

A Systematic Literature Review: Business Feasibility Analysis Using Net Present Value (NPV) and Internal Rate of Return (IRR) Methods in the Automotive Industry

Adi Pranoto^{1*}, Hery Hermawan², Nicko Albart³

Universitas Paramadina, Indonesia^{1,2,3}

Email: Adi.pranoto@students.paramadina.ac.id¹, Hery.hermawan@students.paramadina.ac.id²,
Nicko.albart@paramadina.ac.id³

Correspondence: Adi.pranoto@students.paramadina.ac.id*

KEYWORDS

Net Present Value; Internal Rate of Return; Time Value of Money; Business Feasibility Analysis; Automotive

ABSTRACT

This research evaluates business feasibility in the manufacturing sector using the Net Present Value (NPV) and Internal Rate of Return (IRR) methods. Both of these methods are financial analysis tools that play an important role in making investment decisions, especially in projects that require large capital investments and face market uncertainty. The NPV method assesses the potential profit of a project based on the time value of money, while the IRR identifies the minimum rate of return required for the investment to be viable. This study uses the Systematic Literature Review (SLR) approach to compile and analyze various studies that discuss the application of NPV and IRR in the manufacturing industry. By comprehensively understanding the application of these two methods, it is hoped that manufacturing companies can conduct more accurate investment assessments and maximize the sustainability of business projects.

Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)



Introduction

The manufacturing industry plays a crucial role in supporting the economy, creating jobs, and meeting consumer needs. However, in order to execute significant investment projects in this sector, companies need a robust feasibility analysis to ensure that the allocated resources are able to deliver the expected financial returns (Muhammad & Widyastuti, 2023). Business feasibility analysis is one of the main approaches used to assess whether a project is worth continuing or not, especially through financial analysis tools such as Net Present Value (NPV) and Internal Rate of Return (IRR).

The NPV method calculates the net value of future cash flows by considering the time value factor of money, assisting investors in assessing how much net profit can be obtained from a project. On the other hand, IRR is used to calculate the minimum rate of return required for a project to break even. In the context of a competitive and high-risk manufacturing industry, NPV and IRR are often combined to provide a more holistic perspective, allowing companies to understand not only the potential profits but also the level of risk that may occur.

Although NPV and IRR are two widely used methods in project feasibility analysis, they have different characteristics and assumptions, which can result in interpretations that are not always consistent. For example, NPV indicates the magnitude of a project's net worth, while IRR describes the rate of return, and the difference in results between these two methods can complicate decision-making. In the manufacturing industry, where fluctuations in production costs and market uncertainty are frequent, a comprehensive analysis through a combination of NPV and IRR becomes essential to mitigate the risk of unwanted investments.

This research aims to examine the application of NPV and IRR methods in the feasibility analysis of manufacturing industry projects through the *Systematic Literature Review* (SLR) approach. By reviewing various related literature, this study will identify patterns, trends, as well as the benefits and limitations of the application of these two methods in helping manufacturing companies make more informed investment decisions. The results of this study are expected to provide useful guidance for manufacturing companies in optimizing investment strategies to achieve sustainable profitability.

Research Methods

This research applies the Systematic Literature Review (SLR) approach by following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to identify, select, and analyze literature related to the application of the Net Present Value (NPV) and Internal Rate of Return (IRR) methods in the context of the manufacturing industry. This method aims to provide a comprehensive overview of the feasibility of businesses using both methods.

The search process begins by conducting a literature search on two main sources: Google Scholar and ScienceDirect. The keywords used in the search include "Net Present Value", "NPV", "Internal Rate of Return", "IRR", "feasibility analysis", "business feasibility", and "manufacturing industry". The search is limited to articles published within a certain time span to ensure the relevance of the information.

After the search process, the first stage is identification, where all the articles found are recorded. In the filtering stage, irrelevant articles based on title and abstract will be eliminated. Exclusion criteria include articles that do not focus on feasibility analysis using NPV and IRR as well as articles that are not available in full text.

The next stage is the feasibility evaluation, where the selected articles from the screening are read thoroughly to assess the suitability of the content with the focus of the research. At this stage, articles that do not provide an in-depth analysis of NPV and IRR in the context of business feasibility will be issued.

Finally, at the inclusion stage, articles that meet the selection criteria are taken for further analysis. These selected articles will serve as the basis for the synthesis of findings and discuss how NPV and IRR methods can be effectively applied in the manufacturing industry.

