

Financial Analysis of Sawn Timber Sales at Buana Alam Trade Business in Palu City, Central Sulawesi

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ABSTRACT

Keywords

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Introduction: Forests have an important role in meeting the needs of human life. In addition to having benefits for life, forests also have many benefits, one of which is benefits in the economic sector. Development in the forestry sector is directed at optimal and sustainable utilization of forest resources and strives to improve the welfare of people's lives. Utilization of forest resources, especially timber forest products to be used as sawn timber. sawn timber is semi-finished goods because it will be further processed into other products, for example, sawn products are processed into molding products, flooring furniture, and others that are specific. This study aims to determine the financial aspects of sawn timber processing at Buana Alam Trading Business. This research was conducted for two months from March 2023 to April 2023, which took place at the Buana Alam Trade Business in Palu City, Central Sulawesi. **Method:** This research uses a purposive sampling method at the location and 1 respondent, namely the leader or business owner as a research sample. This research calculates business finances for 13 years of operation. **Results and Discussion:** The results of this study indicate that the financial analysis of the sawn timber business obtained an NPV value of Rp. 389,806,900, BCR 2.09 and IRR 22.9% of the Buana Alam Trading Business shows a positive value, so that the Buana Alam Trading Business is feasible to continue and based on the results of business financial analysis using NPV calculations, the Buana Alam Business is feasible to continue. **Conclusion:** The results of the financial analysis of the sawn timber business for 13 years of operation obtained an NPV value of Rp. 389,806,900, BCR 2.09, and IRR 22.9%. Based on the results of research using financial analysis, the Buana Alam trade business in Palu City is feasible to continue.

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1. Introduction

Indonesia is a country with high biodiversity, especially in its wet tropical forests. One of the forest products that is still irreplaceable is wood. However, because the speed of harvesting is not balanced with the speed of growth, the pressure on natural forests is getting bigger and the availability of wood from natural forests is decreasing, both in terms of quality and volume [1]. The timber industry in Indonesia began to develop in the 1970s and developed rapidly in the 1980s since the enactment of the log export ban and other government policies to support the wood processing industry [2]. [3] stated that the timber industry was recorded to have been a barometer of increased State revenue in the Forest sector during the period 1967-1999.

One of the wood processing industries is the sawmill industry. The sawn timber industry is one of the many timber industries that have developed in Indonesia. This industry is quite good if it develops well in the country of Indonesia. Demand for sawn timber is significantly influenced by domestic log prices, timber export volumes, domestic demand for sawn timber, and the number of companies in the

sawn timber industry [4]. The timber industry is an important sector of the economy in Indonesia. However, as market demand continues to increase, the wood processing industry faces challenges in dealing with fluctuating raw material prices and high production costs. Therefore, financial analysis in wood processing becomes very important to help make the right business decisions. Financial analysis can provide important information about project feasibility, profitability, and risks associated with investment decisions in the wood processing industry. By conducting a financial analysis, business owners can identify the strengths and weaknesses of their business, and understand how money flows into and out of their business. In addition, financial analysis can also help business owners make plans and strategies to grow their business, as well as determine investment priorities to generate maximum profits. Thus, business owners can make more precise and accurate decisions in running a sawn timber processing business, so as to improve their financial performance and business sustainability.

UD. Buana Alam is one of the wood trading SMEs in Palu City which is still classified as a household industry. The main objective of every business activity is to obtain the maximum possible income and incur the minimum possible costs so that the business activity can run and be feasible. In addition, Buana Alam Trading Business has never calculated financial costs while the business is running. Therefore, it is necessary to calculate the level of financial feasibility of sawn timber to find out whether or not it is feasible to continue the business. This study aims to determine the financial aspects of the Dagang Buana Alam business, Palu City.

2. Method

This research uses a quantitative method approach. The research was conducted for 3 months, from March 2023 to May 2023, at UD. Buana Alam, Palu City, Central Sulawesi.

2.1 Materials and Tools

The tools used in this study are:

- The camera was used for research documentation.
- Writing instruments were used to record research data.

The materials used in this study are:

- The questionnaire is used as a material to collect data and information needed for the accuracy of the data taken in the study.

2.2 Sampling Technique

a. Sample Location

For the location in this study, purposive sampling (on purpose) is located at UD. Buana Alam is one of the timber trading businesses in Palu City.

b. Respondent Sample

The sample of respondents in this study were 1 leader or business owner and 2 employees of Buana Alam Trading Business.

2.3 Data Type and Source

The data used in this study are primary data and secondary data.

1. Primary data

Primary data is obtained through direct observation in the field and interviews using a questionnaire with the owner of UD. Buana Alam. The interview was conducted using a list of questions (questionnaire) that had been prepared.

