

RESEARCH ARTICLE

INVESTMENT FEASIBILITY ANALYSIS OF COIL WAREHOUSE CONSTRUCTION PROJECT

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Abstract

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..... PT XYZ is one of the logistics and port service companies that plan to build a new warehouse to store coil products, where the existing coil warehouse does not have enough capacity to store increasing production. Before the project is carried out, PT XYZ needs to calculate coil warehouse rental rates and investment feasibility analysis. This study aims to determine the rental rate of the coil warehouse to be used by PT XYZand investment feasibility analysis on financial aspects. The coil warehouse rental rate in this study was calculated using the Cost Based Pricing method with a normal price approach (Cost Plus Pricing) with the results for the coil warehouse rental rate of Rp21.561/ton. The method used to analyze the feasibility of investment in the financial aspect of the project, the construction of PT XYZ's coil warehouse, namely Net Present Value (NPV) with a result of Rp2.717.830.633, Internal Rate of Return (IRR) with a result of 13.4% and Payback Period with a result of 13.75 years which all resulted in the conclusion that the project was said to be feasible to run.

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Introduction:-

For the investment in warehouse construction made by PT XYZ to contribute to increase company profits, an appropriate calculation is needed in determining the coil warehouse rental rate. The determination of warehouse rental rates is calculated using the Cost Based Pricing method. Cost Based Pricing is the simplest method by setting the selling price based on the total cost per unit plus an amount for the desired profit (margin) on each unit (Farijah et al., 2018). In setting the selling price, the company must take into account the costs incurred plus the desired profit level so that the selling price offered to consumers can cover the production costs incurred by the company (Situmorang et al., 2021).

After the coil warehouse rental rate is known, it is necessary to measure the feasibility of investment based on financial aspects. This is done to assess whether the investment in the company is feasible to invest or not. In addition to determining whether the project is feasible or not, the company can also see whether the planned investment project will benefit or not (Ridwan et al., 2022). Measurement of investment feasibility value will be calculated using the NPV (Net Present Value), IRR (Internal Rate of Return), and PP (Payback Period) methods. The NPV method is a method that takes into account the difference between the present value or present value of the flow of benefits with net cash receipts in the future (Setiawan and Hermanto, 2022). The IRR method is a method used to calculate the discount rate of return that results in the NPV value of all expected cash inflows equal to the NPV value of expected cash outflows (Pratama, 2021). Meanwhile, the PP method is a method used to calculate the project or return the investment value through the Revenue generated by the investment project

(Rahmawati et al., 2022). By looking at several indicators of investment feasibility, the decision to be made to run a project will be more appropriate (Ridwan et al., 2022). From the results of this study, it is hoped that it can help PT.XYZ in setting the rental rate for the coil warehouse and can determine the feasibility of investing in the construction and rental of coil warehouses.

Methods:-

This research uses descriptive research methods with a quantitative approach. The quantitative approach used is to conduct a financial analysis to determine the rental rate of the coil warehouse and measure the investment feasibility of the PT XYZ coil warehouse construction project so that the company can know the value of business feasibility in running the coil warehouse construction project, and conduct a sensitivity analysis of changes in tariff and tonnage increases. Calculations are carried out using the Cost Based Pricing method and continued by calculating the feasibility of investment using the NPV (Net Present Value), IRR (Internal Rate of Return), and PP (Payback Period) methods.

Cost Budget Plan

The cost Budget Plan is the total cost incurred for wage and material requirements, as well as the costs required to run a project. The following is the Cost Budget Plan calculation formula (Fatonah and Wulansari, 2017): Cost Budget Plan = \sum (Volume) x Unit Price of Work

Cost of Revenue

Cost of Revenue is the sum of all costs incurred in making services or services in a business. The cost of Revenue consists of direct expense costs, indirect expense costs, and overhead costs. The cost of Revenue is the total of each cost component related to the calculation of services. The calculation of the Cost of Revenue is usually relatively simpler because the cost of goods budget used is less, even without including product raw materials (Nurmaya and Khabibah, 2021). The following is the formula for calculating the Cost of Revenue or expenses used by service companies (Ramdani and Ashoer, 2021):