The PRISMA flowchart describes the article selection process that follows these stages, starting from identification, screening, feasibility evaluation, to the inclusion of articles to be

further analyzed. Using this method, this study aims to provide deeper insights into the application of NPV and IRR in business feasibility analysis in the manufacturing sector.

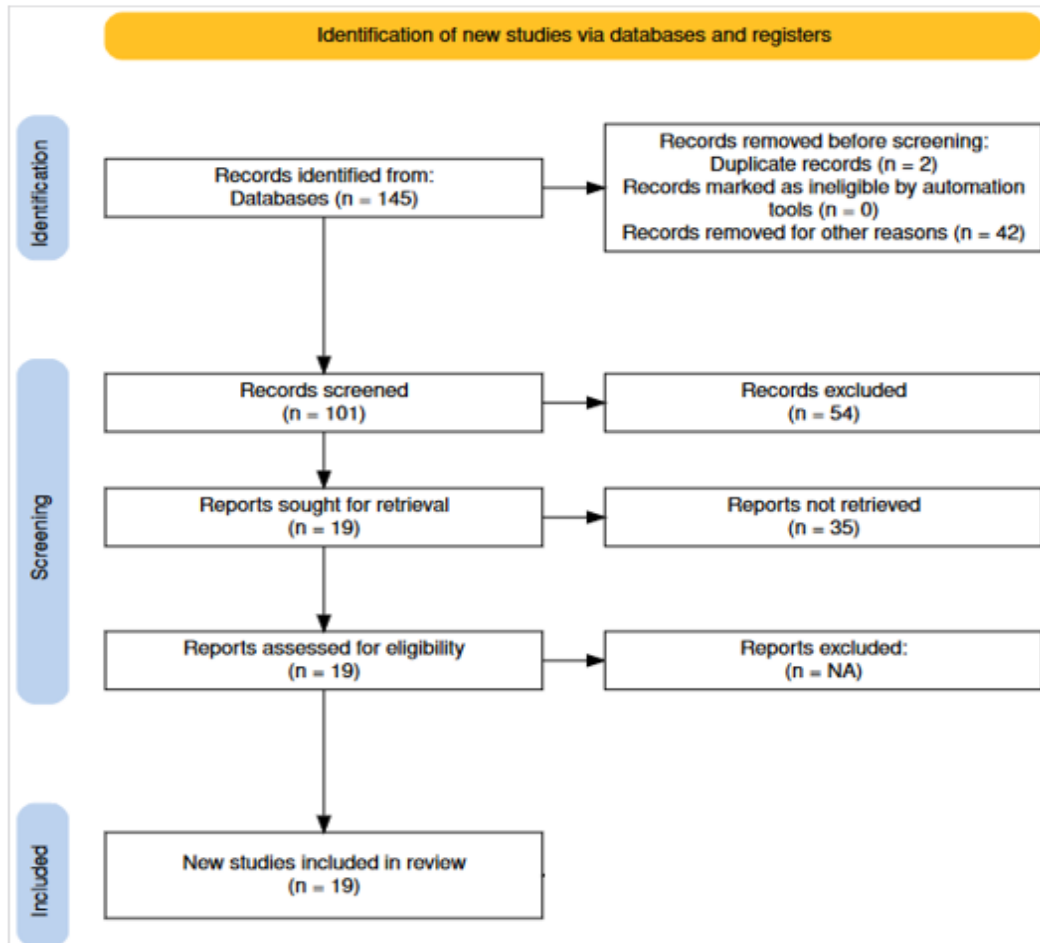


Figure 1. PRISMA 2024 search method flowchart

Results and Discussion

In this study, researchers used VOSviewer software to analyze the relationships between keywords that appeared in various related studies. Through VOSviewer, researchers can visualize keyword clusters, identify relationships between topics, and understand the main focus in the literature related to business feasibility analysis with Net Present Value (NPV) and Internal Rate of Return (IRR) methods in the manufacturing industry.

