A Study on Capital Investment In Vell Biscuits(P)Ltd, Thirubhuvanai, Puducherry.

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Abstract- *The study, "A Study on Capital Investment in Vell Biscuits Private Limited", To explores the significance of capital investment decisions and their impact on the company's growth, profitability, and competitiveness in the biscuit manufacturing industry. Capital investment, which involves allocating resources towards machinery, technology, and infrastructure, is essential for enhancing production efficiency and sustaining long-term financial stability. This research analyses the patterns of capital investment in the company and evaluates their influence on profitability, productivity, and market expansion. Using financial tools and performance measures, the study highlights how effective investment strategies improve operational efficiency, reduce costs ,and strengthen competitive advantage. The findings underscore the importance of strategic financial planning and periodic evaluation of capital allocation to ensure sustainable growth. Recommendations focus on strengthening capital budgeting practices, adopting modern technology, and optimizing financial resources to maximize returns and secure the future growth of Vell Biscuits Private Limited.*

Keywords- Capital Investment, Financial Planning, Profitability, Operational Efficiency, Sustainable Growth.

I. INTRODUCTION

Capital investment plays a vital role in the long-term growth and sustainability of any business organization. It refers to the allocation of financial resources for acquiring, upgrading, or maintaining physical assets such as property, plants, machinery, and technology. Such investments are often large in value, strategic in nature, and expected to generate benefits over a longer period of time. The importance of capital investment has been widely recognized in both developed and developing economies. For firms, these investments are critical for improving production capacity, enhancing efficiency, reducing costs, and maintaining competitiveness in the market. At the macro level, higher capital investments are linked to industrial development, employment generation, and overall economic growth. Decision-making in capital investment is not simple, as it involves significant risks and uncertainties. Managers are required to evaluate multiple alternatives, forecast future cash flows, and assess.

STATEMENT OF THE PROBLEM:

Capital investment decisions are critical as they need huge funds, long-term commitment, and deal with future uncertainties. Many firms struggle due to poor evaluation, weak forecasting, and lack of strategic planning, which cause resource misuse and losses. Market changes, technology shifts, and economic fluctuations make the process more complex. Inefficient decisions reduce growth and competitiveness. Hence, proper tools and strategies are needed for effective capital investment and long-term success.

SIGNIFICANCE OF THE STUDY:

Capital investment decisions help organizations plan long-term growth and sustainability. They involve spending on projects like infrastructure, equipment, or technology. This study shows how such decisions affect financial performance and competitiveness. It also highlights the importance of managing risk, returns, and aligning with goals. The findings guide managers, policymakers, and professionals in making better investment choices.

OBJECTIVE OF THE STUDY:

- To identify capital investment decisions at Vell Biscuits Pvt Ltd.
- To study and evaluate methods like NetPresentValue,PaybackPeriod, Accounting Rate of Return, Profitability Index.
- To explore strategic reasons for capital investments.
- To evaluate the decision-making process in capital investment planning.

SCOPE OF THE STUDY:

- Focuses on long-term capital investment decisions.
- Uses tools like Net Present Value, Accounting Rate of Return, Payback Period, Profitability Index.
- Analyzes financial data from the past3- 5 years.

- Excludes short-term investments and external factors.

LIMITATION OF THE STUDY:

- Limited to historical financial data; future projections may vary.
- Excludes short-term investment and working capital decisions.
- External factors like inflation and market changes are not deeply analyzed.
- Focus is on a single company/industry, limiting generalization.
- Assumptions in cash flows and discount rates may reduce accuracy.

II. REVIEW OF LITERATURE

(Michelon et al., 2020) Researchers interested in Capital Budget often focus on the evaluation phase, where most CB publications are based on analysis of Capital Budget Other activities in the evaluation phase such as identifying positive factors affecting CB or decision- making processes such as assigning weights.

(Sizba and Hall, 2020) encourage researchers to participate in the decision-making phase of the investment process. Guidelines should examine whether managers are ready to use a solid budget. (Michelon, Lunkes, &Bornia, 2020) Investment decisions today can improve the company's future results; therefore, it is considered one of the most important financial management decisions.

(Paseda, O. 2020) examined various capital budgeting methods and evaluated their theoretical soundness and practical applications. The author concluded that Net Present Value(NPV) is the most robust and academically accepted method because it incorporates the time value of money and focuses on shareholder wealth maximization. However, the paper also discussed why firms still prefer simpler methods like Payback Period—mainly due to risk aversion, managerial conservatism, and ease of application.

(Hartmann &Weißenberger 2024) This study examines how managers in organizations make capital budgeting decisions when faced with high levels of information load and decision-support tools.
The authors argue that while decision aids (like NPV software or financial models) improve accuracy, they can also overwhelm managers if the information becomes too complex.

