

“A Study on Capital Budgeting Techniques at Av Vision Equipment’s India Pvt Ltd”

¹ Pulivarthi Bhavana, St. Peters Engineering College (AUTONOMOUS)
Maisammaguda, Secunderabad, Email ID: joshnabhavana385@gmail.com

² Mr. Vinay Kumar, Assistant Professor, Department of MBA, St. Peters Engineering
College (AUTONOMOUS) Maisammaguda, Secunderabad Email Id:
vinaywarrior@gmail.com

ABSTRACT

This study is about Capital Budgeting Techniques at AV Vision Equipment’s India Pvt Ltd. It looks at how the company makes long-term investment decisions using financial appraisal methods. The study highlights the importance of Capital Budgeting in choosing projects and using resources efficiently. It examines techniques like Payback Period, Net Present Value, Internal Rate of Return and Profitability Index. The study analyzes how these methods are used in decisions related to AV equipment purchase, infrastructure expansion and technology upgrades. It emphasizes planning, risk assessment and return optimization in investment decisions. The study also looks at the role of cash flow estimation and cost of capital in project evaluation. The findings show that Net Present Value and Internal Rate of Return provide decision accuracy compared to traditional methods. Proper Capital Budgeting helps reduce risk and improve profitability. The study concludes that systematic investment appraisal supports business growth.

Keywords: Capital Budgeting, Net Present Value, Internal Rate of Return, Payback Period, Profitability Index, Investment Decisions, Cash Flows, Cost of Capital, Financial Analysis, AV Industry.

1. INTRODUCTION

Capital Budgeting is a part of financial management that deals with planning, evaluating and selecting long-term investment projects. It involves decisions related to investments in fixed assets like machinery, equipment, technology, infrastructure and expansion projects. These decisions are critical because they require financial commitments and have a long-term impact on the profitability and sustainability of a business. The primary objective of Capital Budgeting is to ensure that a company’s funds are invested in the efficient and profitable manner thereby maximizing shareholder wealth. In today’s business environment companies face rapid technological changes, increasing competition and evolving customer demands.

Therefore, investment decisions must be carefully analyzed before committing resources. Capital Budgeting techniques help managers evaluate the feasibility and profitability of investment proposals. These techniques also assist in comparing projects and selecting the one that provides the highest return with acceptable risk. There are methods used in Capital Budgeting, which can be broadly classified into traditional and modern techniques. Traditional methods include Payback Period and Accounting Rate of Return which're simple to understand but do not consider the time value of money. On the hand modern techniques like Net Present Value, Internal Rate of Return and Profitability Index consider the time value of money and provide more accurate results for decision-making. AV Vision Equipment's India Pvt Ltd is engaged in the distribution and supply of -visual equipment such as projectors, screens and other related accessories. The company operates in an industry where technological advancements occur frequently and product life cycles are relatively short. As a result, investment decisions in such a company require evaluation of benefits and risks associated with new technology adoption, infrastructure development and equipment procurement. Capital Budgeting plays a role in ensuring that the company invests in the right projects that enhance operational efficiency and market competitiveness. In AV Vision Equipment's India Pvt Ltd Capital Budgeting is applied in decisions such as purchasing AV systems expanding storage and warehouse facilities upgrading digital infrastructure and introducing new product lines. Since these investments involve costs the company needs to analyze expected cash inflows, project lifespan and associated risks before making final decisions. Proper evaluation helps the company avoid overinvestment in projects and ensures optimal utilization of financial resources. The importance of Capital Budgeting in such a business cannot be overstated, as it directly influences long-term growth and profitability. Poor investment decisions may lead to losses, inefficient resource allocation and reduced competitiveness in the market. Therefore, financial managers rely on Capital Budgeting techniques to ensure rational and data-driven decision-making. These techniques help in estimating cash flows assessing risk factors and determining the financial viability of investment proposals. This study focuses on understanding the Capital Budgeting techniques used at AV Vision Equipment's India Pvt Ltd and analyzing their effectiveness in decision-making. It also aims to evaluate how the company balances risk and return while making investment decisions in a changing technological environment. The study further highlights the importance of adopting financial tools to improve accuracy and efficiency in investment appraisal. The company's investment decisions are critical to its success and Capital Budgeting is a factor in making these decisions. By using Capital Budgeting techniques, the company can ensure that its investments are aligned with its business strategy and that they provide the best possible returns.