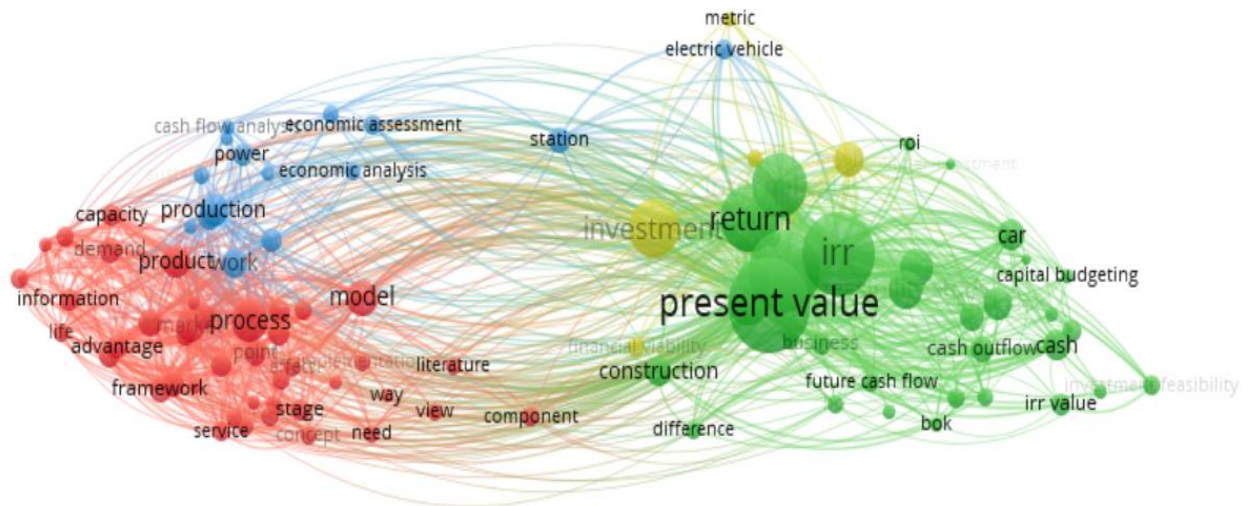


Figure 2. Visualization results with the VosViewer application

1. Green Cluster - IRR, Present Value, and Investment Feasibility

- The green cluster highlights keywords such as "present value," "IRR," "investment," "return," and "business," which are core elements in investment and business feasibility analysis.
- Keywords such as "future cash flow," "capital budgeting," and "ROI" also appear in this cluster, indicating a focus on investment evaluation and return calculation in project feasibility analysis.
- This cluster shows the importance of NPV and IRR in determining the long-term profitability and cash flow stability of a project, especially in the context of industrial or business projects.

2. Yellow Cluster - Electric Cars and Vehicles

- The yellow cluster highlights words such as "electric vehicle," "car," and "metric," indicating investment trends in the electric vehicle sector, which have been a major concern in several studies.
- The existence of this cluster indicates interest in the topic of electric car development and the need to evaluate the feasibility of projects in this context, including NPV and IRR analyses as tools to measure the return on investment in emerging sectors.

3. Red Cluster - Process, Model, and Product Development

- The red cluster groups keywords such as "process," "model," "framework," "production," and "product work," indicating a focus on the production and development side of the manufacturing industry.
- Keywords such as "demand," "capacity," and "advantage" indicate that there is an interest in optimizing production processes to meet demand and maintain a competitive advantage.

- This cluster focuses on how production processes and business model development can support project sustainability and effectiveness in the manufacturing sector.
- 4. Blue Cluster - Economic Analysis and Capacity Assessment**
- Blue clusters involve terms such as "economic assessment," "power," "capacity," and "production," which indicate economic assessment in relation to production capacity and resource utilization.
 - This indicates the importance of conducting an economic assessment to determine whether the production capacity and existing resources can support the proposed project.
 - The focus of this cluster supports investment decisions by providing insight into production capacity and growth potential.

The results of the journal articles that have been reviewed are shown in table 1. under

