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Predicting Investment Feasibility in Perumda Establishment Using Payback Period, Net Present Value, and Internal Rate Return

Citra Sarasmitha^{1*}, Karina Setia Utami²

University of Merdeka Malang

Corresponding Author: Citra Sarasmitha citra.sarasmitha@unmer.ac.id

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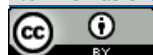
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ABSTRACT

This study examines the feasibility of investing in the establishment of a Regional Public Company in the field of rice distributors in the Yahukimo Regency, Papua. The investment feasibility analysis used consists of evaluating the payback period, Net Present Value, and Internal Rate Return. The analysis is also combined with various possible conditions, namely pessimistic, moderate and optimistic conditions. The type of data used is secondary data with a qualitative descriptive research approach. The results of the study show that the attitude of PERUMDA of Yahukimo district in the field of rice distribution is that the Payback Period, NPV, and IRR values show that they are feasible. The feasibility of investing in PERUMDA as a rice distributor is feasible in optimistic, moderate and pessimistic conditions. The establishment of the New PERUMDA will contribute to the absorption of rice production by the Yahukimo Regency community as a business process on the upstream side. Meanwhile, the business processes on the downstream side will have an impact on increasing PAD from the company's operating profit from the sale of rice

INTRODUCTION

Regional Public Company (PERUMDA) is a company established by the local government as a manifestation of the implementation of regional autonomy, especially in regional wealth management. PERUMDA has a major role in increasing regional prosperity and potential. This is in line with the 1945 Constitution which states that the state is obliged to guarantee the welfare of its citizens. National development starts from economic development at the district or city regional level (Wibisono, 2022). This encourages regional leaders to understand the potential and needs of the region in order to support the accelerated growth of Local Own Revenue (Ari Waluyo & Sotya Partiwidiwijoyo, 2022).

The Yahukimo Regency Government in its Regional Medium-Term Development Plan (RPJMD) has identified development potential and strategic issues for 2021-2026. The establishment of a new PERUMDA as part of the accelerated growth of the Gross Regional Domestic Product (GRDP) in the Yahukimo Regency area. GRDP is the total gross added value generated from various economic activities of the people of a certain area without regard to production factors (Rencana Pembangunan Jangka Menengah Daerah Kabupaten Yahukimo (RPJMD) 2021-2026, 2021). The proposal to form a new PERUMDA in the rice product distribution sector will simultaneously have an impact on economic growth in the agriculture, plantation and retail trade sectors in the Yahukimo Regency area. This is in line with the existing problems where the rate of economic growth in the agriculture and plantation sector is quite low, namely -1.1 percent in 2020 and the average during 2015-2020 is only 0.93 (Rencana Pembangunan Jangka Menengah Daerah Kabupaten Yahukimo (RPJMD) 2021-2026, 2021).

The natural potential possessed by Yahukimo Regency is the availability of fertile agricultural land that has not been utilized optimally. Based on BPS data for 2019, it is known that the number of traders in Yahukimo Regency consists of 412 small traders, 74 medium traders and 51 large traders. The results of the BPS survey also show that the highest income

from the basic food trade in the Yahukimo area is the rice trade, reaching 4,570 tonnes. Thus, it can be said that the potential for rice consumption in Yahukimo Regency has the potential to be developed. However, in fact the rice circulating in Yahukimo district was imported from outside the region. This is the background for the Regional Government to develop the agricultural industry starting from providing land, planting rice, processing agricultural products, and distributing agricultural products through the establishment of a New PERUMDA in the agricultural sector. The formation of the new PERUMDA will later be considered as a legal umbrella in an effort to be self-sufficient in rice and increase local revenue (PAD). The increase in Yahukimo Regency's PAD is expected to increase capital expenditure which will be useful in regional development. This is because an increase in PAD will affect an increase in capital spending by local governments (Safriliana & Amin, 2022).