Cost of Revenue (Total Expenses) = Direct Expense Cost + Indirect Expense Cost Indirect + Overhead Costs

Cost Based Pricing

Cost Based Pricing is a pricing method based on the total cost incurred for production plus the desired profit. Cost Based Pricing consists of 2 approaches in the calculation, namely the normal price method (Cost Plus Pricing) and reseller price (Mark Up Pricing). Cost Plus Pricing is a method of determining selling prices based on the total cost of production and non-production processes plus the desired profit (margin). Apart from being based on normal prices, Cost Based Pricing can also be done based on the Mark Up Pricing approach, which adds a markup value to the purchase price per unit. The following is the calculation formula used to determine Cost Based Pricing (Farijah et al., 2018):

1. Cost Plus Pricing Method:

Selling Price = Total Cost + Margin

- 2. Mark Up Pricing Method:
- Selling Price = Purchase Cost + Mark Up

Economic Value Added (EVA)

Economic Value Added (EVA) is a measure of economic profit obtained from the difference between Net Operating Profit After Tax and the cost of capital. The cost of capital is determined through the calculation of the weighted average cost of Debt and equity (Weighted Average Cost of Debt and Equity Capital) and the amount of capital used (Fauzi et al., 2019).

Components of Economic Value Added (EVA)

The following are components that can support the calculation of EVA (Fauzi et al., 2019):

- 1. Net Operating Profit After Tax (NOPAT)
- NOPAT is a company's operating profit after tax and a measure of the profit earned by the company from ongoing operations. Net operating profit after tax (NOPAT) can be formulated as follows:

Net Operating Profit = Operating profit + Interest income

2. Cost of Capital

Cost of capital is the minimum rate of return that a company must earn on its invested capital. The cost of capital is equal to the company's invested capital multiplied by the weighted average cost of capital (WACC).

a) Cost of Equity

The capital asset pricing model is a calculation of the cost of equity that uses internal resources in managing the company. CAPM considers the risk-free profit rate factor, the rate of return on investment, and market risk, which can be seen from the beta of each company against the market. The CAPM cost of capital can be measured by the following formula (Wiharto, 2019):

Ke = Rf + (β x (Rpm) Note:

Rf = Risk-Free Rate

 β = Beta

Rpm = Market Risk Premium

b) Cost of Debt

The cost of Debt is the pre-tax interest rate that must be paid by the company to the lender. The following is the Cost of Debt calculation formula (Dewi& Wessiani, 2021):

$$\begin{split} K_d &= K_i \; (1-T) \\ K_d &= Cost \; Of \; Loan \; Capital \\ K_i &= Interest \; Rate \\ T &= Tax \end{split}$$

Weighted Average Cost of Capital(WACC)

Weighted Average Cost Of Capital (WACC) is a weighted average of the cost of equity and debt components (Fauzi et al., 2019). For investors, WACC is used as the minimum expected rate of return on invested funds (Wiharto, 2019). The WACC calculation formula is as follows (Dewi& Wessiani, 2021):

 $WACC = W_d \ x \ K_d + W_e \ x \ K_e$

W_d= Percentage Of Debt To Capital Structure

We = Percentage Of Equity To Capital Structure

 $K_d = Cost Of Debt$

 $K_e = Cost Of Equity$

Business Feasibility Study

A business feasibility study is an analysis of an investment activity or business, whether the business if run, will provide benefits or not. A business feasibility study is the basis for assessing whether an investment activity or a business is feasible to run. The intensity factors in the preparation of a business feasibility study are as follows (Sasmi and Hasri, 2021):

a. The size of the impact that can be caused

b. The degree of business certainty

c. The amount of investment required to implement a business

Investment Feasibility Analysis

Capital Budgeting is the entire process of planning and making decisions on the expenditure of funds for investment where the period for the return of these funds is more than one year. The feasibility of investment made by company managers is based on allocating capital to an investment where the benefits or benefits to be obtained have been considered beforehand for the future (Moridu and Adista, 2019). In general, the aspects that can be used to assess a business's feasibility are market and marketing aspects, legal aspects, technical and operational aspects, management and human resources aspects, and financial aspects.

