

## THE REVIEW AND USE OF CAPITAL BUDGETING INVESTMENT TECHNIQUES IN EVALUATING INVESTMENT PROJECTS: EVIDENCE FROM MANUFACTURING COMPANIES LISTED ON PAKISTAN STOCK EXCHANGE (PSE)

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### ABSTRACT

*An assortment of speculation examination/capital planning systems is talked about as a basic segment of standard and prominently utilized course readings on Financial Management and Corporate Finance. Every procedure has a few points of interest and deficiencies which a client must know about other than knowing which method would be the right instrument to use for taking a choice in a specific circumstance. That's why the aim of the present study is to determine the review and use of capital budgeting investment decision in Pakistan in 2017. As there is 427 manufacturing companies listed on Pakistan stock exchange categorized into 26 sectors from which five sectors [Chemical, automobiles assemblers, food & personal care product, sugar & allied industry and textile (weaving)] have selected as a sample by applying purposive sampling technique, which contains 90 manufacturing companies. The nature of study based on quantitative and qualitative both. Primary data was collected with the help of adopted questionnaire containing sixteen items. There are six types of capital budgeting techniques like internal rate of return (IRR), payback period (PBP), profitability index (PI), accounting rate of return (ARR), net present value (NPV) and modified internal rate of return (MIRR) which are considered in investment decision but four techniques (net present value (NPV), internal rate of return (IRR), profitability index (PI), and payback period (PBP)) are more specifically be used in every organization. That's why the current study considered these four techniques to evaluate investment projects. The reliability calculated by the help of Cronbach's Alpha and One-Sample T-Test used to calculate the results of this study statically to prove the significance level (P-value) of Net Present Value, Internal Rate of Return, Profitability Index and Payback Period. The results found that net present value (NPV) is most commonly used by the manufacturing companies in choosing amongst investment projects, while on the other side profitability index (PI) has least used in investment decisions by the firms in Pakistan according to the statistical results. It is, further, revealed that most of the firms used only one evaluation technique among these favored techniques. Moreover, it is found that project definition is the most important and critical in the capital budgeting process for service organizations.*

**Key Words:** Capital Budgeting Techniques, Pakistan Stock Exchange, NPV, IRR, PI, PBP

### INTRODUCTION

Companies are often encountered with the decision to make large expenditures. However, for any firm, expenditures are not the same. They can be divided into two types, the first type is the current expenditure which is incurred frequently by the firm, relates to a specific period and is relatively smaller in amounts such as the electricity expenses, the phone expenses, and the salaries of employees (Daour & Shaaban, 2013): The second type is the capital expenditure which is a

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a nonrecurring expenditure that relates to long periods of time and it usually entails the disbursement of large amounts of dollars such as investments in fixed assets, capital improvements, and new companies (Alnaaemi, et al. 2010).

On the other hand, firms usually have a capital budget ceiling, or constraint, on the number of funds available for investment during a specific period of time; this situation is called capital rationing (Horne, 2004). According to Ross et al. (2006) capital rationing is defined as the situation that exists if a firm has feasible projects but cannot obtain the necessary financing. Such a constraint is prevalent in most of the firms, particularly in those that have a policy of financing all capital expenditures internally and avoiding resorting to the capital markets (Horne, 2004). Thus, a firm cannot undertake all the appealing feasible projects if it has a capital budget constraint. This, in turn, places more pressure on the firm to undertake the best available capital investments.

Hornigren et al. (2005) define capital budgeting as “the long-term planning for making and financing investments that affect financial results over a period longer than just the next period”. When dealing with capital budgeting investment decision most of the large organizations normally used specific procedures and methods. Capital budgeting decisions affect the operations of a going concern for the long term. Essentially, the process of capital investment involves the innovative search for investment opportunities, arranging them on the basis of some schedule, gathering data and information on the feasible alternatives predicting cash flows, distinguishing satisfactory variables from unsatisfactory variables on the basis of well-known methods and checking the critical parts of extending execution. However, financial literature seems to be mainly accurate and sophistication of methods, especially with develop and refine quantitative risk and return assessment techniques (Zaman, Arslan & Siddique, 2014).