In 2021, the local government has conducted a trial planting of high-yielding varieties of rice planted on an area of 26 hectares. This program involves 23 farmer groups where 50 percent are indigenous farmers of Yahukimo Regency. In October 2022 it is predicted that the harvest will reach a minimum of 50 tons of rice (Leloltery, 2022). Based on these facts, it can be concluded that the local government program in establishing the New PERUMDA has an important role in strengthening food security in the Yahukimo district. The formation of a new PERUMDA in the Rice product distribution sector also has the potential for the government to promote a labor-intensive worker program. The establishment of a new PERUMDA in the rice product distribution sector basically has several advantages, namely (1) Yahukimo Regency has the potential to develop management of lowland rice and dryland rice. (2) The Regional Government of Yahukimo Regency can encourage residents to become rice field farmers, garden farmers, and building material traders. (3) Labor training in agriculture, plantation, and sales of building materials tends to be easy and low-cost. (4) The use of technology tends to be small in the three sectors.

The formation of the New PERUMDA by the Regional Government shows that there is a direct influence in increasing regional financial investment (Sarasmitha & Patalo, 2023).

The application for the formation of PERUMDA must meet several requirements stipulated in the Minister of Home Affairs Regulation No. 118 of 2018. One of the requirements that must be met is to include a study related to regional needs analysis and business feasibility analysis. Regional needs analysts aim to analyze the basic potentials of an area to be developed and become a means of increasing people's welfare (Burhanuddin et al., 2020), (Rosari & Tnunay, 2020). Meanwhile, analysis of business feasibility according to regulations Government No 54 of 2017 is an analysis to assess several feasibility components, namely economic feasibility, market and marketing analysis, financial feasibility analysis, and other aspects (Mahirun & Sakhowi, 2018). This study is limited in the discussion of financial feasibility analysis only. The financial feasibility analysis in this study is to carry out an analysis related to the feasibility of the most profitable capital, investment and financing that will be run and managed by PERUMDA Baru, Yahukimo Regency. The approach used in this investment study uses the payback period, net present value, and internal rate return calculations. This approach can be used to see the potential of a project to increase economic factors in the region (Marsi, 2018), (Asmala, 2021), (Helmina & Raysalefty, 2022).

METHODS

The research approach used by the study team is a descriptive approach. This approach is used to explain phenomena that occur and develop reasons for a phenomenon to occur (Chandrarin, 2017). The type of data in this study is secondary data. Documentary studies are the method used by the study team to collect secondary data.

RESULTS AND DISCUSSION

In the financial feasibility analysis stage, there are many projections that will be used as the basis for calculating business feasibility on the financial side. These projections will be used as a basis for using financial analysis tools. Some of the analytical tools used in assessing the financial feasibility of establishing the New PERUMDA of Yahukimo Regency include the Payback Period, NPV (Net Present Value), and IRR (Internal Rate Return) values. The financial feasibility analysis will be divided into 3 based on the product focus of the New PERUMDA of Yahukimo Regency, namely financial feasibility in the distribution of rice products. However, this research will discuss related to financial feasibility analysis in the distribution of rice products. Financial feasibility analysis will also be presented with calculations involving several conditions, namely optimistic, moderate and pessimistic conditions.

Distribution of Rice Products

One of the areas of distribution that PERUMDA of Yahukimo Regency wants to open and develop is the Distribution of Rice Products. The cost of establishing a company engaged in the distribution of rice products is projected to consist of the initial investment used for expenditure on fixed assets and operational costs. Then the projections used next are projections related to annual sales figures and expenses. The following is the projection used in calculating the financial feasibility analysis for the distribution of rice products:

Initial Investment Forecasting

The projection of the initial investment amount which is the capital for the formation of the Yahukimo Regency New PERUMDA in the distribution of rice products uses the projection that the initial investment is used for fixed asset expenditure, employee salary expenditure, rental expenditure, raw material expenditure and other expenditures. The list of estimated expenditures may grow and decrease according to the real needs of the New PERUMDA. Thus, it can be concluded that the projection of the shopping list allocated from this initial investment is only a general projection. The nominal price approach is also carried out through a general market price approach so that if there are price differences that are influenced by certain regional conditions, this is ignored in the formation of this projection.