1.1 Need for the Study

1. To understand the importance of capital budgeting in making long-term investment decisions.

2. To examine the capital budgeting techniques used by Av Vision Equipment's India Pvt. Ltd.
3. To analyze how the company evaluates investment proposals and allocates financial resources.
4. To study the assumptions made regarding cash flows and the cost of capital in investment decisions.
5. To assess the effectiveness of the existing capital budgeting practices followed by the company.

1.2 Scope of the Study

The present study is about the capital budgeting techniques used by Av Vision Equipment's India Pvt Ltd. It covers the methods used by the company to evaluate long-term investment proposals.

It also covers the procedure followed for sanctioning capital expenditure and the post-implementation review of capital projects. The study covers a period of five years. The analysis is based on the data provided by the company and secondary sources such as reports, financial journals, textbooks and reputable websites.

The study focuses on techniques, like Payback Period, Accounting Rate of Return, Net Present Value, Internal Rate of Return and Profitability Index. It also discusses factors influencing capital budgeting decisions.

1.3 Objectives of the Study

The study aims to achieve the following goals:

1. Understand what capital budgeting is, why it is important and how it works.
2. Study the capital budgeting methods used by Av Vision Equipment's India Pvt Ltd to evaluate long-term investments.
3. Check if certain capital expenditure projects of the company are viable using methods like Payback Period, Accounting Rate of Return, Net Present Value, Internal Rate of Return and Profitability Index.
4. Look at how the company approves and reviews capital expenditure proposals.
5. Find out the problems the company faces in using capital methods.

1.4 Limitations of the study

The study has the following limitations:

- The study is limited to AV Vision Equipment's India Pvt Ltd so the findings may not apply to the industry.
- The study relies on data, which may not be entirely accurate.

- Some confidential information could not be obtained due, to the company's policies.
- The study only covers a period of five years, which may not reflect long-term trends.

2 Review of Literature

Joel Dean from 1951 is important because he made capital budgeting a part of managing money in companies. He said that companies should use their long-term money wisely. Joel Dean liked methods that calculate the value of money in the future like NPV and IRR of just using intuition or looking at accounting profit.

David B. Hertz from 1964 did something by adding risk analysis to capital budgeting. He used probability distributions. Monte Carlo simulation to do this. David B. Hertz said that companies should think about how sure they're about their cash flows when making investment decisions.

James C. T. Mao from 1970 found out that there is a difference between what managers do and what they should do. Managers like to use methods like Payback Period and ARR but academics like to use NPV and IRR.

Schall, Sundem and Geijsbeek from 1978 looked at how companies make decisions about capital budgeting. They found out that most companies use different methods, including calculating the value of money in the future. Payback Period is still used a lot for quick checks.

Richard Pike from 1983 and 1996 saw that companies are moving away from methods and towards newer methods that calculate the value of money in the future. This is because technology is better and people know more about money in big companies.

Research Gap

There are three gaps in what we know so far. First most studies look at companies that are listed on the stock market.

There are not studies on medium-sized companies that are not listed like AV Vision Equipments. Second most case studies do not actually use real project data to test their methods...

This study will use real project data to see how well the methods work. Third there are studies that look at what happens after a project is finished but this study will compare what we thought would happen to what actually happened with the cash flows.

This means we will look at the forecast cash flows and the actual cash flows, for the project.

3 RESEARCH METHODOLOGY

3.1 Introduction

This study is about understanding how AV Vision Equipment's India Pvt Ltd makes investment decisions. It looks at the ways they use money and the financial information they use to make these decisions. The goal is to get useful information to help them make better decisions.

3.2 Statement of the Problem

Making investment decisions is very important because it involves a lot of money and there is a risk of losing it. This study checks how AV Vision Equipment's India Pvt Ltd makes these decisions and if the methods they use are good.

3.3 Objectives of the Study

The main goal of this study is to understand how AV Vision Equipment's India Pvt Ltd uses capital budgeting. It looks at how they did in the past by using tools like Payback Period, ARR and NPV. It also tries to find out what they are not doing well. Suggests ways to improve.

3.4 Scope of the Study

This study only looks at the investment decisions made by AV Vision Equipment's India Pvt Ltd. It looks at five years of information to help with future decisions.

3.5 Research Design

This study uses a way of researching that describes and analyzes investment decisions using tools. It uses numbers and interviews to get information.

3.6 Sources of Data

The study gets information from talking to finance managers and from company reports and records. Both of these helps to get a picture. This helps to see patterns in investment decisions and gets a picture of how well the company is doing financially.

3.7 Sampling Design

A few important investment projects are chosen to be looked at. These are chosen based on how much money was invested and how important they're. This helps to get a picture of what is happening.