- a. Observation is carried out by directly observing the Buana Alam Trading Business to be studied so that a clear picture of the object of research to be studied is obtained.
- b. Interview, namely filling out the questionnaire by asking questions directly to the leader or owner of the Buana Alam Trading Business.

c. Documentation is taking pictures that are needed during observations and interviews.

2. Secondary Data

Secondary data is data obtained from literature, research reports, scientific papers, and other information related to this research such as library materials, articles, journals, and internet facilities and the results of previous studies.

2.4 Data Analysis

The use of financial analysis methods in this study aims to determine the company's financial condition. The financial analysis method uses three investment criteria, namely net present value (NPV), benefit-cost ratio (BCR), and internal rate of return (IRR). Below are the NPV, BCR, and IRR formulas used:

a. Net Present Value (NPV)

NPV is a calculation method that uses the principle of present value by finding the difference between the initial investment in the project and the total net value of cash flow over the life of the project or the difference between income and expenditure. If the results of the NPV calculation are positive, the project is concluded to be feasible [5].

$$NPV = \sum_{t=0}^n \frac{Bt - Ct}{(1+i)^t}$$

The formula used is:

(1)

Description:

Bt = Benefit (business revenue in year t)

Ct = Cost (business cost in year t)

N = economic life of the project

i = the prevailing interest rate

A business is said to be worth doing if it produces $NPV > 0$. If $NPV \leq 0$, then the business is not worth running.

b. Benefit Cost Ratio (BCR)

Benefit Cost Ratio is a comparison of the sum of the present value of the income (benefit) and expenses (cost) of the project during its economic life [6]. The formulation used is :

$$NET\ B/C = \frac{\sum_{t=1}^n \frac{Bt - Ct}{(1+i)^t}}{\sum_{t=1}^n \frac{Ct - Bt}{(1+i)^t}}$$

(2)

Description:

Bt = Benefit (business revenue in year t)

Ct = Cost (business cost in year t)

N = Economic life of the project

i = prevailing interest rate

include: criteria that can be derived that B/C calculation

Net B/C > 1, then the business is profitable;

Net B/C = 1, the business is neither profitable nor detrimental;

Net B/C < 1, then the business is detrimental.

c. Internal Rate of Return (IRR)

IRR is a measure of the project's ability to return loan interest to finance a project. If $IRR >$ the prevailing bank interest rate, then the project is feasible to implement [7].

IRR is formulated as follows:

$$IRR = i_1 + \frac{NPV_1}{NPV_1 - NPV_2} (i_2 - i_1) \quad (3)$$

Description:

NPV1= NPV with positive value NPV2 = NPV with negative value

i1= Interest rate at which NPV is positive

i2= Interest rate at which the NPV is negative

2.5 Operational Concept

1. Wood can be defined as a material, which is obtained from the collection of trees in the forest, as part of a tree.
2. Respondents are leaders and employees of UD. Buana Alam
3. Investment costs are costs whose use can last a relatively long time. Investment costs are usually associated with the construction development of physical infrastructure and production capacity, which are valued in rupiah (IDR) and consist of :
 - a) Building costs, calculated in Rupiah units
 - b) Cost of store fixtures, calculated in Rupiah.
4. Operational costs, which are costs used to carry out activities in a production process and have a consumable nature in a relatively short period of time, are valued in rupiah (Rp) and consist of:
 - a) The cost of purchasing wood is calculated in units of Rp/cubic.
 - b) Freight and transportation costs, calculated in Rp/cubic.
 - c) Fuel cost, calculated in units of Rp
 - d) Labor, calculated in units of Rp/HKP.
 - e) Electricity, calculated in units of Rp/month.
 - f) Vehicle cost, calculated in units
 - g) Other costs, calculated in units of Rp/one-time production process
5. The benefit is the result obtained that becomes a source or increases the entrepreneur's income, valued in rupiah (Rp), obtained from the sale of sawn timber.
6. The analysis period was 13 years.

2.6 Research Assumptions

Research assumptions are assumptions or conjectures made by researchers before conducting research. The basic assumptions in this study are:

1. Revenue from the sale of sawn timber at Buana Alam Trading Company
2. The influence and results obtained from the sale of sawn timber at the Buana Alam Trading Business
3. Business feasibility at Buana Alam Trading Company

3. Results and Discussion

Financial analysis used to determine the benefits of the sawn timber business for the future can be seen from the amount of profit. Indicators of the amount of profit received by the sawn timber business and whether it is feasible to develop can be seen from the $NPV > 0$, $BCR > 1$, and IRR values. The interest rate used in this study is 7% which is the interest rate on bank loans.