Table 1. Initial Investment Estimation of Rice Products

N o	Investment Component	Description	Fulltime Percentage	Amount
1	Fixed Asset Expenditure	Rice Grinding Machines, Rice Packaging Machines, Logistics Trucks	100%	Rp 605,000,000
2	Wages Expenditure	Wages	50%	Rp 168,000,000
3	Rent Expenditure	Factory buildings, offices, warehouses, and director's operational vehicle rent	50%	Rp 48,000,000
4	Miscellaneous Expenditure	Water expense, electricity expense, etc.	50%	Rp 135,750,000
5	Grain Expenditure	150,850 Kg of milled dry unhusked rice (PESIMIS CONDITION)	100%	Rp 633,570,000
Estimation Of Initial Investment Total				Rp 1,590,320,000

Based on the table above, it is known that the initial investment that can be deposited as capital for the formation of the New PERUMDA in the rice product distribution sector is IDR 1,590,320,000. The study team includes a minimum percentage of quota fulfillment that must be covered with initial capital. Expenditures for fixed assets and expenditure for raw materials in the form of dry unhulled rice per year must be covered by initial capital with the lowest projection, namely pessimistic conditions. This is because fixed assets and raw materials are the main components in business continuity. Meanwhile, salary spending, rent spending, and other expenses of at least 50% must be covered using the initial capital. This is

because salary expenditure, rent expenditure, and other expenses are operating expenses that can be adjusted according to income or current profit.

Annual Sales Forecasting

Forecasting annual sales is taken from the multiplication of the amount of rice consumption by the average price of rice per kilogram. The amount of demand for rice consumption per year is illustrated by the amount of real consumption per year of rice products with the year of observation, namely 2019. The variable that is ignored is the quality of rice products which consist of local, superior quality, and imported rice. The following is the estimated rice consumption per year used:

Table 2. Rice Consumption Per Year

Region	Rice Consumption (local rice, superior quality, imported) Tons
Year 2019	
Yahukimo	0.014508
Papua	182.79
Papua Barat	69.3
Amount Consumption	252.1045

Source: BPS (2022)

Table 3. Annual Rice Production in Kab. Yahukimo

Plant Variety	Harvested Area (Hectares)	Production (Tons)
Padi sawah	125	175
Padi Ladang	10.25	40.5
Total	135	215.5

Source: BPS (2022)

The price projection for rice in the market is taken from the Yahukimo Regent Regulation document Number 60 of 2021 concerning Unit Price Standards within the Yahukimo Regency

Government for the 2022 Fiscal Year (Yahukimo, 2022). The following is the result of processing data on the average price of rice per kilogram in Yahukimo Regency:

Table 4. Estimated Price of Rice per Kilogram in Kab. Yahukimo

Product	Weight	Price per Kilograms
Rice	15 kg	Rp15,333
	18 kg	Rp15,556
	25 kg	Rp14,600
Average Price per kg		Rp15,163

Source: Primary Data (2022)

Calculation of estimated annual income is the result of multiplying the demand for rice consumption per year by the average price of rice per kilo. Calculation of estimated annual income is presented in 3 schemes of conditions with different levels of optimism, namely optimistic conditions, moderate conditions and pessimistic conditions. These three schemes are part of the estimated annual revenue calculation which serves to provide an overview of the risk of fluctuations in demand for goods in the future.

Optimistic conditions are projected that annual rice production will be able to cover the annual real demand for rice. In moderate conditions, it is projected that the annual rice production will be the same as the real production in the Yahukimo Regency area in the previous year. The pessimistic condition is projected that rice production will be 30% lower than the production in previous years. The following presents the estimated annual income from rice sales in Yahukimo Regency:

Table 5. Estimated Yearly Income of Rice Sales in Kab. Yahukimo – Rice Products

	Optimistic		Moderate		Pessimistic	
Consumption per year (kg)	252,105		215,500		150,850	
The average price	Rp	15,163	Rp	15,163	Rp	15,163
Estimated Annual Revenue	Rp	3,822,651,196	Rp	3,267,618,519	Rp	2,287,332,963

Source: Primary Data (2022)

Information :

Optimistic: Conditions according to the number of rice requests

Moderate: Conditions according to the amount of real rice production

Pessimistic : The condition is 30% below the real production amount

Annual Expense Forecasting

Forecasting is also used in predicting the expenses that will occur from the company's operational activities. Expenses that are predicted to occur include depreciation of fixed assets, employee salary expenses, rental expenses, other operating expenses and costs for purchasing raw materials. The

type of operating expenses is predicted to increase with the length of the company. Therefore, the types

of loads provided in this study are only projections that are described in general terms.