3.8 Tools Used for Analysis

Tools like Payback Period, ARR, NPV, IRR and Profitability Index are used to see if the investments are making money and if they are working well. These tools help to make financial decisions about AV Vision Equipment's India Pvt Ltd investments.

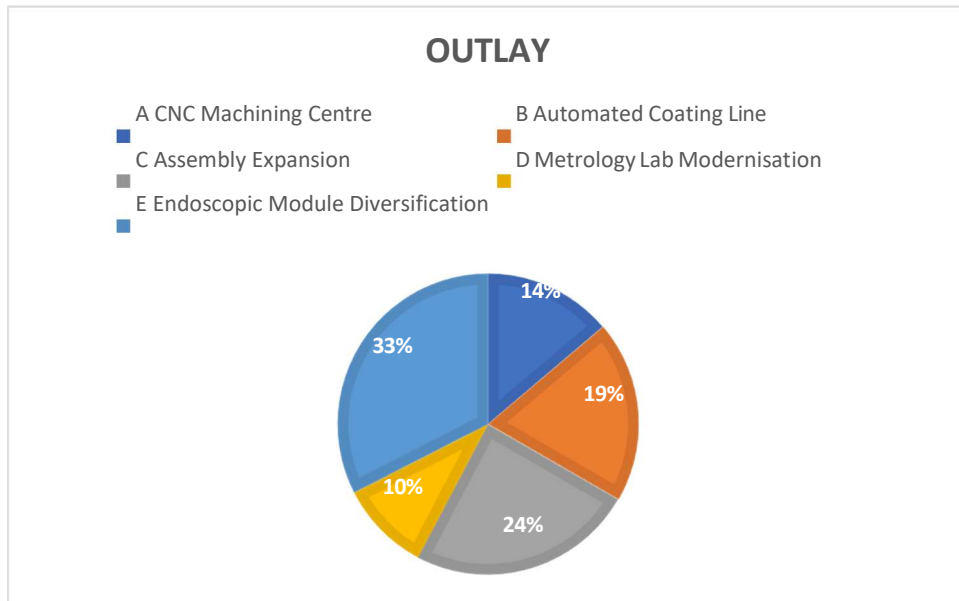
3.9 Limitations of the Study

This study only looks at AV Vision Equipment's India Pvt Ltd so the results may not be true for other companies. It also only looks at what happened in the past which may not be the same as what will happen in the future. Some information was not available which is a limitation of the study, about AV Vision Equipment's India Pvt Ltd.

4 DATA ANALYSIS AND INTERPRETATION

Table 4.1: Summary of Capital Investment Proposals (Rs. in lakh)

Project	Description	Outlay	Life (yrs)	Salvage
A	CNC Machining Centre	85.00	5	8.50
B	Automated Coating Line	120.00	6	12.00
C	Assembly Expansion	150.00	7	15.00
D	Metrology Lab Modernisation	60.00	5	6.00
E	Endoscopic Module Diversification	200.00	8	25.00