(Failasufa, R. &Mukhtaruddin, M. 2025) This systematic review focused on studies published between 2014–2025 and analyzed how different capital budgeting techniques (NPV, IRR, Payback Period, Profitability Index) impact investment feasibility and decision-making efficiency. The authors concluded that firms using advanced evaluation method stend to make more sustainable and profitable investment decisions.

(Davina F. Jacobs 2021) is a senior economist at the Department of the Treasury and conducts research on investment finance. According to his research, the main challenge of the government budget is to determine the balance between current and capital expenditures. Expenditure on government resources is also poorly integrated into the budgeting process in many countries. 20 Therefore, this research is designed to provide an overview of past and present public investment practices. The study will also compare the use of funds in low income and developed countries and make several recommendations on how to increase the efficiency of capital planning and financial management in low-income countries.

(Theory Psaros 2021) states that similar to stakeholder theory, management theory uses a different perspective from organization theory.

For example, management theory does not support the idea that people are the most productive resource, nor does it support the claim that all business decisions are based on financial considerations Recognizes that some business decisions are based on non-economic rewards such as social impact.

(Prof. Tatikonda Neelakantam 2022), Developments in Capital Budgeting Evaluation Practices: A Conceptual Analysis, 9, p.615, This study explores the evaluation of progress in capital budgeting evaluation practices; From onwards, all points are well analysed in this study to find the most efficient way of capital investment. The study concludes that these modern methods are useful in companies' long-term decisions.

(Rakesh HM 2022), A study of capital use in Mumbai, listed companies, nuanced management research journal, 2(2), p.15, December March 2012 to March 2013, Research conducted by Focus on Capital Within the scope of capital budgeting investment. Budgeting Practices, a questionnaire was sent to 5,163 people responsible for capita l expenditures in companies listed on the Bombay Stock Exchange.

(Omor Faruq & Md Ataur Rahman Chowdhury 2025) "Financial Markets and ESG: How Big Data is Transforming

Sustainable Investing in Developing countries" (2025). They analyse how big data adoption drives ESG-investment in emerging markets; although the focus is more on sustainable investing rather than CAPEX, it's part of "investment" broadening. If your study touches upon green/or sustainable capital investment, this is relevant.

(Alina Landowska, Robert A. Kłopotek, Dariusz Filip & Konrad Raczkowski 2025) "GDP-GFCF Dynamics Across Global Economies: A Comparative Study of Panel Regressions and Random Forest". They show that fixed capital formation (GFCF) is path dependent and impacted differently in developed vs emerging economies. Useful when talking about macro-level capital investment (national/aggregate) and how your firm-level study ties into macro dynamics.

III. RESEARCH METHODOLOGY

Research methodology refers to the overall approach to a research project, including the philosophical assumptions, research design, data collection and analysis methods, and ethical considerations. It is a structured and scientific approach used to collect, analyze, and interpret quantitative or qualitative data to answer research questions or test hypotheses.

Research methodology refers to the systematic process used by researchers to design, conduct, and analyze a study. It is a structured approach that outlines the steps and procedures followed to gather and interpret information in a scientific and objective manner. A well-defined research methodology is crucial for ensuring the reliability and validity of research findings.

RESEARCH DESIGN:

Research design refers to the overall plan or strategy that guides the researcher in conducting a study to address a specific research problem or question. It is a blueprint for the entire research process, outlining the methods and procedures that will be used to collect and analyse data.The choice of research design is crucial as it directly influences the validity and reliability of the study.

ANALYTIC ANALYSIS:

Analytical analysis refers to the process of carefully examining data to understand the underlying reasons, causes, and relationships behind an event or situation. Unlike descriptive analysis, which only reports facts, analytical

analysis goes deeper to interpret the meaning of the data. It mainly answers the question "Why did it happen?" and sometimes "What does it imply?" This type of analysis is more interpretative and problem-solving in nature, as it studies factors, patterns, and connections within the data.

IV. DATA ANALYSIS TOOLS AND TECHNIQUES

Data analysis is a critical part of research, as it involves applying appropriate techniques to interpret information and draw meaningful conclusions. In the field of financial management, particularly in capital budgeting, the choice of analytical tools determines the accuracy and reliability of investment decisions. Since this study focuses on Lenovo's capital investment practices, only capital budgeting tools are applied for analysis. These tools enable the company to evaluate the feasibility, profitability, and risks associated with long-term projects.

a) Payback Period Method
b) Net Present Value
c) Accounting Rate of Return
d) Profitability Index

PAYBACK PERIOD METHOD:

The payback period is also called a payoff or payout period method. That represents the period in which the total investment in permanent assets payback itself.