Table 6. List of Estimated Fixed Assets and Annual Depreciation Expenses - Rice Products

Function	Fixed Asset	Qty	Price Estimated	Total
<i>Manufacturing</i>	Rice Milling Machine	1	Rp 200,000,000	Rp 200,000,000
<i>Packaging</i>	Rice Packaging Machine	1	Rp 55,000,000	Rp 55,000,000
<i>Shipping</i>	Truk Hino Dutro Cargo 110 LD	1	Rp 350,000,000	Rp 350,000,000
Total Price		3		Rp 605,000,000
Estimated Depreciation Expense per year (20%)				Rp 121,000,000

Source: Primary Data (2022)

Table 7. List of Estimated Employee Salaries Per Year - Rice Products

No	Employee Position	Qty	Salary Estimated	Total Salary
1	Director	1	Rp 15,000,000	Rp 15,000,000
2	Manufacturing Staff	3	Rp 1,500,000	Rp 4,500,000
3	Packaging staff	2	Rp 1,000,000	Rp 2,000,000
4	Warehouse staff	2	Rp 1,500,000	Rp 3,000,000
5	Driver	1	Rp 1,500,000	Rp 1,500,000
6	Security	1	Rp 1,000,000	Rp 1,000,000
7	General staff	1	Rp 1,000,000	Rp 1,000,000
Estimated Total Employee Salary Expenses/Month		11		Rp 28,000,000
Estimated Total Employee Salary Expenses/Year				Rp 336,000,000

Source: Primary Data (2022)

Table 8. List of Estimated Rent Per Year for Rice Products

No	Rent Type	Qty	Rent Estimated	Total Rent
1	Office Building Rent	1	Rp 4,000,000	Rp 4,000,000
2	Factory Rent + Storage Warehouse	1	Rp 4,000,000	Rp 4,000,000
Estimated Total Rent Per Month		2		Rp 8,000,000
Estimasi Total Beban Sewa Per tahun				Rp 96,000,000

Source: Primary Data (2022)

Table 9. List of Estimated Other Operating Expenses Per Year - Rice Products

No	Expenditure	Qty	Expenditure Estimated	Total Expenditure
1	Electricity expense	2	Rp 5,000,000	Rp 10,000,000
2	Water expense	2	Rp 500,000	Rp 1,000,000
3	Internet expense	1	Rp 1,000,000	Rp 1,000,000
4	Gasoline expense	225	Rp 25,000	Rp 5,625,000
5	Misscelenous expense	1	Rp 5,000,000	Rp 5,000,000
Estimated Total Other Operating Expenses Per Month		231		Rp 22,625,000
Estimated Total Other Operating Expenses Per Year				Rp 271,500,000
Purchase cost of milled dry unhusked rice (PESIMIS)		150,850	Rp 4,200	Rp 633,570,000
Estimated Total Other Operating Expenses and Cost of purchasing GKG				Rp 905,070,000

Source: Primary Data (2022)

Based on the table above, it is known that there is a purchase cost of milled dry unhusked rice under pessimistic conditions. The study team chose pessimistic conditions in purchasing raw materials on the grounds that the first year of company establishment tended to experience many obstacles related to organizational and operational adjustments. Thus, pessimistic conditions are the worst choice of consideration for the risk of

production failure. Pessimistic conditions can help potential investors prepare for minimal conditions in the first year of company development but still get optimal profits (Abdillah & Mennita, 2022). This can be explained in the table below, it can be seen that under pessimistic conditions, the company is still able to earn a net profit of Rp. 829,262,963 with the projection scheme previously described.