There are six types of capital budgeting techniques like internal rate of return(IRR), payback period(PBP), profitability index(PI), accounting rate of return(ARR), net present value(NPV) and modified internal rate of return(MIRR) which are considered in investment decision but four techniques net present value (NPV), internal rate of return (IRR), profitability index (PI), and payback period (PBP) ) are more specifically be used in every organization(Andrés, Fuente & Martín, 2015). Although each one of these techniques has its own advantages and disadvantages, this research is not intended to differentiate between the various methods of capital budgeting techniques but rather to investigate the use of capital budgeting techniques in the manufacturing sectors in Pakistan.

### **PROBLEM STATEMENT**

According to financial theory, the objective of the firm is to maximize the wealth of its shareholders. The optimal investment decision is hence the one that maximizes the present value of shareholders' wealth (Copeland & Weston, 1992). Capital budgeting procedures can under the assumption of economic rationality all be regarded as means, which a firm uses in order to fulfil its objective, to maximize shareholders' wealth. This fact indicates that firms can increase or even maximize its shareholder wealth by using sophisticated capital budgeting procedures.

Studies undertaken on capital budgeting techniques include: Kengatharan (2016) focused on the review of capital budgeting techniques by taking different databases; (Zubairi& Amin, 2016) investigated the review of capital budgeting decisions on financial and non-financial firms listed on Pakistan stock exchange (PSE); discussed the problem of capital budgeting decision used by South African mines listed on the Johannesburg Securities Exchange (JSE) and the reasons behind

their use were investigated; Masson (2004) determined which capital budgeting techniques publicly traded utility companies are currently using and to ascertain if they had changed their emphasis on the use of capital budgeting techniques. Hermes, Smid, and Yao (2007) focused on the practices of capital budgeting techniques between Netherland (Dutch) and Chinese Companies comparatively; Daniel (2014) results of a survey on the capital budgeting practices in Rwanda. A questionnaire seeking to assess the capital budgeting techniques, cash flow estimation was used in order to assess problems faced in applying theory to practice was distributed to 30 Rwandan companies these included the banking and non-banking institutions. The study indicated that most firms use internal rate of return (IRR) and discounted payback period (DPBP). Olum (1975) focused on capital investment appraisal, technique and publicity finances investment project in the private sector; Simiyu (1977) focused on the problems of budgeting and motivation at the supervisory level in manufacturing firms in Kenya; Biwott (1987) focused on the budgetary allocation process in public sector institutions; Kadondi (1987) undertook a survey of capital budgeting techniques used by companies listed at the NSE (Nigerian Stock Exchange).

None of the studies has been done the review of capital budgeting techniques in manufacturing companies only due to this reason the present study focused on manufacturing companies of Pakistan stock exchange (PSE) in Pakistan and also analyze statically to check the significant level of each technique adopted by (Daour&Shaaban, 2013). The researchers took only five sectors naming: Chemical, automobiles assemblers, food & personal care product, sugar & allied industry and textile (weaving) sectors in out of twenty-five sectors because in Pakistani context the other researchers focused on both manufacturing and non-manufacturing companies. The study also aimed at bridging knowledge gap in the area of adoption of Capital budgeting techniques in manufacturing sectors of Pakistan by seeking answers to the following research questions: What are the capital budgeting techniques employed by the manufacturing sectors? And how would be the significant level of each technique of capital budgeting in evaluating investment projects due to organizational factors?

### **OBJECTIVES**

- To consider the capital budgeting techniques employed by manufacturing companies in Pakistan
- To calculate the use of capital budgeting techniques in evaluating investment projects in manufacturing sectors of Pakistan

### **RESEARCH QUESTIONS**

- Do the manufacturing companies of Pakistan consider the capital budgeting techniques when choosing among investment projects?
- Are there differences at the significance level ( $\alpha= 0.05$ ) in the responses about the use of capital budgeting techniques in evaluating investment projects?

