% of respondents and remaining 76.67% of respondents believe Determining Discount Rate as difficulty faced by the companies.

The average Return on Assets(ROA) earned by companies

It is important to know the average Return on Assets(ROA) earned by the companies in Balkh province over the past years. Since the aim of our research is to study the impact of capital budgeting decisions on performance(ROA) of companies in Balkh province.

As shown in the Table 8 according to the estimation of respondents the average ROA earned by the companies over the past years is 10.672%.

Table:8

Average (ROA) earned by companies		
N	Valid	30
	Missing	0
Mean		10.762

Techniques Used for evaluating various investment decisions

Table 9:

Techniques Used for evaluating various investment decisions							
	NPV	PBP	DPBP	IRR	PI	ARR	PJ
New Project	53.84%	80.76%	15.38%	-	19.23%	-	96.15%
Expansion of existing operation	34.61	73.07%	-	-	15.38%	-	84.61%
Merger / Acquisition	11.53%	69.23%	-	7.69%	-	-	92.30%
Replacement of Assets	42.3%	84.61%	23.07%	19.23%	46.15%	7.69%	88.46%
Leasing of Assets	23.07%	61.53%	-	-	26.92%	15.38%	92.30%
Process or Product improvement	26.92	84.61%	11.53%	-	-	-	96.15%

We can observe in the Table 9, that Personal Judgment (96.15%), Payback Period (80.76%), Net Present Value (53.84%) and Profitability Index (19.23%) respectively are the most preferred methods for evaluating new capital budgeting projects. Personal Judgement is the most preferred method used in various investment decisions. The respondents prefer Payback Period and Net Present Value in the second and third preference respectively in various investment decisions. However, the percentage of PI, DPBP, IRR, and ARR is very low.

Different Risk Factor in investment decisions

Table 10:

Different Risk Factor in investment decisions					
	1 (Most unimportant)	2 (Unimportant)	3 (Somewhat Important)	4 (Important)	5 (Most Important)
Product price risk	-	7.7%	7.69%	38.46%	46.15%
Risk of unexpected inflation	-	3.84%	3.84%	11.53%	80.76%
Company Size	3.83%	11.53%	7.7%	19.23%	57.69%
Foreign exchange risk	-	3.84%	11.53%	15.38%	69.23%
GDP or business cycle risk	-	3.84%	3.84%	7.69%	84.61%
Environmental Security Risk	-	-	-	7.7%	92.30%
Investment Security Risk	-	-	-	11.53%	88.46%
Any other (please specify)	-	-	-	-	-

In every long term investment there are various types of risks that the companies face. Some are systematic and some are non-systematic risk. Table 10 reveals the various risk factors in capital budgeting decisions. According to respondents every type of risk listed in above table is most important. The basic reason of their viewpoint is the safety and expected return of investments in various projects. Therefore, every company in Balkh province wants to reduce any type of risk in earlier stage.

Importance of Capital Budgeting Methods

In this section of the study we have evaluated the importance of various capital budgeting methods. Hence the respondents were asked to indicate the relative importance of each of capital budgeting methods on a Likert Scale of 1 to 5 (where 1 = not used, 2=unimportant, 3=somewhat important, 4=important and 5=Most important).

The results are shown in Table-11 ranked according to perceived importance. The respondents ranked PBP (53.87%), NPV (46.15%), PI (42.33%), DPBP (40.2%) and IRR (34.61%) as the most important methods respectively. Among these methods PBP is getting highest rating even though it ignores time value of money and it also ignores cash flow beyond payback period. It seems as it is easy to calculate and understand, PBP is still a very popular technique. Although it is not directly comparable, these results are consistent with the findings of Wong, Farragher and Leung (1987), who found that Payback, IRR and ARR were equally the most popular methods. However, NPV is ranked second and PI is ranked third as the most important but 42.33% consider it as most important method in this survey. Surprisingly, only 15.38% consider ARR as most important method, in fact 30.76%% respondents believe that companies do not use at all.

Table 11:

Importance of Capital Budgeting Methods					
Capital Budgeting methods	1 (Not Used)	2 (Unimportant)	3 (Somewhat Important)	4 (Important)	5 (Most Important)
Net Present Value(NPV)	7.69%	3.84%	11.53%	30.76%	46.15%
Payback Period(PBP)	3.84%	3.84%	7.69%	23.07%	53.87%
Discounted Payback Period(DPBP)	15.38%	11.53%	7.69%	25.2%	40.2%
Internal Rate of Return(IRR)	23.07%	15.38%	15.41%	11.53%	34.61%
Profitability Index (PI)	3.84%	7.69%	11.53%	34.61%	42.33%
Accounting Rate of Return(ARR)	30.76%	26.92%	3.87%	23.07%	15.38%

Hypothesis Testing

For testing of hypothesis regarding the usage of Capital Budgeting Methods and their impact on companies' ROA in Balkh Province, respondents were asked to indicate their responses on a Likert Scale of 1 to 5 (where 1= Strongly Disagree, 2= Disagree, 3= not sure, 4= Agree and 5= Strongly Agree. We will test the hypothesis by using Sample T Test and Regression analysis.