Table 10. List of Estimated Net Profit Per Year - Rice Products

Optimistic Level	Optimistic	Moderate	Pessimistic
	Rp	Rp	Rp
Estimated Annual Revenue	3,822,651,196	3,267,618,519	2,287,332,963
Cost estimation per year:			
		Rp	Rp
Estimated Depreciation Expense per year	Rp 121,000,000	121,000,000	121,000,000
Estimated Total Employee Salary Expenses			
per Year	Rp 336,000,000	Rp 336,000,000	Rp 336,000,000
Estimated Total Rental Expenses Per year	Rp 96,000,000	Rp 96,000,000	Rp 96,000,000
Estimated Total Other Operating Expenses		Rp	Rp
Per Year	Rp 271,500,000	271,500,000	271,500,000
Estimated Cost of Purchasing Dry Milled Grain	Rp 1,058,838,900	Rp 905,100,000	Rp 633,570,000
	Rp	Rp	Rp
Estimated Total Expenses per year	(1,883,338,900)	(1,729,600,000)	(1,458,070,000)
	Rp	Rp	Rp
Estimated net profit per year	1,939,312,296	1,538,018,519	829,262,963

Source: Primary Data (2022)

Information :

Optimistic: Conditions according to the number of rice requests

Moderate: Conditions according to the amount of real rice production

Pessimistic : The condition is 30% below the real production amount

The next step after describing the analysis of making financial projections, the financial feasibility

analysis study team in the study conducted an analysis related to the most profitable capital, investment and financing feasibility that would be run and managed by PERUMDA Baru Yahukimo Regency. Some of the analytical tools used in assessing the financial feasibility of establishing the New PERUMDA of Yahukimo Regency include the Payback Period, NPV (Net Present Value), and IRR (Internal Rate Return) values.

Table 11. Net Cash Flow Optimistic Conditions - Rice Products

Year	Sales Revenue (Optimis)	Raw Materials	Rent expense	Salary Expense	Depreciation expense	Misscelenous expense	Total Expense	Net Profit	Net Cash Flow
1	2	3	4	5	6	7	8 = (3+4+5+6+7)	9=(2 - 8)	10=(9+6)
0									-1,590,320,000
1	3,822,651,196	1,058,838,900	96,000,000	336,000,000	121,000,000	271,500,000	1,883,338,900	1,939,312,296	2,060,312,296
2	4,013,783,756	1,111,780,845	100,800,000	352,800,000	121,000,000	285,075,000	1,971,455,845	2,042,327,911	2,163,327,911
3	4,214,472,944	1,167,369,887	105,840,000	370,440,000	121,000,000	299,328,750	2,063,978,637	2,150,494,307	2,271,494,307
4	4,425,196,591	1,225,738,382	111,132,000	388,962,000	121,000,000	314,295,188	2,161,127,569	2,264,069,022	2,385,069,022
5	4,646,456,421	1,287,025,301	116,688,600	408,410,100	121,000,000	330,009,947	2,263,133,948	2,383,322,473	2,504,322,473

Table 12. Moderate Net Cash Flow - Rice Products

Year	Sales Revenue (Optimis)	Raw Materials	Rent expense	Salary Expense	Depreciation expense	Misscelenous expense	Total Expense	Net Profit	Net Cash Flow
1	2	3	4	5	6	7	8 = (3+4+5+6+7)	9=(2 - 8)	10=(9+6)
0									-1,590,320,000
1	3,267,618,519	905,100,000	96,000,000	336,000,000	121,000,000	271,500,000	1,729,600,000	1,538,018,519	1,659,018,519
2	3,430,999,444	950,355,000	100,800,000	352,800,000	121,000,000	285,075,000	1,810,030,000	1,614,919,444	1,741,969,444
3	3,602,549,417	997,872,750	105,840,000	370,440,000	121,000,000	299,328,750	1,894,481,500	1,708,067,917	1,829,067,917
4	3,782,676,888	1,047,766,388	111,132,000	388,962,000	121,000,000	314,295,188	1,983,155,575	1,793,471,313	1,920,521,313
5	3,971,810,732	1,100,154,707	116,688,600	408,410,100	121,000,000	330,009,947	2,076,263,354	1,895,547,378	2,016,547,378