### **LITERATURE REVIEW**

Capital budgeting decisions are extremely important and complex and have inspired many research studies. In an in-depth study of the capital budgeting evaluations, Marc Ross found in 1972 that although techniques that incorporated discounted cash flow were used to some extent, firms relied rather heavily on the simplistic payback model, especially for smaller projects. In addition, when

discounted cash flow techniques were used, they were often simplified. For example, some firms' simplifying assumptions include the use of the same economic life for all projects even though the actual lives might be different. Further, firms often did not adjust their analysis for risk (Ross, 1986). Literature of finance gives two sorts of capital budgeting strategies in the development of the venture evaluations. One is the traditional technique, that is involved and sentiments were utilized as a part of assessing the capital budgeting choices. As of late there are created non-discounted and discounted cash flow procedures are there to assess the capital budgeting choices and official have the alternative to utilize any strategy or a mix of every one of the three strategies to show signs of improvement choices which upgrade the investors' riches (Schall, Sundem & Geijsbeek, 2014).

### ***1. Capital Budgeting Techniques***

The prime undertaking of the capital budgeting is to evaluate the prerequisites of the capital venture of a business. A portion of the techniques depends on the idea of incremental money streams from the undertakings or potential ventures. For the analysis of data the following capital budgeting techniques were used that is mentioned below:

- Pay Back Period (PP)

It is an extremely straightforward strategy. It gives the precise time to giving back the sum. The venture ought to be acknowledged your anticipated payback time (PB) is equivalent to/not as much as the time required by the association Arnold and Hatzopoulos (2000). Payback is the duration in which the initial money recouped from the whole of each year's money inflows (Peterson & Fabozzi, 2002). It is rejected at that time when the duration is less an equal than a cutoff period. On the other side when the time period is greater than cut off period so the project will be accepted.

- Net Present Value (NPV)

It is a strategy that decides the present estimation of the inflows and outflows and afterwards just takes a contrast between the two. If the amount is greater than the initial value so the project will be accepted, and if the amount of NPV is less than initial cash flow so the project will be rejected (Chai, 2011).

- Profitability Index (PI)

The profitability index (PI) is another variety of NPV in that it endeavours to estimate the outcomes got by the IRR without the resultant calculations. NPV by and large rewards extensive benefits since it is simpler for them to create substantial NPVs without having a high IRR. The PI modifies for this by a basic change. In NPV counts, the present estimation of the outpourings is subtracted from the present estimation of the inflows giving the NPV. The profitability index takes those same two numbers yet rather separates the present estimation of the surges into the inflows. On the off chance that the resultant number is more noteworthy than one it is an adequate venture (Chai, 2011).

- The internal rate of return (IRR)

It is just a variety of NPV in that it endeavours to discover the rate of discount that gives an NPV of zero. On the off chance that the NPV is sure it is accepted that the genuine return is higher. On the off chance that the NPV is negative, it is assumed the real return is lower. By consistently controlling the markdown rate it is conceivable to focus on the rate where the NPV is zero (Chai, 2011).

### **Empirical Studies**

Even though capital investment process includes many stages, Literature of finance has focused on the monetary consideration and determination of investment recommendations. The different phases of the procedure are less all around organized and henceforth it is harder to build up a hypothetical system for them. They are, be that as it may, essential parts of the entire procedure. Istvan (1961) and Bowlin (1976) found that the lion's share of capital investment approvals was started at the operating levels, the however major proposition, as a rule, spilt out of best administration. Fremgen (1973) discovered the strength of divisional and plant levels over the focal office level in the proposition screening process particularly when the solicitations are identified with the current item lines. The focal office, by and large, decides the assets to be dispensed and the go no-go choices. In an investigation of twelve expansive makers Ross (1986) found that the basic leadership procedures of the vast majority of the organizations are distinctive for various venture sizes. Normal levels of endorsement expert are plant and divisional chiefs for little tasks, corporate investment advisory group for medium-sized ventures, and top managerial staff for expansive ventures.