1. Market and Marketing Aspects

Market aspects are carried out to analyze market potential, market shape, estimated sales that the company can achieve, and estimated market share that the company can control. In addition, an analysis of market aspects is carried out in making marketing strategies that will be used to achieve the expected market share (Faradiba & Musmulyadi, 2020).

2. Technical and Operational Aspects

Technical and operational aspect an aspect that relates to the process of building the project technically and its operation after the project is completed. This aspect analyzes the technical needs of the business, such as determining production capacity, the type of technology used, the use of equipment and machinery, the location of the business, and the most profitable location of the company (Nurjanah, 2013).

3. Management and Human Resources Aspects

In this aspect, what needs to be considered is the form of activities and how to manage the company, about how the system of organizing the duties and authority of the leadership and staff of the company includes positions within the company. In a business feasibility study, it is necessary to analyze aspects of management and human resources regarding how to run an organization. One management with another has a job relationship (Nurjanah, 2013).

4. Financial Aspects

The financial aspect takes into account how much funding is needed to finance a project, knowing the company's financial condition seen from the tendency or trend from year to year, and calculating benefits and costs. The method used in analyzing feasibility is using assessment methods or investment project criteria such as Payback Period, Net Present Value, and Internal Rate of Return (Faradiba & Musmulyadi, 2020.

Net Present Value (NPV)

Net Present Value (NPV) is a method to determine the net benefits received from a business over the life of the business, where this method takes into account the difference between the present value of the investment and the present value of future net cash receipts. The following is the formula for calculating investment feasibility based on Net Present Value (NPV) (Rahmawati et al., 2022):

$$NPV = \sum_{t=1}^{n} \frac{CFt}{(1+i)^{t}} - Id$$

CFt = Cash flow in year t

n = Economic life of the project (years)

i = Interest rate (%)

t = Y ear 1, 2, 3, n.

Io = Initial Expenditure

The criteria used in the feasibility analysis based on Net Present Value (NPV) are as follows (Sasmi and Hasri, 2021):

- NPV>0, then the business/project is feasible to implement.
- NPV < 0, then the business/project is not feasible to implement
- NPV = 0, then the business/project is in a BEP state, namely TR = TC in the form of present value

Internal Rate of Return (IRR)

Internal Rate of Return (IRR) is an interest rate that makes the sum of the present values of the expected future proceeds equal to the sum of the present values of capital expenditures (Sasmi and Hasri, 2021). In the IRR method, there are two values of the investment rate of return or Internal Rate of Return (IRR), namely positive and negative i (interest) values, where the negative interest value is unknown and must be found by trial and error (Rahmawati et al., 2022). The following is the formula for calculating investment feasibility based on the Internal Rate of Return (IRR) (Wantasen et al., 2020):

IRR = $i_{1+} \left[\frac{NPV 1}{NPV 1 + NPV 2} \right] x (i_2 - i_1)$

 i_1 = discount rate that produces a positive NPV

 i_2 = discount rate that results in negative NPV

NPV $_1$ = NPV at discount rate i_1

NPV $_2$ = NPV at discount rate i_2

For feasibility calculations, if $IRR \ge WACC$, then the investment can be said to be feasible, and the project can be implemented. Conversely, if IRR < WACC, then the investment can be said to be unfeasible, and the project cannot be implemented (Sasmi and Hasri, 2021).

Payback Period (PP)

The payback Period (PP) is a period used to determine the period of return on investment, where the period can recoup the expenditure of investment (capital outlays) using the cash inflows obtained (Rahmawati et al., 2022). The faster the period required, the more profitable and feasible the business is to develop. The following is the formula for calculating investment feasibility based on the Payback Period (PP):

- Payback Period formula if the cash flow of the investment project is the same every year(Rahmawati et al., 2022): Payback Period(PP) = $n + \frac{\text{Investasi Awal}}{\text{Arus Kas}} \ge 1$ Year

- Payback Period formula if the cash flow of the investment project is different every year (Maelani et al., 2022): Payback Period(PP) =n + $\frac{a-b}{c-b} \ge 1$ Year

n = The last year when the amount of flows is not enough to cover the initial investment

a = Initial investment amount

b = Cumulative amount of cash flow in the nth year

c = Cumulative amount of cash flow in year n+1

The eligibility criteria for PP is if the PP value < Business Age, then the business can be said to be feasible to do; otherwise, if PP > Business Age, then the business can be said to be not feasible to do (Setiawan and Hermanto, 2022).