Table 13. Net Cash Flow Pessimistic Conditions - Rice Products

Year	Sales Revenue (Optimis)	Raw Materials	Rent expense	Salary Expense	Depreciation expense	Misscelenous expense	Total Expense	Net Profit	Net Cash Flow
1	2	3	4	5	6	7	8 = (3+4+5+6+7)	9=(2 - 8)	10=(9+6)
0									-1,590,320,000
1	2,287,332,963	633,570,000	96,000,000	336,000,000	121,000,000	271,500,000	1,458,070,000	829,262,963	950,262,963
2	2,401,699,611	665,248,500	100,800,000	352,800,000	121,000,000	285,075,000	1,524,923,500	876,776,111	997,776,111
3	2,521,784,592	698,510,925	105,840,000	370,440,000	121,000,000	299,328,750	1,595,119,675	926,664,917	1,047,664,917
4	2,647,873,821	733,436,471	111,132,000	388,962,000	121,000,000	314,295,188	1,668,825,659	979,048,163	1,100,048,163
5	2,780,267,512	770,108,295	116,688,600	408,410,100	121,000,000	330,009,947	1,746,216,942	1,034,050,571	1,155,050,571

Payback Period

Payback Period is one of the indicators used to determine the feasibility of a project. This investment criterion measures project profitability based on the time needed to collect internal funds to return all of the funds invested (Sumbodo et al., 2021). The shorter the time required for a project to generate profits, the project being implemented can

be said to be attractive (feasible). The longer it takes to return investment funds, it means that the project can be reconsidered because a longer return on funds will indicate a smaller monetary value than the investment value. The Payback Period calculation formula is:

Payback Periode = Initial Investment / Cash inflow

Table 14. Calculation of Payback Period for Optimistic Conditions - Rice Products

Tahun	Net Cash Flow
0	-1,590,320,000
1	2,060,312,296
2	2,163,327,911
3	2,271,494,307
4	2,385,069,022
5	2,504,322,473

Table 15. Calculation of Payback Period of Moderate Conditions - Rice Products

Tahun	Net Cash Flow
0	-1,590,320,000
1	1,659,018,519
2	1,741,969,444
3	1,829,067,917
4	1,920,521,313
5	2,016,547,378

Table 16. Calculation of Payback Period for Pessimistic Conditions - Rice Products

TAHUN	Cash Flow	Accumulated Cash Flow
1	(1,590,320,000)	(1,590,320,000)
2	950,262,963	(640,057,037)
3	997,776,111	357,719,074

$$\begin{aligned}
 \text{Payback Periode} &= 1 \text{ year} + \left(\frac{357,719,07}{997,776,111} \times 12 \text{ months} \right) \\
 &= 1 \text{ year} + 4,3 \text{ months} \\
 &= \mathbf{1 \text{ year } 4 \text{ months}}
 \end{aligned}$$

Based on the three tables above, it is known that the payback period for the initial investment invested in establishing PERUMDA Rice Product Distributors only takes 1 to 2 years. Of course this is based on the assumptions that have been used before. If the sales conditions and annual expenses are in accordance with the projections made based on optimistic, moderate and pessimistic conditions, then this investment is declared feasible. This is reinforced by the short waiting period for return on investment, which only takes 1 to 2 years.

NPV (Net Present Value)

Net Present Value (NPV) is an investment criterion that is commonly used in assessing investment feasibility (Ramdani, 2021). NPV takes into account the difference in money received and spent by taking into account the value of money over time. An investment is stated to provide benefits (feasible) if the NPV value is > 0 , while an investment is declared to result in a loss (not feasible) if the resulting NPV is less than 0 (zero).