Block (2005) completed an assessment to with between various businesses including Three hundred two fortune 1000 organizations and found that industry designs influence the financing and capital budgeting choices of all the businesses inspected. Ryan and Ryan (2002) clarified that NPV and IRR are the most favoured capital budgeting apparatus of Fortune 1000 organizations inspected. In the meantime, Payback period and Profitability Record are additionally being used to some degree.

Lord, Shanahan and Boyd (2004) studied portion of the New Zealand neighbourhood experts to determine how they comprised capital budgeting. This determination was later reached out to all New Zealand nearby experts. Consequences of the two reviews demonstrate that 75% of neighbourhood specialists utilize money saving advantage investigation and NPV in monetarily assessing capital speculations. Be that as it may, contrasted with investigations of the private segment, there is a more attention on subjective parts of basic leadership. Post-reviews were additionally profoundly utilized, however with a concentrate on quantitative data.

Smid, Yao and Hermes (2006) looked at the utilization of capital budgeting systems of Dutch and Chinese firms, utilizing information got from a study among 250 Dutch and 300 Chinese organizations. They have examined the utilization of capital budgeting systems by organizations in the two nations from a similar viewpoint to see whether financial improvement matters. The empirical studies give confirm that Dutch CFO (Chief Financial Officer) on a normal utilize more refined capital budgeting methods than Chinese Chief Financial Officers do. Their results recommend that the contrast amongst Dutch and Chinese firms is littler than might have been normal in light of the distinctions in the level of financial advancement between the two nations, in any event as for the utilization of techniques for evaluating the cost of capital and the utilization of Capital Assets Pricing Model as the strategy for assessing the cost of value. The NPV strategy is more favoured by Chinese firms while IRR technique is better known among Dutch firms.

Brennon Meredith and Marchant (2010) completed a study on capital budgeting of vast firms in Canada, numerous extensive firms in Canada tend to utilize Discounted Cash Flow strategies (DCF) in assessing their investment chances. Subsequently, Discounted Cash Flow Techniques are progressively acknowledged by the extensive firms in America uniquely NPV and IRR. In any case, this study has not tended to the arrangement of cash related goals of the business methodology with the appropriation of venture examination strategies in assessing the investment chances. Moreover, they

they clarified that use of non-discounted cash flow techniques has declined however the utilization is still in the framework.

In Pakistan, the research in the same area was conducted by Shafique, Hussain and Hassan, (2013) by taking 5 largest branches of Islamic banks. Their findings showed that in Pakistan most of the Islamic banks used the Net Present Value (NPV) model for the Capital Budgeting Decision making. On the other hand, smaller Islamic banks used the Internal Rate of Return (IRR) as a primary model.

### Hypotheses

**H1:** The manufacturing companies in Pakistan considers the capital budgeting techniques when choosing among investment projects.

**H2:** There are no differences in the responses about the use of capital budgeting techniques in evaluating investment projects

## METHODOLOGY

The focus of the current study is to investigate the review and use of the capital budgeting techniques by using the quantitative and qualitative method to quantify the results and descriptive in type. Data gathered through an adopted questionnaire (Zubairi & Amin, 2016) based on sixteen items regarding capital budgeting techniques from the executives of manufacturing sectors. The survey questionnaire divided into three sections, section one containing 5 items about role of firms in decision making, experience, selection of firms, number of employees and paid-up capital, section two consists of three items about capital budgeting decision, amount of investment and significance of capital budgeting techniques, while eight items included in the section three regarding cost of capital and leverage ratio. The population based on 26 manufacturing sectors which contain 427 companies listed on Pakistan Stock Exchange (PSE) in which only five manufacturing sectors have taken as a sample to make this study more meaningful. The sample size is mentioned below to specify the sectors:

**Table 1:** Sample Size of Manufacturing Sectors Listed on PSE

<i>S.No</i>	<i>List of Manufacturing Companies</i>	<i>Number of Companies</i>
1	Chemical Sector	29
2	Food & Personal Care Products	22
3	Automobiles Assemblers	12
4	Sugar & Allied Industry	24
5	Textile (Weaving)	13
	<b>Total</b>	<b>90</b>

**Source:** Pakistan Stock Exchange (PSE)

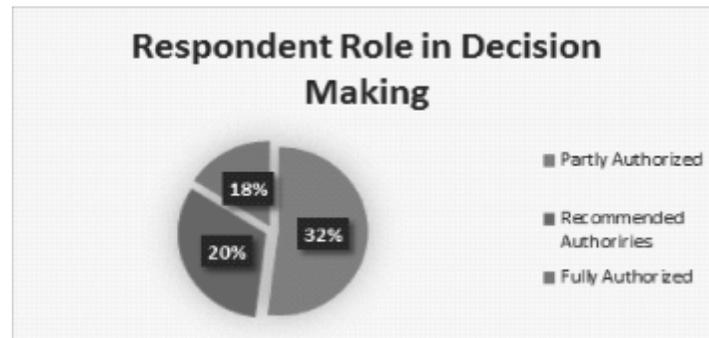
In out of 427 companies the 90 companies were selected by applying a purposive sampling technique. The data about companies used in this research was obtained from the Pakistan Stock Exchange website and the contact details of the financial officers were obtained from company websites by use of a Google search. In order to obtain more meaningful results and to add value to the responses, all 90 companies were considered for participation in the research. All 90 companies were contacted by telephone to establish if they were interested in participating in the research. Software Package for Social Science (SPSS) used to calculate the results of the study by applying different tests to test each hypothesis respectively which are mentioned below (El-Daour&Shaaban, 2013):

- Alpha – Cronbach's alpha
- One Sample T-Test

## RESULTS AND DISCUSSION

### Review of Capital Budgeting Techniques

The main aim of this paper is to investigate that which type of capital budgeting technique is widely used by the firm's listed on Pakistan Stock Exchange (PSE) based on a sample survey. The results of this study showed that 32 % of respondents are partly authorized to take advantage of capital budgeting decision in their investment projects. 20% of the respondents as it was having recommended authorities, while just 18% were completely authorized to take capital budgeting decision in their own in out of 70% respondents. It is calculated with the help of question one of the survey.



**Figure 1:** Respondent Role in Decision Making

According to the sample data, the researcher found that majority of the companies used Net Present Value (NPV) 95%, internal rate of return (IRR) 90%, payback period (PBP) 88% and the profitability index (PI) 50%. For each of the initial investment outflow, 33% of the companies used this capital budgeting tool, the amount of investment is greater than Rs. 25 million to the 45% of firms used these tools for investors. Hence like that, when the size of the investment is more than Rs. 50 million then only 17 % of the firms used these capital budgeting decision tools for their investment.

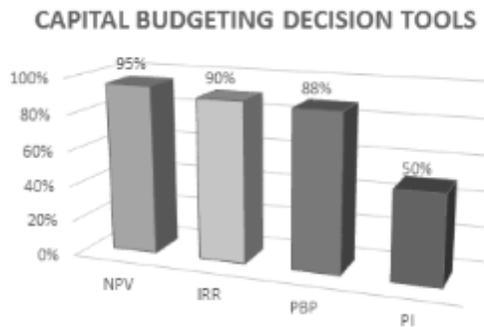


Figure 2: Capital Budgeting Decisions Tools

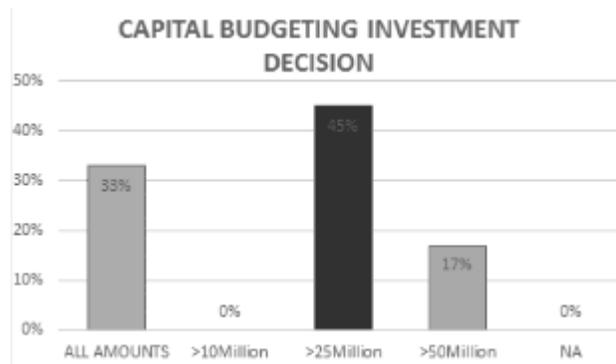


Figure 3: Capital Budgeting Investment Decisions According to the Price Level of Funds

**The significance of the Capital Budgeting Techniques**

In view of the question, six of the survey data the below results has conducted in table 2.