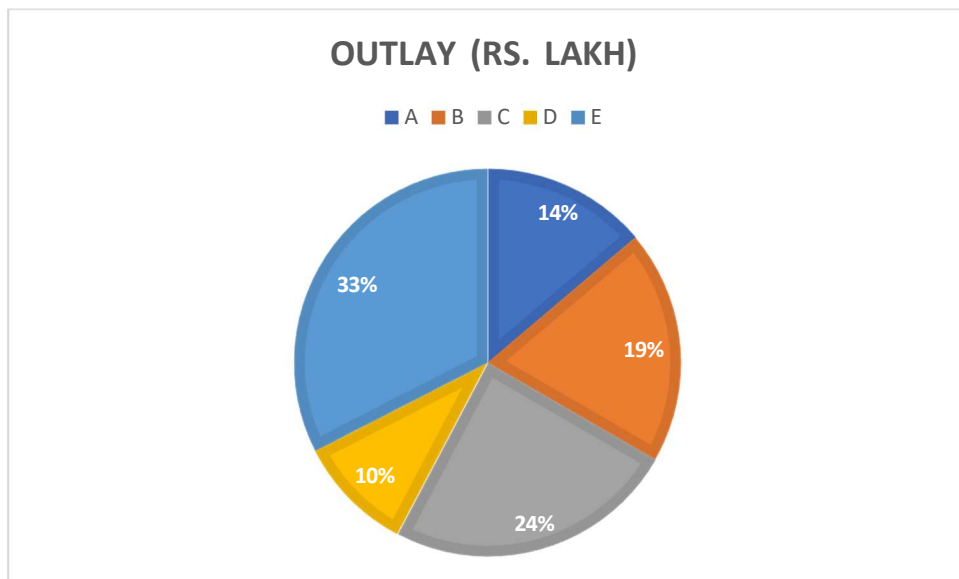


Interpretation

The five project proposals require a total investment of ₹615 lakh. Project E is the largest project, accounting for 32.5% of the total investment, while Project D is the smallest. Since the projects differ in investment size and useful life (ranging from 5 to 8 years), appropriate capital budgeting techniques are needed to compare and evaluate all five projects effectively.

Table 4.2: Summary of Payback Periods

Project	Outlay (Rs. lakh)	Payback (Years)	Rank
A	85.00	3.33	2
B	120.00	3.63	3
C	150.00	4.07	4
D	60.00	3.27	1
E	200.00	4.30	5

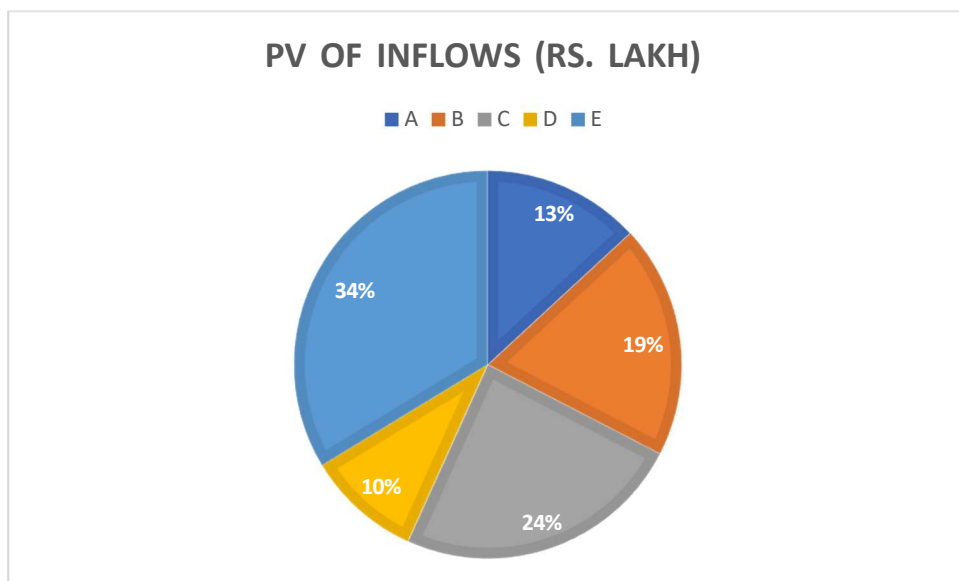


Interpretation

Project D is ranked first because it has the shortest payback period of 3.27 years, meaning the investment is recovered quickly. Project A also performs well, while Project E ranks last due to its long payback period. If the required payback period is within four years, only Projects A, B, and D would be accepted. However, the payback method should not be the only basis for decision-making because it ignores cash flows received after payback and does not consider the time value of money.

Table 4.3: Profitability Index - All Projects

Project	PV of Inflows (Rs. lakh)	Outlay (Rs. lakh)	PI	Rank
A	101.55	85.00	1.195	5
B	150.34	120.00	1.253	2
C	186.61	150.00	1.244	3
D	73.88	60.00	1.231	4
E	260.17	200.00	1.301	1