Table 17. NPV Moderate Conditions - Rice Products

Year	Sales Revenue	Raw Materials	Rent Expense	Salary Expense	Depreciation Expense	Miscellaneous Expense	Total Expense	Net Profit	Net Cash Flow	NPV
1	2	3	4	5	6	7	8 = (3+4+5+6+7)	9=(2 - 8)	10=(9+6)	6%
0									- 1,590,320,000	
1	3,822,651,196	1,058,838,900	96,000,000	336,000,000	121,000,000	271,500,000	1,883,338,900	1,939,312,296	2,060,312,296	Rp 353,370,845.56
2	4,013,783,756	1,111,780,845	100,800,000	352,800,000	121,000,000	285,075,000	1,971,455,845	2,042,327,911	2,163,327,911	Rp 2,278,724,985.03
3	4,214,472,944	1,167,369,887	105,840,000	370,440,000	121,000,000	299,328,750	2,063,978,637	2,150,494,307	2,271,494,307	Rp 4,185,915,406.21
4	4,425,196,591	1,225,738,382	111,132,000	388,962,000	121,000,000	314,295,188	2,161,127,569	2,264,069,022	2,385,069,022	Rp 6,075,113,464.92
5	4,646,456,421	1,287,025,301	116,688,600	408,410,100	121,000,000	330,009,947	2,263,133,948	2,383,322,473	2,504,322,473	Rp 7,946,488,900.44

Table 18. NPV Kondisi Pesimis - Produk Beras

Year	Sales Revenue	Raw Materials	Rent Expense	Salary Expense	Depreciation Expense	Miscellaneous Expense	Total Expense	Net Profit	Net Cash Flow	NPV
1	2	3	4	5	6	7	8 = (3+4+5+6+7)	9=(2 - 8)	10=(9+6)	6%
0									- 1,590,320,000	
1	2,287,332,963	633,570,000	96,000,000	336,000,000	121,000,000	271,500,000	1,458,070,000	829,262,963	950,262,963	Rp (693,845,506.64)
2	2,401,699,611	665,248,500	100,800,000	352,800,000	121,000,000	285,075,000	1,524,923,500	876,776,111	997,776,111	Rp 194,171,680.18
3	2,521,784,592	698,510,925	105,840,000	370,440,000	121,000,000	299,328,750	1,595,119,675	926,664,917	1,047,664,917	Rp 1,073,811,346.37
4	2,647,873,821	733,436,471	111,132,000	388,962,000	121,000,000	314,295,188	1,668,825,659	979,048,163	1,100,048,163	Rp 1,945,152,525.14
5	2,780,267,512	770,108,295	116,688,600	408,410,100	121,000,000	330,009,947	1,746,216,942	1,034,050,571	1,155,050,571	Rp 2,808,273,504.12

IRR (Internal Rate Return)

The last criterion that can be used in an investment feasibility analysis is to calculate the IRR. Internal Rate of Return (IRR) analysis calculates the interest rate that equates the value of the investment now with the value of net cash receipts in the future. The criterion for declaring an investment feasible or not is if the IRR value is greater than the applicable relevant interest rate (Kartikasari, 2021). Automatically, if the IRR is greater than 6%, then the investment can be said to be feasible to run. The formula used in calculating the IRR is:

$$IRR = i' + \frac{NPV'}{NPV' - NPV''} (i'' - i')$$

dimana:

i' = tingkat discount rate yang menghasilkan NPV'

i'' = tingkat discount rate yang menghasilkan NPV''

Based on the formula above, IRR calculation results for Rice Product Distributors with an initial investment from the Yahukimo Regency Government of Rp. 1,590,320,000 is an IRR of 132% for optimistic conditions, 106% IRR for moderate conditions, and 57% IRR for pessimistic conditions. An IRR value of more than 6% indicates that the investment is feasible in all three conditions. The study team used MS application assistance. Excel 2013 with the =IRR formula.

CONCLUSION

The financial feasibility analysis shows that the rice distributor business is feasible under a variety of optimistic, moderate and pessimistic conditions. The formation of the New PERUMDA will make a major contribution to the absorption of rice production by the people of Yahukimo Regency as a business process on the upstream side. Meanwhile, the business processes on the downstream side will have an impact on increasing PAD from the company's operating profit from the sale of rice.

This study has limitations on the disclosure of analysis in the establishment of PERUMDA. This study only describes the feasibility analysis of investment which is one of the methods in analyzing the business feasibility of establishing PERUMDA. Recommendations for further research can add studies from other aspects of economic feasibility and market and marketing analysis.

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