Table 1. The literature include in this study

Article	Researcher	Findings
Analysis of Investment Feasibility of 25mw Power Plant Development Project in Paper Factory in Karawang in Financial Aspects, Technology and Environmental	<u>Rosalendro Eddy Nugroho</u> , <u>Ihsan Maulana</u> (2020)	The project is feasible for implementation. [1] New technology is more efficient than old technology. [1] Power plant produces 25 MW electricity and steam for production. [1] Environmental technology reduces harmful emissions effectively. [1] Payback period is 3.62 years. [1] Discounted payback period is 4.21 years. [1] Net Present Value (NPV) is \$32,513,596.83. [1] Internal Rate of Return (IRR) is 36.88%. [1] Profitability Index (PI) is 2.29. [1]
Feasibility study on small cars as an alternative to conventional fleets due to low occupancy: case study in Indonesia	<u>Muji Setiyo, Eko Muh Widodo, Muhammad Imron Rosyidi, Budi Waluyo, Zulfikar Bagus Pambuko, Noreffendy Tamaldin</u> (2020)	Small car RE60 is a feasible alternative to conventional fleets. [1] Positive financial indicators: BEP, NPV, IRR, and PP. [1] [2] Additional monthly income: IDR 1,533,122 to IDR 2,536,946. [1] [2] NPV after 60 months: IDR 33,088,000 to IDR 80,841,000. [1] [2] IRR values: 2.24% and 4.17%. [1] [2] BEP distances: 190,670 km and 115,225 km. [1] [2] Sensitivity analysis shows positive NPV under pessimistic conditions. [1] [2]

FEASIBILITY ANALYSIS OF
INVESTMENT IN SENTUL
MARKET
REVITALIZATION
YOGYAKARTA

Mei Lutfi Yudhitasari,
I Nyoman Dita Pahang
Putra (2024)

Revitalization of Sentul Market is financially unfeasible. [1]
NPV calculated at -8,596,409,255 indicates unfeasibility. [2]
IRR is 2.746%, below acceptable investment threshold. [3]
BCR value is 0.6885, indicating poor investment return. [3]
Payback period exceeds 20 years, indicating losses. [3]
Feasibility improves with 68.31% increase in levy rates. [1]

Financial Feasibility of
Modification Workshop Case
Studies: Be-Modified

Rizky Puspita Dewanti
(2022)

The custom workshop is financially viable based on NPV analysis. [1]
IRR achieved is 29.4%, indicating strong profitability. [2]
Payback period is 2.75 years, showing quick return on investment. [2]
Profitability index is 1.48, reflecting good investment benefits. [2]
Financial analysis supports business sustainability and growth. [1]

Cost-Benefit Analysis of
International Airports:
Methodology for
Evaluating Financial Feasibility
and Economic Viability

Vedant Pawar (2024)

Revenue increased by 17% post-pandemic recovery. [1]
Lower discount rates yield better NPVs. [1]
IRR of the project is 14.129%. [1]
User Development Fee needs revision for increased revenue. [1]
Increasing cargo flights boosts trade and revenue. [1]
Strategic changes can enhance profitability of the airport. [1]

<p>Generation of Alternative Battery Allocation Proposals in Distribution Systems by the Optimization of Different Economic Metrics within a Mathematical Model</p>	<p><u>Norberto Martinez</u>, <u>Alejandra Tabares</u> and <u>John F. Franco</u> (2021)</p>	<p>Optimal battery allocation improves voltage profile by ~1%. [1] Peak reduction achieved is 31.17%. [1] Increased photovoltaic hosting capacity by 18.8%. [1] Cost reduction of 3.06% noted. [1] IRR optimization yields different solutions than NPV. [1] Proposed model uses mixed-integer two-stage stochastic programming. [2] NPV of the solution is 90,300 with 441,700 investment. [3] IRR solution has lower operation costs than NPV. [4]</p>
<p>A Through-Life Cost Analysis Model to Support Investment Decision-Making in Concentrated Solar Power Projects</p>	<p><u>Mahmood Shafiee</u> 1,2,* , <u>Adel Alghamdi</u> , <u>Chris Sansom</u> , <u>Phil Hart</u> and <u>Adriana Encinas-Oropesa</u> (2020)</p>	<p>Economic assessment shows negative NPV for all coal gasification variants. [1] Hard coal variants achieved positive IRR but below discount rates. [1] Lignite gasification is unprofitable under current investment and coal prices. [1] A 20% hydrogen price increase is needed for positive NPV. [1] CO2 allowance prices must exceed EUR 40/Mg for savings. [1] Hydrogen production from coal requires national support mechanisms. [2] Sensitivity analysis identifies key factors affecting economic efficiency. [3] Most sensitive factors include hydrogen price and discount rate. [3] Clean hydrogen production faces challenges without renewable energy support. [2]</p>
<p>Investment Analysis for Replacement Premium Economy Trains into Executive Trains of Argo Parahyangan A Case Study of PT Kereta Api Indonesia (Persero)</p>	<p><u>R Irwanto</u>, <u>A H Anggono</u> (2019)</p>	<p>The project is financially feasible based on NPV and IRR. [1] NPV for free cash flow to project is IDR 225 Billion. [1] IRR for free cash flow to project is 45.27%. [1] Payback period for free cash flow to project is 3.13 years. [1] NPV for free cash flow to equity is IDR 66 Billion. [1]</p>