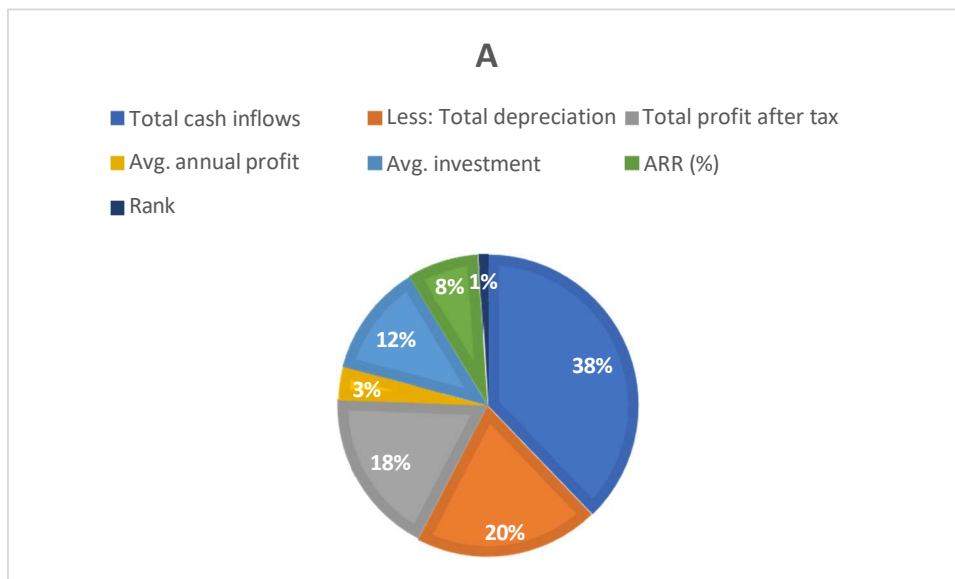


Interpretation

Project E ranks first with a Profitability Index of 1.301, indicating the highest value generated per rupee invested. The ranking is similar to NPV, but PI is more useful when funds are limited because it helps identify the most efficient projects for investment.

Table 4.4 Accounting Rate of Return - All Projects

Item	A	B	C	D	E
Total cash inflows	145.50	228.00	300.00	106.00	444.00
Less: Total depreciation	76.50	108.00	135.00	54.00	175.00
Total profit after tax	69.00	120.00	165.00	52.00	269.00
Avg. annual profit	13.80	20.00	23.57	10.40	33.63
Avg. investment	46.75	66.00	82.50	33.00	112.50
ARR (%)	29.52	30.30	28.57	31.52	29.89
Rank	4	2	5	1	3



Interpretation:

All five projects are financially attractive as their ROI exceeds the 12% cost of capital, indicating that each project generates returns above its required cost. Project D has the highest ROI (31.52%) due to its smaller investment and stable cash inflows, while Project C has the lowest ROI (28.57%) despite generating the highest profit. The small difference of 2.95 percentage points between the highest and lowest ROI suggests that ROI alone may not be a reliable decision-making tool, as it ignores the timing of cash flows and the scale of investment.

5 FINDINGS, SUGGESTIONS AND CONCLUSION

FINDINGS

AV Vision Equipment's India Pvt Ltd makes precision vision and inspection equipment. The company's growth depends on investment in plant, machinery and technological upgradation. This is very important for AV Vision Equipment's India Pvt Ltd.

Most of the selected projects have a payback period within the company's time frame which means the invested capital is recovered quickly. This is news for AV Vision Equipment's India Pvt Ltd.

The accounting rate of return analysis shows that the projects are profitable in accounting terms. However, it does not consider cash flows and the time value of money. This is something AV Vision Equipment's India Pvt Ltd should think about.

The net present value of the projects is positive which means the projects add value to AV Vision Equipment's India Pvt Ltd.

The internal rate of return of the selected projects is greater than the cost of capital of AV Vision Equipment's India Pvt Ltd, which confirms the viability of the investments. This is a thing for AV Vision Equipment's India Pvt Ltd.

The profitability index of all the analyzed proposals is greater than one, which means the present value of inflows exceeds the cash outflow. This is very good for AV Vision Equipment's India Pvt Ltd.

The company relies more on techniques like payback period and accounting rate of return than on discounted cash flow techniques like present value, internal rate of return and profitability index. AV Vision Equipment's India Pvt Ltd should consider using these techniques often.

SUGGESTIONS

1. AV Vision Equipment's India Pvt Ltd should give importance to discounted cash flow techniques like present value, internal rate of return and profitability index because they consider the time value of money and provide a more accurate picture of project profitability. This will help AV Vision Equipment's India Pvt Ltd make decisions.
2. A formal capital budgeting policy and procedure manual should be prepared, which clearly specifies the techniques to be used, cut-off rates, approval hierarchy and documentation requirements. This will be very helpful for AV Vision Equipment's India Pvt Ltd.
3. The cost of capital should be computed using the average cost of capital approach to ensure discounting of future cash flows. This is an idea for AV Vision Equipment's India Pvt Ltd.
4. Risk analysis tools like sensitivity analysis, scenario analysis and the risk-adjusted discount rate method should be incorporated into the evaluation process to deal with uncertainty. This will help AV Vision Equipment's India Pvt Ltd be more prepared.
5. A combination of two or more techniques, such, as present value and payback period should be used to consider both profitability and liquidity aspects. This is something AV Vision Equipment's India Pvt Ltd should consider.

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