**a. Net Present Value (NPV)**

According to the survey data, the results found that 60% of firms considered NPV as an important instrument, while 20% of the firms considered it as important and the remaining 13% considered moderately important. 7% is not considered as significant technique by the firm

**b. The internal rate of Return (IRR)**

73% of firms considered this technique a very important technique for assessment, 8% of firms considered it as an important technique and 9% of firms considered it moderately important technique.

**c. Pay Back Period (PBP)**

Firms give more importance to 75% of this technique, while 9% considered important and 8% firms considered it as a moderately important for decision making.

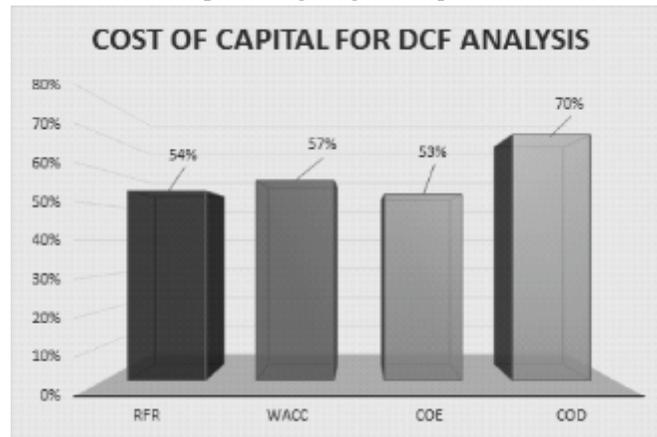
**d. Profitability Index (PI)**

Only 52% of the firms considered it more important for decision making.

**Table: 2** The significance of Capital Budgeting Tools are used by the Firms

<i>Tools Applied</i>	<i>Not App</i>	<i>Not Imp</i>	<i>Mod. Imp</i>	<i>Important</i>	<i>Very Imp</i>
NPV	0	7%	13%	20%	60%
IRR	0	0	9%	8%	73%
PBP	0	0	8%	9%	75%
PI	0	0	0	0	52%

Figure 4 showed that after the analysis of capital budgeting technique the another question is that what cost of capital rate/ discount rate the firms used if they employ a discounted cash flow technique, the response presented that 54% of the firms use 'Risk Free Rate plus a risk premium', 57% of the companies use Weighted Average Cost of Capital, 53% of the firms employ Cost of Equity Capital and 70% of the firms used cost of debt. In capital budgeting decision making the cash flow (80%) used after tax. 85% of firms use different capital budgeting techniques for different risk classes.

**Figure 4:** Cost of Capital for Discounted Cash Flow (DCF) Analysis

Most of the firms calculate more than one measure to calculate the risk factor for the project. For instance, 60% of the organizations utilize their 'Subjective Judgment', majority of the firms (82%) deliberates 'Likelihood Distribution of the Project's Projected Cash Flows', 48% of the reacting firms utilize 'Covariance of Project's Cash Flow with Cash streams of other Projects' and 55% of the organizations offer weight to 'Likelihood of Loss' in the ventures. The organizations can also calculate the effect of risk factor in the project by applying different techniques in which 44% of the organizations do as such by raising the required payback time frame, 40% of the organizations turn to bring the markdown rate up in processing the present estimation of the venture and just 13% of the organizations abbreviate the required payback time frame. Additionally, a significant number of the organizations (25%) utilize none of the strategies specified in our questionnaire.