		<p>IRR for free cash flow to equity is 85.15%. [1] Payback period for free cash flow to equity is 1.94 years. [1] The replacement project supports KAI's business development in passenger transport. [2]</p>
<p>Financial Feasibility for Project Machining Under Bracket PT. Karya Komponen Presisi</p>	<p><u>Emmelia Tan</u> <u>,Fitria</u> (2021)</p>	<p>The project 'Machining Under Bracket' is feasible for the company. [1] Minimum selling price is IDR 20.349 per piece. [1] Expected NPV is IDR 1.227.613.848. [1] IRR under normal conditions is 21.48%. [1] Payback period is three years and three months. [1] Profitability index is 1.157. [1] Sensitivity analysis shows varying outcomes under different scenarios. [2]</p>
<p>Tug-Barge Operating Costs Analysis based on Charterer Versus Ownership Perspective: A Case Study of Nickel Ore Transport Boenaga-Fatufia Route</p>	<p><u>Chris Jeremy Verian Sitorusa,*</u>, <u>Mislihah Idrusb</u> <u>, Andi Sitti Chaerunnisa</u> (2024)</p>	<p>Secondhand Tug-barge investment is the most feasible option. [1] Highest NPV for secondhand Tug-barge is IDR 18.64 billion. [1] Secondhand Tug-barge has an IRR of 20%. [1] Fastest payback period for secondhand Tug-barge is 4.18 years. [1] Charter Tug-barge has the lowest operating costs. [2] Investment feasibility analysis includes NPV, IRR, and PBP. [2] All three Tug-barge options are feasible within ten years. [3]</p>
<p>Assessing The Financial Feasibility Study of QRS Company New Branch</p>	<p><u>Richard Natanael</u> (2023)</p>	<p>QRS Company's expansion project is financially feasible. [1] The project's NPV is positively valued. [1] Payback period is shorter than five years. [1] The IRR is less than the WACC. [1] Risk analysis indicates low risk for the expansion project. [1]</p>

<p>Analysis of Sustainable Financial Investment Feasibility Syaiful (2020) Study on Housing Casase Cetrene</p>	<p>Casase Cetrene Housing project is financially feasible. [1] Net Present Value (NPV) is IDR 3,758,048,607.95. [1] Internal Rate of Return (IRR) is 49%. [1] Minimum Attractive Rate of Return (MARR) is 15%. [1] Project cash flow is stable from 2017 to 2019. [2] Housing development meets urban housing needs in Indonesia. [3] Payment systems include mortgages and gradual cash payments. [2] Total sales cumulative projected at IDR 88,387,553,250. [2]</p>	
<p>Planning of Sukabumi – Padalarang Toll Road in View of Economic and Financial Feasibility</p>	<p><u>Muhammad Arya Indrayana, and Hera Widyastuti</u> (2023)</p>	<p>Sukabumi-Padalarang toll road is economically feasible. [1] Economic feasibility score is 2.51, indicating viability. [1] NPV value is IDR 11.58 trillion, confirming profitability. [1] Financial feasibility score is BCR 2.47, indicating efficiency. [1] NPV value for financial aspect is IDR 11.25 trillion. [1] IRR is 10.11%, exceeding MARR of 5.63%. [1] Payback period is approximately 2 years and 10 months. [1]</p>
<p>Investment Feasibility Analysis in Financial Aspects of Startup Business In Lifestyle Combining Barbershop And Coffee shop Over PT. Jeeva Work Corporation</p>	<p>Caecilia Kwarti Krist Marsiwil, Tantri Yanuar Rahmat Syah, Semerdanta Pusaka, Rhian Indradewa (2019)</p>	<p>Investment of 6.9 billion is feasible for PT. Jeeva Works. [1] ROI in the 5th year reached 55.16%. [1] NPV calculated at 10.97%, indicating positive value. [1] BEP achieved in 2 years 5 months, below target. [1] IRR of 48.81% exceeds minimum expected rate of 13.13%. [1]</p>