Hypothesis 1: It seems that usage of Net Present Value(NPV) have a positive effect on Return on Assets(ROA) of companies in Balkh province

Table 12:

One-Sample T Test					Confidence Level 95%	
	N	Mean	Std. Deviation	t	Test Value	P-Value
When making investment proposals, approved budget is considered.	30	2.5333	0.5713	-4.474	3	0.005
When evaluating projects all cash-flows are considered.	30	2.1333	0.7303	-6.5	3	0.005
The increase in the current value of future cash-flows is based on chosen cost of capital.	30	3.6342	0.4982	6.595	3	0.005
Using NPV method helps companies in Balkh province to generate the projected earnings.	30	3.5121	0.5085	5.385	3	0.005

In Table 12, the mean of 2.533 was for the statement that when making investment proposals, approved budget is considered. We also sought to determine When evaluating projects all cash-flows are considered, the mean was 2.133 which was a neutral response and this means there is a moderate response that net present value considers all cash inflows from the proposed project. The increase in the current value of future cash-flows is based on a chosen cost of capital and it recorded the mean of 3.6342 which indicates that changes in the cost of capital moderately influence the use of net present value. For the statement that using NPV method helps companies in Balkh province, the mean of 3.5121 was obtained. Hence with 95% confidence level we conclude that using NPV method of capital budgeting is positively related to companies' ROA. Thus, the first hypothesis (Hypothesis 1) is supported by the study.

Hypothesis 2: It seems that usage of Payback Period(PBP) have a positive effect on Return on Assets(ROA) of companies in Balkh province

Table 13:

One-Sample T Test					Confidence Level 95%	
	N	Mean	Std. Deviation	t	Test Value	P-Value
Using PBP method help companies in Balkh province to accurately determine the period in which the investment is recovered.	30	3.7523	0.6608	11.05	3	0.005
Initial investment in project is considered at nominal value.	30	4.2667	0.6372	10.846	3	0.005
Companies in Balkh province set a 'standard pay-back' period to be maintained on all investment projects.	30	4.2531	0.5683	11.886	3	0.005
The projects with shortest pay-back period is considered by Companies in Balkh province.	30	4.1246	0.7184	7.878	3	0.005

In Table 13, mean value of 3.7523 for the first statement Using PBP method help companies in Balkh province to accurately determine the period in which the investment is recovered, indicates a moderate response. We also sought to determine initial investment in project is considered at nominal value, the mean was 4.2666 which was a positive response and this means that nominal value is usually considered while initial investment in projects. Also companies in Balkh province set a standard pay-back period to be maintained on all investment projects and it recorded the mean of 4.2531 which indicates that setting a standard

pay-back period extremely crucial while using this method of making investment decisions. For the statement the projects with shortest pay-back period is considered by the companies, the mean of 4.1246 was obtained indicating a strong response. Therefore, with 95% confidence level we summarize that usage of PBP method of capital budgeting is positively related to companies' ROA. Hence, the second hypothesis is accepted by the study.

Hypothesis 3: It seems that usage of Discounted Payback-Period(DPBP) have a positive effect on Return on Assets(ROA) of companies in Balkh province

Table 14:

One-Sample T Test			Confidence Level 95%			
	N	Mean	Std. Deviation	t	Test Value	P-Value
By considering time value the companies easily determine the period in which the investment is recovered.	30	2.0333	0.556	-9.522	3	0.005
The companies usually calculate an appropriate discount rate.	30	1.9667	0.6149	-9.204	3	0.005
Companies in Balkh province set a 'standard discounted pay-back' period to be maintained on all investment projects.	30	1.7212	0.7849	-8.837	3	0.005
The projects with shortest discounted pay-back period is considered by Companies in Balkh province.	30	1.9672	0.6386	-9.133	3	0.005

As shown in Table 14, by considering time value the companies easily determine the period in which the investment is recovered, had a mean value of 2.0333 indicating a negative response which means most of the companies don't consider the time value. The companies usually calculate an appropriate discount rate, had a mean value of 1.9667 and this indicates most of the companies don't calculate an appropriate discount rate. The mean value of 1.7212 was recorded in this study where it was in line with the statement that the companies set a standard discounted pay-back period to be maintained on all investment projects, indicating a negative response. The projects with shortest discounted pay-back period is considered by the companies had a mean of 1.9672 which highlights a negative response. Hence with 95% confidence level we conclude that using DPBP method of capital budgeting is negatively related to companies' ROA. Thus, the third hypothesis is rejected by the study.