Results and Discussion:-

Cost Budget Plan Of Coil Warehouse Construction Project

The total cost that will be used for the PT XYZ coil warehouse construction project is Rp52.702.772.685/year. Where the costs to be used consist of Fixed Costs, Variable Costs, and Investment Costs. A detailed cost budget plan can be seen in Table 1.

 Table 1:- Cost Budget Plan Of Coil Warehouse Construction Project.

Cost Budget Plan			
No	Description	Total Cost (Rp)	
1	Fixed Cost	2.425.598.645	
2	Variable Cost	5.177.058.842	
3	Investment Cost	45.100.115.198	
Total Cost		52.702.772.685	

Meanwhile, the depreciation value that occurred in the PT XYZ coil warehouse construction project amounted to Rp3.272.446.134/year, where the depreciation cost consists of depreciation costs on buildings with a depreciation value of Rp1.240.628.409, warehouse equipment with a depreciation value of Rp79.312.500, office equipment with a depreciation value of Rp5.795.325, material handling equipment with a depreciation value of Rp1.912.566.150, and auxiliary equipment with a depreciation value of Rp34.143.750.

Cost of Revenue

It is necessary to calculate the cost of services (Cost Of Revenue) as the basic price or all costs that will be incurred by PT XYZ on the coil warehouse construction project. PT XYZ on the coil warehouse construction project. The calculation of the cost of services (Cost Of Revenue) obtained for the coil warehouse construction project is Rp12.071.365.019/year, where the cost of services (Cost Of Revenue) used consists of direct expense costs with a total cost of Rp5.177.058.842, indirect expense costs with a total cost of Rp2.425.598.645, overhead costs with a total cost of Rp3.272.446.134, and tax costs with a total of Rp1.196.261.398. Detailed Cost of Revenue can be seen in Table 2.

Cost Of Revenue				
No	Components	Total Cost (Rp)		
1	Direct Expense Costs	5.177.058.841		
2	Indirect Expense Costs	2.425.598.645		
3	Overhead Costs	3.272.446.134		
4	Tax (11%)	1.196.261.398		
Total Cost of Revenue		12.071.365.019		

Table 2:- Cost of Revenue.

Coil Warehouse Rental Rates

After the cost of services (Cost Of Revenue) is known, to calculate the tariff using the Cost Based Pricing method, a margin is needed as the profit or profit expected by the company, where the margin value used by the company in this project is 25% of the total margin obtained is Rp3.017.841.255. Furthermore, a calculation was made between all costs incurred plus the total margin obtained and divided by the amount of tonnage. Determination of the amount of tonnage used for coil warehouse rental is based on the maximum capacity of coil storage in the warehouse and is a policy set by the company, where the amount of tonnage used is 729 coils or 699.840 tons. So based on the calculation results using the Cost Based Pricing method, it is obtained that the tariff is to be used for PT.XYZ coil warehouse rental is Rp21.561/ton with a maximum limit in the use of coil warehouses or storage of goods in warehouses for seven days. Detailed calculations of the coil warehouse rental rates can be seen in Table 3.

 Table 3:- Coil Warehouse Rental Rates.

Coil Warehouse Rental Rates Using Cost-Based Pricing Method					
Component	Description		Total Margin (Rp)	Total Cost (Rp)	
Margin	Company Margin	Tonnage	3.017.841.255	15.089.206.274	
	25%	699.840			
Coil Warehouse Rental Rates/Tonnage 21.561					

Weighted Average Cost of Capital (WACC)

All capital costs used in the coil warehouse construction project come from PT XYZ. The Risk-Free Rate value or the rate of return on risk-free instruments comes from the value of the Indonesian Bonds Rate determination on December 22, 2022, which is 5.50%, as for other values derived from company provisions, namely for the Beta value, Equity Market Risk Premium, Investment Loan, and Tax. The following is the calculation of the Weighted Average Cost of Capital (WACC) value in the PT XYZ coil warehouse construction project.