		<p>Financial parameters confirm investment feasibility for 10 outlets. [2]</p>
<p>Feasibility Study on Improvement of Investment Lithium Batteries by Considering Depreciation and Income Tax</p>	<p><u>Hasna Rifky Afifah,</u> <u>Hilmy Muhammad</u> <u>Aqil,</u> <u>M.</u> <u>Nurwicaksana,</u> <u>M.</u> <u>Safely Afnan</u> (2022)</p>	<p>Investment in lithium battery business is not feasible. [1] NPV value calculated is IDR 198,366,208.00. [1] Payback period exceeds the eight-year time horizon. [1] IRR is less than the MARR at 12%. [1] Improvements include considering income tax and inflation rates. [2] [3] Sensitivity analysis enhances understanding of profitability variables. [3] Previous research lacked accuracy due to omitted variables. [2] [4]</p>
<p>Feasibility Analysis of Investment Assets for Business Development in The Calculation of Capital Budgeting In Surabaya UD Rahayu</p>	<p>Desi Harmada Wiratama (2020)</p>	<p>Payback Period (PP) is 1.8 years, indicating quick returns. [1] Net Present Value (NPV) is positive at 300,281,359. [1] Profitability Index (PI) is 1.283, greater than 1. [1] Internal Rate of Return (IRR) is 15.932%, exceeding required rate. [1] Investment plan for Rahayu UD is deemed 'WORTH' to execute. [1]</p>
<p>Investment Sensitivity Analysis of Transjatim Corridor I Luxury SidoarjoSurabaya-Gresik Route</p>	<p>Kiki Devita Novalia, Haris Muhammadun, Risma Marleno (2024)</p>	<p>All three investment alternatives are financially feasible. [1] NPV values are positive for all alternatives. [1] IRR values exceed the discount rate of 6%. [1] BCR values are greater than 1 for all alternatives. [1] Payback periods range from 4 to 6 years. [1] Sensitivity analysis confirms financial feasibility under varying discount rates. [1] [2]</p>

		<p>Investment is sensitive to changes in discount rates. [2]</p>
<p>Investment Analysis of New Fire Truck: A Case Study of Purchase or Rent Option</p>	<p>Dannys Setyadi Wibawa and Subiakto Sukarno (2024)</p>	<p>Purchase option shows better economic value than renting. [1] Predicted NPV for purchase is Rp. 569,276,495. [1] IRR for purchase is 11.56%, exceeding the discount rate. [1] Discounted payback period for purchase is 9.35 years. [1] Annual fees significantly impact financial performance. [1] [2] Manpower costs also affect project financial performance. [1] [2] Recommendations include controlling manpower costs and attracting more clients. [1]</p>
<p>Financial Feasibility Study of Oil and Gas Well in Indonesia Case Study: New Oil and Gas Well in PT ABC</p>	<p>Henni Rahman and Sylviana Maya Damayanti (2021)</p>	<p>PT ABC's project can generate profits with NPV of USD 46.7 million. [1] The IRR for the project is 17.15%. [1] Payback period (PBP) is estimated at 5.52 years. [1] Profitability index (PI) value is 1.98. [1] Key risk factors include oil prices and capital expenditure. [1] Project has a production life of 12 years. [2] Financial condition of PT PXZ is healthy for funding. [2] Economic analysis uses DCF method for feasibility assessment. [3]</p>

1. Project Feasibility

- Many of the projects in this data are declared feasible to implement based on financial calculations and included performance indicators. It is based on an evaluation that includes various parameters such as NPV and IRR.
- For example, the statement that "The project is feasible for implementation" indicates that the project has sufficient potential profits and financial feasibility to proceed.

2. Financial Performance Indicators

- Net Present Value (NPV): A positive NPV value, as the example mentioned shows a positive number, this means that the project is expected to generate more than the capital invested. A high NPV indicates a good potential return on investment.
- Internal Rate of Return (IRR): A significant internal rate of return, such as 36.88%, indicates a good annual rate of return for investors. An IRR above the minimum rate of return (e.g., capital cost) strengthens the investment feasibility of the project.
- Profitability Index (PI): A PI value of 2.29 indicates that the project is generating more profit than the costs incurred, with a PI of more than 1 indicating that the project is profitable.
- The conclusion of these various indicators shows that these projects are not only profitable but also have an adequate rate of return to attract investors' interest.