The company's cost of the capital might be investigated under different circumstances. High level of the organizations (95%) audit the cost of capital at 'Project Evaluation time' and 70% of the organizations assess it when there is 'Critical Business Environment Change'. 45% of the organizations audit their cost of capital on the basis of Semi-yearly, just 30% organizations survey it

on 'Quarterly Basis' and just a couple of (16%) of the organizations evaluate it on 'yearly premise'. While checking on the occasional cost of capital, it might include evaluating the Opportunity cost of capital, Cost of obligation just and Weighted Average Cost of Equity and Debt. There are 52% of the organizations who offer inclinations to 'Weighted Average Cost of Equity and Debt', 55% just to 'Cost of Debt' and only 11% to 'Circumstance Cost of Equity'.

For assessing the connection between growth rate of the organizations and capital budgeting techniques, we have determined that the organizations whose P/E (price per earning) proportion is high (more than 30), give most significance to utilization of IRR (60%) trailed by PBP (20%), PI (12%) and NPV (16%). Also, when the P/E proportion is direct say under 30 yet more than 10, the organizations give almost rise to significance to IRR, NPV, PI, and PBP i.e. 60%, half, 45% and 55% individually. Though organizations whose P/E proportion is low (underneath 10), rate IRR, NPV, PI and PBP as high in significance i.e. 62%, 45%, 22% and 37% individually.

**Table: 3** Company's Cost of Capital

	<i>NPV</i>	<i>IRR</i>	<i>PBP</i>	<i>PI</i>
<b>High P/E (&gt;30)</b>	16	60	20	12
<b>Moderate P/E (&gt;30&gt;10)</b>	50	60	55	45
<b>Low P/E (&gt;10)</b>	45	62	37	22

Likewise, with respect to the connection between financial leverage and capital budgeting techniques utilized by the firms, we checked that highly leveraged firms utilize IRR (60%), NPV (35%), PI (15%) and PBP (20%), moderate leveraged firms use IRR (60%), NPV (11%), PI (9%) and PBP (14%). However, low leveraged firms widely use IRR (93%) followed by PBP (56%), PI (34%) and NPV (52%)

**Table 4:** Leverage (Long-Term Debt to Total Capitalization Ratio)

<i>Leverage (Long-Term Debt to Total Capitalization Ratio)</i>	<i>NPV</i>	<i>IRR</i>	<i>PBP</i>	<i>PI</i>
High (More than 70:30)	35	60	20	15
Moderate (31:69 to 70:30)	11	60	14	9
Low (0:100 to 30:70)	52	93	56	34

## STATISTICAL REVIEW/ANALYSIS

### Reliability

Statistical Package for Social Science (SPSS) to check the reliability of the study and found that all the items are highly reliable. Sekaran, (2005) stated that a value of 60% is acceptable whereas a value of 90% is excellent while the reliability of this study is 80% and near to 90%

**Table 5:** Reliability

<i>S.No</i>	<i>Section</i>	<i>Items</i>	<i>Cronbach's Alpha</i>
1	Role of the company in decision making	5	0.83
2	The use of capital budgeting techniques in assessing the investment project	3	0.86
3	Cost and riskiness involved in capital budgeting decision	8	0.80

One-Sample T-test used to test the sentiments of the respondents about regardless of whether the capital budgeting techniques are utilized as a part of assessing investments decision in their organizations (Daour & Shaaban, 2013) and the outcomes appear in Table No. (5) Follow as:

1. The mean value of NPV is 1.4950 and the standard deviation is 0.60114, p-value equals "0.016 < 0.05, this means (when assessing the investment project the observers are neutral while using NPV).
2. The PBP mean and standard deviation are 1.4525 and 0.62798 respectively having a p-value of "0.019" < 0.05, so the results indicated that (The respondents are unbiased as to whether the PBP is used when calculating investment projects).
3. The mean and standard deviation of IRR is 1.5925 and 0.80579 with a p-value of "0.029", which is less than 0.05, this means (when analyzing investment project the observer considered that most of the firm use IRR in decision making)
4. The PI mean equals "1.1675" and the standard deviation is 0.76111 with a p-value "0.052" which is equal to 0.05, this means (when investigating investment project the respondents are impartial while utilizing profitability Index).