Table 4:- Weighted Average Cost of Capital (WACC).

Weighted Average Cost of Capital (WACC)			
Risk-Free Rate	5.50%		
Beta	0.93		
Equity Market Risk Premium	7.41%		
Cost of Equity (Ke)	12.39%		
Investment Loan	10%		
Tax	22%		
Cost of Debt (Kd)	7.80%		
Debt (Wd)	0.00%		
Equity (We)	100.00%		
Weighted Average Cost of Capital (WACC)	12.4%		

Investment Feasibility

Table 5:- Cash Flow.						
Components	Year					
	0	1	2	•••	20	
Cash In						
Revenue	Rp -	Rp15.089.206.273	Rp 15.089.206.273		Rp 15.089.206.273	
Cash Out	Rp -	Rp 7.602.657.486	Rp 7.602.657.486		Rp 7.602.657.486	
Depreciation	Rp -	Rp 3.272.446.133	Rp 3.272.446.133		Rp 3.272.446.133	
Investment	Rp45.100.115.197	Rp -	Rp -		Rp -	
Cost						
Gross Profit	Rp -	Rp 4.214.102.653	Rp 4.214.102.653		Rp 4.214.102.653	
(EBITDA)						
Loan Interest	Rp -	Rp -	Rp -		Rp -	
Profit Before	Rp -	Rp 4.214.102.653	Rp 4.214.102.653		Rp 4.214.102.653	
Tax (EBT)						
Corporate Tax	Rp -	Rp 927.102.583	Rp 927.102.583		Rp 927.102.583	
Profit After	Rp -	Rp 3.287.000.069	Rp 3.287.000.069		Rp 3.287.000.069	
Interest and						
Tax (EAIT)						
Total Free	-Rp 45.100.115.197	Rp 6.559.446.203	Rp 6.559.446.203		Rp 6.559.446.203	
Cash Flow to						
The Firm						
(FCFF)						
Accumulated	-Rp 45.100.115.197	-Rp38.540.668.994	-Rp 31.981.222.791		Rp 86.088.808.868	
Free Cash						
Flow to The						
Firm (FCFF)						

Discount	0,00	0,89	0,79	 0,10	
Factor					
(12.4%)					
Present Value	-Rp 45.100.115.197	Rp 5.836.257.969	Rp 5.192.802.262	 Rp	634.181.081
Discount	1,00	0,88	0,78	 0,08	
Factor					
(13.4%)					
Present Value	-Rp 45.100.115.197	Rp 5.784.344.094	Rp 5.100.832.534	 Rp	530.403.136

Based on Table 5, It can be seen that cash flow is a company's funds consisting of cash inflows (cash in) and cash outflows (cash out). In year 0, the company spent investment costs for the construction of warehouses and equipment amounting to Rp45.100.115.197, and in years 1 to 20, the company incurred costs for operational processes amounting to Rp7.602.657.486, depreciation of Rp3.272.446.133, and corporate tax of Rp927.102.583. While the company earns a net profit every year of Rp6.559.446.203, where the net profit earned starts in year one, while in year 0, the company has not received any income.

The Net Present Value (NPV) value, it is necessary to compare the income, costs, and net profit obtained based on a discount factor of 12.4%. The discount factor is a component that determines the amount of NPV per year. The value of the discount factor in this study is adjusted to the value of the Weighted Average Cost of Capital (WACC).

The investment feasibility value in the IRR method is obtained based on the comparison of the IRR value with the WACC. By using WACC as a feasibility parameter in this study, the company can find out the interest rate earned on project risks that occur based on the value of the Cost of Debt and Cost of Equity so that the company can get optimal profits and avoid large losses. Based on the research results, the Cost of Debt value is 7.80%, and the Cost of Equity is 12.39%, which, when compared to IRR (13.4%) > Cost of Debt (7.80%) and Cost of Equity (12.39%), the PT XYZ coil warehouse construction project can be profitable because the IRR revenue is greater than the cost of equity and the cost of Debt (Cost of Debt). In addition, by using the WACC value, the company can also measure and determine the costs or capital incurred for each part of the capital structure of the company according to the proportion of equity and Debt so that the company can determine the profit sharing or cost of income received according to the proportion of ownership of the capital of the project. In this study, the proportion of capital structure used is 100% of equity and 0% of Debt.