Hypothesis 4: It seems that usage of Internal Rate of Return(IRR) have a positive effect on Return on Assets(ROA) of companies in Balkh province.

Table 15:

One-Sample T Test			Confidence Level 95%			
	N	Mean	Std. Deviation	t	Test Value	P-Value
Using IRR method help companies in Balkh province to equalize the inflows and outflows.	30	4.2308	0.4296	14.606	3	0.005
The companies usually estimate an appropriate Internal Rate of Return.	30	4.1538	0.3679	15.99	3	0.005
The projects with IRR more than the required rate is considered by the Companies.	30	4.1286	0.4823	13.87	3	0.005

In Table 15, the mean value of 4.2308 was for the statement that using IRR method help companies in Balkh province to equalize the inflows and outflows, indicating a positive response. We also determine whether the companies usually estimate an appropriate Internal Rate of Return, the mean was 4.1538 which was a positive response. The projects with IRR more than the required rate is considered by the companies and it recorded the mean of 4.1286 also highlighting a positive response. Hence with 95% confidence level we conclude that using IRR method of capital budgeting is positively related to companies' ROA. Thus, the fourth hypothesis is supported by the study.

Hypothesis 5: It seems that usage of Profitability Index(PI) have a positive effect on Return on Assets(ROA) of companies in Balkh province.

Table 16:

One-Sample T Test					Confidence Level 95%	
	N	Mean	Std. Deviation	t	Test Value	P-Value
Companies in Balkh province accurately estimate present value of cash inflows and present value of cash outflows.	30	3.3854	0.4314	13.182	3	0.005
The companies usually calculate an appropriate Benefit Cost Ratio.	30	3.2361	0.6275	8.75	3	0.005
The projects with greater than one PI is considered by Companies in Balkh province.	30	4.1463	0.7215	9.66	3	0.005

In Table 16, the mean value of 3.7854 was for the statement that companies in Balkh province accurately estimate present value of cash inflows and present value of cash outflows, indicating a moderate response. We also determine whether the companies usually calculate an appropriate benefit cost ratio, the mean value was 3.2361 which was a neutral response. The projects with greater than one PI is considered by Companies in Balkh province and it recorded the mean value of 4.1463 highlighting a positive response. Hence with 95% confidence level we conclude that using PI method of capital budgeting is positively related to companies' ROA. Thus, the fifth hypothesis is supported by the study.

Hypothesis 6: It seems that usage of Accounting Rate of Return(ARR) have a positive effect on Return on Assets(ROA) of companies in Balkh province

Table 17:

One-Sample T Test					Confidence Level 95%	
	N	Mean	Std. Deviation	t	Test Value	P-Value
The companies compare the average annual returns of an investment against its average net book value.	30	1.2692	0.4523	-19.510	3	0.005
The investment period considered is neglected during budgeting decisions.	30	2.9721	0.5084	-5.437	3	0.005
The companies use historical information in evaluating future proposed projects.	30	1.6159	0.5172	-13.281	3	0.005

As shown in Table 17, the firm compares the average annual returns of an investment against its average net book value had a mean value of 1.2692 which indicates negative responses. The investment period considered is neglected during capital budgeting decisions had a mean value of 2.9721 which highlights a neutral response. The mean of 1.6159 was recorded in this study where it was in line with the statement that the firm uses historical information in evaluating future proposed projects which also indicates negative responses. Hence with 95% confidence level we conclude that using ARR method of capital budgeting is negatively related to companies' ROA. Thus, the sixth hypothesis is rejected by the study.

Regression Result

We also have decided to use regression because Regression analysis is one of the most important statistical techniques for financial applications. It's a statistical methodology that helps us to estimate the strength and direction of the relationship between two or more variables.

In the study the dependent variable used was Return on Assets(ROA). ROA was proxies as companies' performance indicator and the six capital budgeting methods employed were Net Present Value(NPV), Payback period(PBP), Discounted Payback Period(DPBP), Internal Rate of Return(IRR), Profitability Index(PI) and Accounting Rate of Return(ARR).

The model adopted is:

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \varepsilon$... (1)

Where;

Y = Companies Performance (ROA) in Balkh Province
X1 = Payback period
X2 = Net present value
X3 = Discounted Payback Period
X4 = Internal rate of return
X5 = Profitability Index
X6 = Accounting rate of return
β0 = Slope coefficient of the model
β1= Beta coefficient of determination
ε = error term

From the Table 18 below, R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table below there was a positive relationship between the study variables as shown by 0.611 at the 5% significance level. The Adjusted R squared is the coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variables, from the findings in the table below the value of adjusted R squared was 0.551 which is an indication that there was variation of 55.1% on performance of companies due to changes in net present value,

Payback period, Internal rate of return and Profitability Index at 95% confidence interval. This is an indication that 55.1% of the changes in performance of companies could be account for by the independent variables.