Conclusion

From the Vosviewer map the relationships between keywords in the analysis that divides the words into several color clusters, which indicates the degree of proximity and interconnectedness between concepts. It can be seen that the keywords "production" (in red) and "present value" (in green) are located in different clusters and have stronger associations with the keywords around them in the same cluster.

The keyword "production" focuses more on concepts related to processes, models, capacities, and information that are more oriented to operational or manufacturing aspects. Meanwhile, "present value" is closely related to concepts such as IRR (Internal Rate of Return), cash inflow, cash outflow, and ROI (Return on Investment), which are related to financial analysis and investment valuation.

The significant distance between "production" and "present value" suggests that these two concepts do not have a close relationship in the context of this analysis, but rather stand as two separate main focuses – one concerned with the production process, while the other concerned with the evaluation of financial value or investment.

Based on the conclusion that the keywords "production" and "present value" are in different clusters and do not have a close relationship, the suggestions for the next research are as follows:

- Integrated Research between Production and Finance: Further research can explore how the concepts of production and investment valuation can influence each other more deeply. For example, examining the impact of production process efficiency on cost savings that contribute to financial value, such as Net Present Value (NPV) and ROI, so as to strengthen the linkage between operational and financial aspects.
- Development of Financial Models for Production Project Evaluation: Developing more specific financial models for assessing investments in production projects. This will help in understanding the relationship between production efficiency and return on investment, especially in industries that rely heavily on production capacity and efficiency.
- Impact Analysis of Waste Reduction on Financial Value: Given the importance of production efficiency in the context of lean manufacturing, further research can focus on how waste reduction in the production process can affect the financial value of the project, such as IRR and NPV. This will allow for a deeper understanding of the financial benefits of efficient production management.

- Mapping the Linkages Between Concepts with a Multidisciplinary Approach: In advanced research, a multidisciplinary approach involving experts in the fields of production, finance, and investment management can produce a more comprehensive map of the relationship between production aspects and investment valuation. With this approach, the relationship between the "production" and "present value" clusters may be more visible and provide new insights for the company's strategic decisions.
- Case Studies on Specific Industries: Applying the same analysis to specific industries, such as automotive or electronics manufacturing, can provide a more detailed perspective on how production processes and investment valuations interact in real-world conditions. This study will help in identifying the key variables that strengthen the relationship between the two clusters in a more specific context.

Bibliography

- Afifah, H. R., Aqil, H. M., Nurwicaksana, M., Afnan, M. S., Afraah, S. M., Hisjam, M., & Sutopo, W. (2022). Feasibility Study on Improvement of Investment Lithium Batteries by Considering Depreciation and Income Tax. *Proceedings of the 3rd Asia Pacific International Conference on Industrial Engineering and Operations Management*, 594–603.
- Dewanti, R. P., Paryanto, E., Pradana, J. A., & Harsito, C. (2022). Financial Feasibility of Modification Workshop Case Studies: Be-Modified. *International Journal of Sustainable Development and Planning*, 17(6), 1865–1871. <https://doi.org/10.18280/ijstdp.170621>
- Irwanto, R., & Anggono, A. (2019). Investment Analysis for Replacement Premium Economy Trains into Executive Trains of Argo Parahyangan A Case Study of PT Kereta Api Indonesia (Persero). *Proceedings of the Proceedings of the 1st Asian Conference on Humanities, Industry, and Technology for Society, ACHITS 2019, 30-31 July 2019, Surabaya, Indonesia*. <https://doi.org/10.4108/eai.30-7-2019.2287761>
- Marsiwi, C. K. K., Syah, T. Y. R., Pusaka, S., & Indradewa, R. (2019). Investment feasibility analysis in financial aspects of startup business in lifestyle combining barbershop and coffee shop over Pt. Jeeva Work Corporation. *Journal of Multidisciplinary Academic*, 3(4), 97–100.
- Martinez, N., Tabares, A., & Franco, J. F. (2021). Generation of Alternative Battery Allocation Proposals in Distribution Systems by the Optimization of Different Economic Metrics within a Mathematical Model. *Energies*, 14(6), 1726. <https://doi.org/10.3390/en14061726>
- Muhammad, A. I., & Widyastuti, H. (2023). Planning of Sukabumi – Padalarang Toll Road in View of Economic and Financial Feasibility. *Jurnal Transportasi: Sistem, Material, Dan Infrastruktur*, 3(1), A97–A101. <https://journal.its.ac.id/index.php/transportasi/article/view/661>
- Natanael, R. (2023). Assessing The Financial Feasibility Study of QRS Company New Branch. *Proceeding International Conference on Economics, Business and Information Technology (ICEBIT)*, 4, 219–233. <https://doi.org/10.31967/prmandala.v4i0.752>
- Novalia, K. D., Muhammadun, H., & Marleno, R. (2024). Investment Sensitivity Analysis of Transjatim Corridor I Luxury Sidoarjo-Surabaya-Gresik Route. *International Journal of Social Science and Community Service*, 2(2), 59–66. <https://doi.org/https://doi.org/10.70865/ijsscs.v2i2.21>
- Nugroho, R. E., & Maulana, I. (2020). Analysis of Investment Feasibility of 25mw Power Plant Development Project in Paper Factory in Karawang in Financial Aspects, Technology and Environmental. *Saudi Journal of Business and Management Studies*, 5(7), 438–447. <https://doi.org/10.36348/sjbms.2020.v05i07.008>