Parameter	Value	Description
Net Present Value (NPV)	Rp 2.717.830.633	Business is
Internal Rate of Return (IRR)	13.4%	Feasible to
Payback Period	13.75	Execute

Table 6:- Investment Feasibility Analysis.

Calculation of investment feasibility carried out in this study, it was found that the investment feasibility value of the coil warehouse construction project at PT. XYZ using the Net Present Value (NPV) method was obtained at Rp2.717.830.633> 0, Internal Rate of Return (IRR) of 13.4%> WACC (12.4%), and Payback Period (PP) of 13 years seven months five days < project life (20 years) is feasible to execute.

Conclusion:-

Based on the research that has been done, the following conclusions can be obtained:

- 1. PT XYZ's coil warehouse rental rate based on Cost Based Pricing calculation is RP21.561/ton
- Based on the results of the feasibility analysis on the financial aspects shows that the PT XYZ coil warehouse construction project can be said to be feasible to execute. This can be seen from the results of measuring investment feasibility using Net Present Value (NPV) obtained at Rp2.717.830.633> 0, Internal Rate of Return (IRR) of 13.4%> WACC (12.4%), and Payback Period (PP) of 13 years seven months five days < project life (20 years)

References:-

- Dewi, V., E., & Wessiani, A., N. 2021. Analysis of Business Valuation and Risk Management on Investment Feasibility Decision by Considering Uncertainty (Case Study: Toll Road Acquisition by PT. X). ITS Engineering Journal. Vol 10. No 2: 121-128. http://dx.doi.org/10.12962/j23373539.v10i2.61331
- Faradiba, B., & Musmulyadi. 2020. Analysis Of Franchise Business Feasibility Studies And Brand Image On Purchasing Decisions For "Alpokatkocok_Doubig" In Makassar. PAY Journal of Finance and Banking. Vol 2. No 2: 52-61. https://doi.org/10.46918/pay.v2i2.751
- 3. Farijah, A., N. 2018. Setting the Selling Price of Products (MSMEs) in Sabumi Using the Cost-Based Pricing Method. Journal of Sharia Economics. Vol 05. No 01: 318-320.https://doi.org/10.21274/an.2018.5.1.317-337
- 4. Fatonah, K., Wulansari, D., N. 2017. Estimation of Structure Cost Budget of Quad Hotel Construction Project Makassar Using SNI Method. Journal of Civil Engineering Studies. Vol 2. No 2: 116-129.
- 5. https://doi.org/10.52447/jkts.v2i2.900
- Fauzi, I., Prasetyowati, A., R., & Suharti, T. 2019. Financial Performance Analysis With Economic Value Added Method In Automotive And Component Manufacturing Companies. Journal of Management Science. Vol 2. No 3: 403-410. https://doi.org/10.32832/manager.v2i3.3715
- Maelani, M., Wandani, R., E., Ramadani, E., H., et al. 2022. Feasibility Of Lamota Pudding Business In Terms Of Benefit Cost Ratio And Payback Period. Samalewa Journal of Research and Management Studies. Vol 2. No 2: 175-182. https://doi.org/10.58406/samalewa.v2i2.1018
- Moridu, I., & Adista, S. D. 2018. Capital Budgeting Analysis of the Feasibility of Fixed Asset Investment at Pt. Kharisma Arta Abadi Guna Luwuk Banggai Regency. Emor Management Scientific Journal. Vol 2. No 1: 70-83. https://doi.org/10.32529/jim.v2i1.190
- Nisrina, N., Affandi, I., A., Marlina, L. 2022. Financial Feasibility Analysis of Layer Quail Business in Pringsewu District, Pringsewu Regency. Journal of Animal Science, Padjadjaran University. Vol 22. No 2: 137-144.
- 10. https://doi.org/10.24198/jit.v22i2.40491