**Table: 5** The use of capital budgeting techniques in evaluating investment projects in the firms

<i>S.No.</i>	<i>Elements</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>T-Value</i>	<i>P-Value</i>
1	NPV	1.4950	.60114	4.974	.016
2	IRR	1.5925	080579	3.953	.029
3	PBP	1.4525	.62798	4.626	.019
4	PI	1.1675	.76111	3.068	.052

## DISCUSSION

Finally, the result showed that the NPV method is the most dominant capital budgeting technique according to the executives of all sectors. It has been found that the executives mostly prefer NPV method of capital budgeting from the companies of the manufacturing sector. The findings of the study are supported by previous studies. Firstly, Gittman and Forrester (1977) [as cited in Rishi and Rao, 2005] showed that most of the firms use the NPV method for capital budgeting. Secondly, Graham and Harvey (2001) showed that executives are more likely to use NPV. On the basis of findings, the first hypotheses are accepted because the firms considered capital budgeting techniques while choosing investment decisions.

In general, the results for all items of the field showed that there have a significant results of net present value (NPV), internal rate of return (IRR), payback period (PBP) in capital budgeting investment decision and Pakistan while the result of profitability index (PI) has neutral mean to be the least used technique in Pakistan thus, the researchers have sufficient evidence to conclude that the manufacturing companies of Pakistan use the capital budgeting techniques when choosing among investment projects at a significance level of ( $\alpha= 0.05$ ). This means that this research accepts the first hypothesis at a significant level ( $\alpha= 0.05$ ). The results are consistent with the findings of Khamees, et al., (2010) found that and PBP was the most utilized system by Jordanian Industrial Corporations. Though Apap and Masson (2005) and Maroyi and Poll (2012) discovered that NPV, PBP, and IRR the most normally utilized by American and South Africa organizations. Likewise, Brijlal (2008) noticed that PBP and NPV were most utilized from Western Cape area of South Africa, though IRR and NPV most supported by expansive organizations. In any case, it couldn't help contradicting Shinoda (2010) which indicated that Japanese organizations joined NPV and PBP. El-Daour & Shaaban, 2013 results found that there that the Palestinian public corporations in Gaza strip used the capital budgeting techniques when selecting investment projects and that the use of these techniques was in the range of 61 to 80%, and that the profitability index is the most used technique while the net present value was found to be the least used technique. Daour and Shaaban (2014) also stated that there is an insignificant level of profitability index and showed significant results of net present value, internal rate of return and payback period in China. The results find that large firms rely heavily on NPV, IRR, Discounted PBP and these are the favoured techniques in Sri Lanka. It is, further, revealed that most firms used only one evaluation technique among these favoured techniques. Moreover, it is found that project definition is the most important and critical in the capital budgeting process for service organizations (Koralalage, 2014).

## CONCLUSION

The current study focused to check the review and use of capital budgeting decision in Pakistan by taking manufacturing sectors listed on Pakistan Stock Exchange (PSE). The adapted questionnaire was used to collect the data from different sectors of Pakistan. Statistical Package for Social Science (SPSS) software tool used to calculate the results of this study by applying one sample T-Test and also checked the reliability through Cronbach's Alpha. The results found that most of the firms used net present value (NPV) in Pakistan. While the internal rate of return and payback period area little bit used by the manufacturing sectors.

## LIMITATION / FUTURE PERSPECTIVE

The current study was restricted to manufacturing sectors namely: Chemical, automobiles assemblers, food & personal care product, sugar & allied industry and textile (weaving) in Pakistan.

Adding more other companies like manufacturing and non-manufacturing may get some different results. This study used four capital budgeting techniques while the future researchers can use other techniques.

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