- Pawar, V. (2024). Cost-Benefit Analysis of International Airports: Methodology for Evaluating Financial Feasibility and Economic Viability. *American Journal of Multidisciplinary Research & Development (AJMRD)*, 6(06), 59–76.
- Rahman, H., & Damayanti, S. M. (2021). Financial Feasibility Study of Oil and Gas Well in Indonesia Case Study: New Oil and Gas Well in PT ABC. *European Journal of Business and Management Research*, 5(6). <https://doi.org/10.24018/ejbmr.2020.5.6.626>
- Setiyo, M., Widodo, E. M., Rosyidi, M. I., Waluyo, B., Pambuko, Z. B., & Tamaldin, N. (2020). Feasibility study on small cars as an alternative to conventional fleets due to low occupancy: case study in Indonesia. *Heliyon*, 6(1).
- Shafiee, M., Alghamdi, A., Sansom, C., Hart, P., & Encinas-Oropesa, A. (2020). A Through-Life Cost Analysis Model to Support Investment Decision-Making in Concentrated Solar Power Projects. *Energies*, 13(7), 1553. <https://doi.org/10.3390/en13071553>
- Sitorus, C. J. V., Idrus, M., & Chaerunnisa, A. S. (2024). Tug-barge operating costs based on Charterer Versus Ownership Perspective. A Case Study: Nickel Ore Transport Boenaga-Fatufia Route. *EPI International Journal of Engineering*, 6(1), 49–55. <https://doi.org/10.25042/epi-ije.022023.07>
- Syaiful, S., & Sutarsa, S. (2020). Analysis of Sustainable Financial Investment Feasibility Study on Housing Casase Cetrene. *Proceeding of the 5th NA International Conference on Industrial Engineering and Operations Management*, 3631–3639.
- Tan, E., & Fitria, F. (2021). Financial Feasibility for Project Machining Under Bracket PT. Karya Komponen Presisi. *Proceedings of the 1st International Conference on Economics Engineering and Social Science, InCEESS 2020, 17-18 July, Bekasi, Indonesia*. <https://doi.org/10.4108/eai.17-7-2020.2302995>
- Wibawa, D. S., & Sukarno, S. (2024). Investment Analysis of New Fire Truck: A Case Study of Purchase or Rent Option. *European Journal of Business and Management Research*, 9(1), 86–94. <https://doi.org/10.24018/ejbmr.2024.9.1.2096>
- Wiratama, D. H. (2020). Feasibility Analysis of Investment Assets for Business Development in The Calculation of Capital Budgeting In Surabaya UD Rahayu. *IJESS International Journal of Education and Social Science*, 1(1), 16–27. <https://doi.org/10.56371/ijess.v1i1.24>
- Yudhitasari, M. L., & Putra, I. N. D. P. (2024). Feasibility Analysis of Investment In Sentul Market Revitalization Yogyakarta. *Scientica: Jurnal Ilmiah Sains Dan Teknologi*, 2(5), 210–221. <https://doi.org/https://doi.org/10.572349/scientica.v2i5.1423>