- 11. Nuramalia, I., Effendi, Z., M. 2021. Sensitivity Analysis of Student Response to Lifebuoy Shampoo Brand Expansion. Ecogen Journal. Vol 4. No 3: 405-417. http://dx.doi.org/10.24036/jmpe.v4i3.11040
- 12. Nurjanah, S. 2013. Feasibility Study of Business Development at PT Dagang Jaya Jakarta. Journal, The Winners. Vol 14. No 1: 20-28. https://doi.org/10.21512/tw.v14i1.641
- 13. Nurmaya, I., Khabibah, N., A. 2021. Analysis of the Calculation of the Cost of Package Delivery Services Overseas at PT Pos Indonesia (Persero) Magelang. Journal Cakrawala Ilmiah. Vol 1. No 4: 473-480.
- 14. https://doi.org/10.53625/jcijurnalcakrawalailmiah.v2i5
- 15. Pratama, Y., B. 2021. Financial Feasibility Analysis of the Construction of the Dumai-Malaka Ro-Ro Ship Port Connection Deterministic Method. Journal of Saints. Vol 21. No 02: 97-104.
- 16. https://doi.org/10.25299/saintis.2021.vol21(02).7584
- 17. PT. ABC (Persero) Tbk. 2022. Annual Report of PT ABC (Persero) Tbk 2019 Moving Ahead With Transformation "ABC Bangkit." Cilegon: PT ABC.
- Rahmawati, E., Wandani, R., Ramadani, E., H., et al. 2022. Financial Feasibility Study of Lamota Pudding Business: Net Present Value and Internal Rate Of Return Approach. Journal of Economics and Business. Vol 10. No 3:276-283.https://doi.org/10.58406/jeb.v10i3.1038
- Ramdani, M., R., & Ashoer, M. 2021. Cost of Goods Analysis of Advertising Services through Social Media Twitter. KRISNA Journal: Collection of Accounting Research. Vol 13. No 1: 40-49.
- 20. https://doi.org/10.22225/kr.13.1.2021.40-49
- 21. Ridwan, A. F., Romli, Z., & Soeroto, W. M. 2022. Investment Feasibility Analysis of Secondary Crusher Replacement Project at PT Berau Coal Site Binungan. Sebatik Journal. Vol 26. No 1:1-8.
- 22. https://doi.org/10.46984/sebatik.v26i1.1832
- Riski, M., Yanuar, A., Santosa, B. 2016. Optimization of PT XYZ Finished Goods Warehouse Storage Space with the Application of Racking System to Increase Warehouse Capacity Using Dynamic Programming Algorithm. Journal of Systems Engineering & Industry. Vol 3. No 04: 25-31. https://doi.org/10.25124/jrsi.v3i04.181
- 24. Sasmi, S., T., Hasri, A., D. 2021. Business Feasibility Study Of The Bengal Ocha. Indonesian Journal of Economics and Business. Vol 06. No 02:15-20.https://doi.org/10.37673/jebi.v6i02.1498
- 25. Setiawan, A., Hermanto, A. 2022. Development of Economic Optimization Software and Financial Analysis of PLTS Case Study of 10 MWAC PLTS. Indonesian Journal of Mechanical Engineering. Vol 17. No 2: 59-71.
- 26. https://doi.org/10.36289/jtmi.v17i2.342

27. Situmorang, F., Sri, A., & Faculty, U. (2021). The Strategy of Traditional Market Traders in Determining the Selling Price of White Snapper Fish. Journal of Economics & Social Sciences. Vol 12. No 2: 55-63.

- 29. Wantasen, E., Kalangi, S., L., Santa, M., N. 2020. Feasibility Analysis of Broiler Business in Taratara I Village, West Tomohon District, Tomohon City. E-Journal Zootec. Vol 40. No 1: 289-298.
- 30. https://doi.org/10.35792/zot.40.1.2020.27733
- 31. Wiharto, S. 2019. Simulation of Start-up Business Development with Cost of Capital Calculation and Capital Budgeting through Sharia Venture Funds. Al-Mizan Journal. Vol 3. No 2: 150-168.
- 32. https://doi.org/10.33511/almizan.v3n2.14-31.

^{28.} https://dx.doi.org/10.35724/jies.v12i2.3934