3.1. Financing Needs / Investment Costs for Sawn Wood at UD. Buana Alam

Investment costs are costs incurred when starting a business. The investment component is needed at UD. Buana Alam, including shop buildings, and shop equipment. The projected direct investment cost requirement for the sawn timber business is Rp. 285,730,000. The description of the investment costs of the Buana Alam Trading Business is described in the table below.

Table 1. Projected investment cost of the Trading Business

Investment Costs	Price
Building	Rp. 285,000,000
Investment Equipment	Rp. 730,000
Total Investment Cost	Rp. 285,730,000

Table 1 shows the investment costs to start the Buana Alam Trading Business Table Investment costs are obtained from interviews with business leaders or owners.

3.2. Financing needs/operating capital of sawn timber trading business

The projected operating capital requirement of the sawn timber trading business is Rp. 101,000,000 in year 0. Operating costs include employee salaries/wages, raw materials, building tax, income tax, electricity, transportation, and fuel. As long as the business operates, the operating capital required to develop the sawn timber trading business is IDR 1,796,228,500.

The raw material used is Palapi wood taken from Donggala Regency. Operational costs were obtained from interviews with business leaders or owners.

Table 2. Projected Operating Capital Requirement of Buana Alam Trading Business

Investment Costs	Amount During Business (13 Years)
Management	Rp. 420,000,000
Employee salary/wages	Rp. 336,000,000
Raw Materials	Rp. 760,000,000
Electricity	Rp. 55,000,000
Building Tax	Rp. 4,738,500
Income Tax	Rp. 17,640,000
Transportation	Rp. 140,000,000
Depreciation	Rp. 850,000
Fuel	Rp. 62,000,000
Total operating expenses	Rp. 1,796,228,500

Table 2 shows the operating costs incurred by Buana Alam Trading Business for 13 years.

3.3. Feasibility Analysis of Sawnwood Trading Business Root Volume

Analysis of business feasibility from a financial aspect is very helpful to determine whether the business is feasible or not to be carried out or developed in the future. To determine the feasibility of the sawn timber trading business, the calculation of investment criteria consisting of Net Present Value (NPV), Benefit Cost Ratio (BCR), and Internal Rate of Return is carried out.

Net Present Value (NPV) is used to determine the current net income obtained from an investment activity. Research on the financial analysis of sawn timber processing has been conducted by Dendi (2019) conducted research with the title financial feasibility analysis of sawmill business in Sirnajaya Village, Karangjaya District, Tasikmalaya Regency. Based on the research conducted, it obtained an NPV value of Rp. 1,196,942,279 with an interest rate of 15%. This means that the sawmill business is financially feasible to operate. Based on the results of the analysis conducted, the NPV value of the sawn timber trading business was obtained at Rp. 389,806,900 The assumptions used in this NPV calculation are a discount rate of 7% and a business life of 13 years. Criteria for assessment: if the NPV value is greater than zero ($NPV > 0$) then the investment is feasible. This shows that the sawn timber business development is feasible based on the NPV criteria.

Benefit Cost Ratio (BCR) is the ratio between positive and negative NPV. To compare the current value of benefits with the current value of costs at an interest rate of 7%, the benefit-cost ratio is used. Based on the results of the comparison value between the benefits and costs of the sawn timber trading business, using the above assumptions, it was obtained at 2.09%. With the assessment criteria: $BCR > 1$ is feasible. With these criteria, it is feasible to develop a sawn timber business. Previous research conducted by Dendi (2019) obtained a BCR value of 3.12%. this shows that the business is feasible to run.

The internal Rate Of Return is used to determine how far the entrepreneur is able to return the amount of capital invested from sawn timber in the Buana Alam Trading Business. The IRR value of the sawn timber trading business from the calculation of NPV1; Df 7% and the NPV2 value; Df 22% obtained an IRR of 22.9%. from the resulting IRR value, this sawn timber trading business is feasible. Table 3 shows the results of the analysis of the feasibility of sawn timber investment in the Buana Alam Trading Business developed. Based on previous research conducted by Dendi (2019), the IRR value was 57.21%. This means that the sawmill business is financially feasible to operate.

Table 3. Feasibility evaluation criteria

Analysis Criteria	Value	Decision
NPV	Rp. 389,806,900	$NPV > 0$, otherwise
BCR	2,09	$BCR > 1$, declared feasible
IRR	22,9%	$IRR > \text{interest rate of } 7\%$, then isdeclared feasible

4. Conclusion

The conclusion of this study is that the results of the financial analysis of the sawn timber business for 13 years of operation obtained an NPV value of Rp. 389,806,900, BCR 2.09, and IRR 22.9%. Based on the results of research using financial analysis, the Buana Alam trade business in Palu City is feasible.

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