$$\text{Payback Period} = \text{Years before full recovery} + \frac{\text{Unrecovered Investment at the beginning of the year}}{\text{cash inflow during the}}$$

NET PRESENT VALUE (NPV):

Net Present Value Measurement The difference between the present value of future cash flows for a given project and the cash outflows from the project time.

$$\text{NPV} = \text{PV(CashInflows)} - \text{PV(Cash Outflows)}$$

ACCOUNTING RATE OF RETURN (ARR):

The Accounting Rate of Return does not consider the time value of money or cash flow which can be an integral part of maintaining a business.

$$ARR = AverageAnnualAccounting\ Profit\ /\ Initial\ investment\ *\ 100$$

PROFITABILITY INDEX (PI):

The Profitability Index formula divides the present value of future expected cash inflows by the initial investment (or present value of cash outflows) to derive a ratio that indicates whether the project will add value to the firm.

$$PI = PV(CashInflows)/Initial\ investment$$

I. DATA ANALYSIS AND INTERPRETATION:

Data analysis and interpretation is the process of assigning meaning to the collected information and determining the conclusions, significance and implications of the findings. The steps involved in data analysis are a function of the type of information collected; however, returning to the purpose of the assessment questions will provide a structure for the organization of the data and a focus for the analysis.

PAYBACK PERIOD METHOD:

The payback measures the length of time it takes a company to recover in cash its initial investment. This concept can also be explained as the length of time it takes the project to generate cash equal to the investment and pay the company back. It is calculated by dividing the capital investment by the net annual cash flow. If the net annual cash flow is not expected to be the same, the average of the net annual cash flows may be used.

It was analysed the company's cumulative cash flow has been consistently positive and increasing from 2020 to 2024. The calculated payback period of 2 years and 5 months (2.48 years) indicates that the initial investment was fully recovered sometime in 2022. This demonstrates a strong financial performance and a positive return on investment.

YEAR	CASHFLOW	CUMULATIVECASHFLOW
2020	18,00,000	18,00,000
2021	20,00,000	38,00,000
2022	25,00,000	63,00,000

2023	28,00,000	91,00,000
2024	30,00,000	1,21,00,000

Initial investment 50,00,000
Payback Period = 2.48 (2 years 5 months)

NET PRESENT VALUE:

Net Present Value measures the difference between the present value of future cash flows and the cash flows from a project at a particular time. With the help of the current price, we can calculate the investment that is expected to yield a good income. The NPV method takes into account the time value of money, hence it is known as a complex capital investment financial process. The project is a profitable and viable investment because it has a positive Net Present Value (NPV) of 37,33,200. This means the project's expected returns are greater than its initial cost of 50,00,000, after accounting for the time value of money.

YEAR	CASHFLOW	DISCOUNTFACTOR10%	PRESENT VALUE
2020	18,00,000	0.909	16,36,200
2021	20,00,000	0.826	16,52,000
2022	25,00,000	0.751	18,77,500
2023	28,00,000	0.683	17,07,500
2024	30,00,000	0.621	18,60,000
Total PV of in flows			87,33,200
Investment			50,00,000
Net present value			37,33,200

ACCOUNTINGRATEOF RETURN:

The Accounting Rate of Return (ARR) is a formula that reflects the Percentage rate of return expected on an investment or asset, compared to the initial Investment's cost. The Accounting Rate of Return (ARR) formula divides an asset's average revenue by the company's initial investment to derive the ratio or return that one may expect over the lifetime of an asset or project. The Accounting Rate of Return does not consider the time value of money or cash flow which can be an integral part of maintaining a business. The method takes into account the earnings expected from the investment over their whole life.

Profit After Tax (PAT) grew consistently from 2020 to 2024, indicating strong performance. The Annual Rate of Return (ARR) is calculated at 32.48%, which is a high return.

This confirms the project is very profitable and generates an excellent return on the initial investment.

YEAR	CASHFLOWS	DEPRECIATION	EBIT	TAX(30%)	PROFITAFTERTAX
2020	18,00,000	1,00,000	17,00,000	5,10,000	11,90,000
2021	20,00,000	1,00,000	19,00,000	5,70,000	13,30,000
2022	25,00,000	1,00,000	24,00,000	7,20,000	16,80,000
2023	28,00,000	1,00,000	27,00,000	8,10,000	18,90,000
2024	30,00,000	1,00,000	29,00,000	8,70,000	20,30,000
Average Profit After Tax					16,24,000
					(16,24,000/50,00,000)*100
Annual Rate of Return					32.48%

PROFITABILITY INDEX:

The Accounting Rate of Return (ARR) is a formula that reflects the Percentage rate of return expected on an investment or asset, compared to the initial Investment's cost. The Accounting Rate of Return (ARR) formula divides an asset's average revenue by the company's initial investment to derive the ratio or return that one may expect over the lifetime of an asset or project. The Accounting Rate of Return does not consider the time value of money or cash flow which can be an integral part of maintaining a business. The method takes into account the earnings expected from the investment over their whole life.The project is a highly profitable and financially viable investment. The quick **payback period of 2 years and 6 months** shows a speedy recovery of the initial capital. The project's financial strength is further confirmed by a positive **NetPresent Value (NPV) of ₹37,33,200** and a high **Accounting Rate of Return (ARR) of 32.48%**. Additionally, a **Profitability Index(PI)of1.75**indicatesthatforevery₹1 invested, the project is expected to generate a return of **₹1.75**, making it an excellent investment.

YEAR	CASHFLOW	DISCOUNTFACTOR10%	PRESENTVALUE
2020	18,00,000	0.909	16,36,200
2021	20,00,000	0.826	16,52,000
2022	25,00,000	0.751	18,77,500
2023	28,00,000	0.683	17,07,500
2024	30,00,000	0.621	18,60,000
Total PV of in flows			87,33,200
			87,33,200/50,00,000
Profitability Index			1.75%

V. FINDINGS, SUGGESTIONS & CONCLUSION

1.   FINDINGS:

- The initial investment of ₹50,00,000 was fully recovered within 2 years and5months(2.48years),showing a quick payback period.

- Cumulative cash in flows consistently increased from 2020 to 2024, proving steady financial growth.

- The positive Net Present Value (NPV) of ₹37,33,200 indicates the project's profitability and viability.

- Since NPV>0, the project adds value to share holders' wealth.

- The Accounting Rate of Return(ARR)is 32.48%, which is significantly higher than normal industry returns.

- Profit After Tax (PAT) increased year-on-year, confirming strong financial performance.

- The Profitability Index (PI) is 1.75, meaning for every ₹1 invested, the project generates ₹1.75.

- The combination of a high ARR and positive NPV makes the project financially attractive.

- The short payback period reduces investment risk and ensures faster recovery of funds.

- The project demonstrates efficient utilization of resources with high returns on investment.

- The strong results suggest that the company can take moderate risks in future investments

2. SUGGESTIONS:

- The project has a positive NPV of ₹3,73,200, so full-scale implementation is recommended.

- A high ARR of 32.48% shows strong profitability and industry competitiveness.
- The payback period of 2 years 5 months reduces financial risk for the company.
- A reserve fund/contingency plan should be maintained for stability.
- With a PI of 1.75, the project gives high returns per rupee invested.
- Surplus cash flows should be reinvested in projects with PI above 1.5.

3. CONCLUSION:

Capital investment is one of the most crucial aspects of financial management because it determines the long-term direction, profitability, and growth of a business. The study highlights that evaluating projects using scientific techniques such as Net Present Value (NPV), Annual Rate of Return (ARR), Payback Period, and Profitability Index (PI) provides a reliable basis for decision-making. A positive NPV reflects value creation, a high ARR indicates profitability compared to normal returns, a short payback period ensures faster recovery of funds with reduced financial risk, and a strong PI proves that every rupee invested generates significant returns. The research also shows that capital investment is not limited to committing financial resources but also involves aligning financial decisions with the long-term vision of the company. Effective investment decisions improve operational efficiency, promote business expansion, and encourage innovation. They also strengthen the competitive advantage of the firm, making it more resilient in a dynamic and uncertain business environment.

REFERENCES

[1] Michelon, C., Lueks, W., &Bozua, J. (2020). Capital budgeting evaluation and decision-making.

[2] Sivia, R., & Hall, J. (2020). Managerial participation in investment decision-making.

[3] Paseda, O. (2020). Examining capital budgeting methods.

[4] Hartmann, F., &Weißenberger, B.E. (2024). Managerial approaches to capital budgeting.

[5] Failasufa, R., &Mukhtaruddin, M. (2025). Systematic review of capital budgeting techniques.

[6] Principles of Corporate Finance – Richard A. Brealey, Stewart C. Myers, Franklin Allen (1981; latest ed. 2022)

[7] Investment Valuation: Tools and Techniques for Determining the Value of Any Asset – Aswath Damodaran (1994; 3rd ed. 2012)

[8] Capital Budgeting and Long-Term Financing Decisions – Neil Seitz, Mitch Ellison (1989; 4th ed. 2005)

[9] The Theory of Corporate Finance – Jean Tirole (2006)

[10] Capital Investment and Financial Decisions – Haim Levy, Marshall Sarnat (1972; 5th ed. 1994)

[11] https://www.mca.gov.inhttps://www.indiamart.comhttps://www.ibef.org/industry/fmcghttps://www.justdial.comhttps://www.cmie.com