Table 18:

Model Summary							
Model	**R**	**R square**	**Adjusted R square**	**Std. error of the estimate**	**R square Change**	**F change**	**Sig. F change**
1	.782	0.611	0.551	0.587	0.611	13.227	.005
Capital Budgeting Methods: (Constant),X1, X2, X3, X4, X5,X6							

Table 19:

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**Sig.**
	B	Std. Err	Beta	
Constant	4.278	4.892		0.082
X1	0.347	0.072	0.292	0.008
X2	0.238	0.261	0.172	0.064
X3	-0.156	0.384	-0.177	0.173
X4	0.583	0.076	0.521	0.003
X5	0.275	0.083	0.243	0.040
X6	-0.124	0.065	-0.388	0.061

From the regression equation below, it was found that keeping all the capital budgeting decision methods to a constant zero, the performance of companies will be 4.278%, one unit increase in the use of the Net Present Value method would lead to increase in performance of companies in Balkh by 34.7%, one percent increase in the use of Payback Period method would lead to an increase in performance of companies in Balkh by 23.8%, one percentage increase in the use of Internal Rate of Return would lead to 58.3% increase in performance of companies and one percentage increase in the use of Profitability Index would lead to an increase in performance of companies by 27.5%. Unfortunately, the Discounted Payback Period method and Accounting Rate of Return are not only insignificant for the study but show a negative effect on performance of companies. Had this result been statistically significant, one percentage increase in the use of Discounted Payback Period and Accounting Rate of Return would have hindered performance of companies by 15.6% and 12.4% respectively. Overall, the Internal Rate of Return had the greatest effect on performance of companies, followed by Net Present Value, Profitability Index, then Payback Period. At 5% level of significance and 95% level of confidence, Net Present Value had a 0.008 level of significance, Payback Period had a 0.064 level of significance, Internal Rate of Return had a 0.003 level of significance, Profitability Index had a 0.04 level of significance while Discounted Payback Period and Accounting Rate of Return had 0.173 and 0.061 level of significance respectively. Hence the most significant factor is the Internal Rate of Return method. All the variables were significant ($p<0.05$). Substituting the estimated results in the empirical model specified in this chapter gives:

$Y = 4.278 + 0.347X1 + 0.238X2 - 0.156X3 + 0.584X4 + 0.275X5 - 0.124X6$

The above equation is our final estimated equation which shows how much each independent variable may impact or influence the dependent variable as already explained in the interpretation and analysis above.

7. Findings, Conclusion and recommendations

This section rounds off the research study. It condenses the findings and results of the research, draws up conclusions and makes recommendations for future improvements or initiative on the issues discussed. The study in essence sought to unearth the impact of capital budgeting decisions on performance of companies in Balkh Province.

The research contributes to capital budgeting and performance literature by exploring the relationship between capital budgeting decisions and performance of companies in Balkh. Theories and literatures were reviewed to develop a suitable model for performance of companies and capital budgeting methods.

The reliability and validity measurement scales were used to measure the relationship between capital budget decisions and performance of companies. Results of testing the model using One-Sample T Test and Regression Analysis discovered some important findings: firstly, most of the independents variables have a direct positive relationship with performance of companies which supported the first (hypothesis H1), second (hypothesis H2) fourth (hypothesis H4), and fifth (hypothesis H5) hypotheses of the study except for the Discounted Payback Period(DPBP) method and Accounting Rate of Return (ARR) method. Thus third (hypothesis H3) and sixth (hypothesis H6) were not supported.

Consequently, in a Statistical view point; the findings confirm that increasing the use of the Internal Rate of Return Method in capital budgeting decisions will strongly invoke performance of companies.

In summary, what can be concluded is that most of the capital budgeting methods have positive impact on performance of companies in Balkh province except for the DPBP and ARR Methods. The impact which the methods have on performance can be reinforcing. It is considered that the companies' budgeting committees have to change their way of capital budgeting decisions to formal and standard methods in order to generate the projected earnings. For this case study of companies what can be concluded is that the if they use these methods of capital budgeting decisions it will positively impact the performance of companies as suggested by the regression result.

This study has certain limitations as in any research. First and foremost, the research made up of 30 finance specialists working at Universities and Offices in Balkh Province, the sample might not be adequate for generalization. Secondly, the capital budgeting decision methods of the companies are sensitive to location. That means, surveys with the same sample in different locations may result in different outcomes. It is suggested that further researchers take the current constraints into consideration

and use different measurement scales to measure the connection between the capital budgeting decision and performance of companies.

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