Feasibility Analysis of Asian Redtail Catfish (*Hemibagrus nemurus*) Cultivation Floating Net Cage System in Pangkalan Kerinci Timur Village, Pangkalan Kerinci District, Pelalawan Regency, Riau Province

Analisis Kelayakan Usaha Budidaya Ikan Baung (Hemibagrus nemurus) Sistem Keramba Jaring Apung di Kelurahan Pangkalan Kerinci Timur Kecamatan Pangkalan Kerinci Kabupaten Pelalawan Provinsi Riau

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Abstract

This research was conducted in Pangkalan Kerinci Timur Sub-district, Pangkalan Kerinci District, Pelalawan Regency, Riau Province to calculate the amount of investment, revenue, profit, and the feasibility level of Asian redtail catfish farming based on financial aspects using investment analysis, revenue, profit, revenue cost of ratio (RCR), financial rate of return (FRR), and payback period of capital (PPC). The method used in this research is the survey method while the determination of respondents is done by census. Data collection was carried out by direct observation, interview, and documentation with 10 mackerel fish farmers. The results showed that the cage size of Asian Redtail Catfish farmers consisted of size of 4×2×1.8 m³, the total investment was (IDR 22,048,997.00), the revenue received was (IDR 28,437,500.00/year), the profit received was (IDR8,442,629.00/year), RCR (1.42), FRR (38.29%), PPC (2.61). Meanwhile, for cages of size 4×4×1.8 m³, the total investment is (IDR30,027,500.00), the revenue received is (IDR 47,500,000.00/year), the profit received is (IDR19,066,669.00/year), RCR (1.67), FRR (63.49%), PPC (1.57). Based on the results of the RCR calculation of more than 1, FRR is greater than the bank interest rate of 6.4%, PPC is less than the maximum time required and the economic life of the equipment used for Asian redtail catfish farming is 3 years, then the Asian redtail catfish farming business is feasible to run but the income level of Asian redtail catfish floating net cage farmers is in the low category.

Keywords: Business Feasibility, Asian Redtail Catfish, Investment, Revenue, Profit.

Abstrak

Penelitian ini dilakukan di Kelurahan Kelurahan Pangkalan Kerinci Timur Kecamatan Pangkalan Kerinci Kabupaten Pelalawan Provinsi Riau dengan tujuan untuk menghitung besar investasi, penerimaan, keuntungan dan tingkat kelayakan usaha budidaya ikan baung berdasarkan aspek finansial (keuangan) menggunakan analisis investasi, penerimaan, keuntungan, *revenue cost of ratio* (RCR), *financial rate of return* (FRR), dan *payback period of capital* (PPC). Metode yang digunakan dalam penelitian ini adalah metode survei sedangkan penentuan responden dilakukan secara sensus. Pengumpulan data dilakukan secara observasi, wawancara dan dokumentasi secara langsung dengan pembudidaya

ikan baung berjumlah 10 orang. Hasil penelitian menunjukkan bahwa ukuran keramba pembudidaya ikan baung terdiri dari ukuran 4×2×1,8 m³ total investasinya sebesar (Rp22.048.997,00), penerimaan yang diterima sebesar (Rp28.437.500,00/Tahun), keuntungan yang diterima sebesar (Rp8.442.629,00/tahun), RCR (1,42), FRR (38,29%), PPC (2,61). Sedangkan untuk keramba ukuran 4×4×1,8 m³ total investasinya sebesar (Rp30.027.500,00), penerimaan yang diterima sebesar (Rp47.500.000,00/Tahun), keuntungan yang diterima sebesar (Rp19.066.669,00/tahun), RCR (1,67), FRR (63,49%), PPC (1,57). Berdasarkan hasil perhitungan RCR lebih dari 1, FRR lebih besar dari suku bunga bank 6,4%, dan PPC lebih kecil dari waktu maksimum yang disyaratkan dan umur ekonomis peralatan yang digunakan untuk budidaya ikan baung adalah 3 tahun, maka usaha budidaya Ikan Baung layak untuk dijalankan namun tingkat pendapatan petani keramba jaring apung ikan baung ini termasuk dalam kategori rendah.

Kata kunci: Kelayakan Usaha, Ikan Baung, Investasi, Penerimaan, Keuntungan.

1. Introduction

Indonesia has rich potential fisheries resources, both from marine fisheries, public waters, and aquaculture (Nainggolan, 2010). Fish farming is increasingly being carried out by farmers because the need for fish consumption is increasing every year. The Food and Agriculture Organisation (FAO) said that fish farming is expected to increase by 172 million tonnes by 2021, up 15% from the average demand in 2009-2011. This shows the high interest of business actors, especially in aquaculture (DJPB, 2021). Public waters that have considerable potential for fish farming include reservoirs, lakes, control dams, and other bodies of water. Aquaculture has the potential to increase community income, expand employment opportunities and business opportunities as well as earn foreign exchange (Pontoh, 2012).

Pelalawan Regency is an area that has fisheries potential that has prospects to be developed, this is supported by most of the area drained by the Kampar River and its tributaries. In addition to the main river, the Kampar River, there are also tributaries, among others: Kampar Kiri River, Segati River, Nilo River, Kerumutan River (which flows from the south of Kampar River), as well as Pelalawan River, Selampaya River, and Serkap River which flows from the north of Kampar River (Zulkarnain et al., 2015). According to Zaldi (2010), efforts towards fish farming in public waters are needed as a balance and help fulfill fish production that has been obtained from fishing which tends to decline. Along with the times and the increasing population growth accompanied by the increasing need for animal protein by humans every year, it is necessary to increase fish production as one of the food sources and protein sources.

Increasing fisheries production can be done with fish farming activities in floating net cages (KJA) and tancap net cages (KJT). With the existing potential, it is a source of livelihood for some fishing communities, especially in the form of fishing businesses. Besides capture fisheries, Pelalawan District also has enormous potential as an area that has the opportunity to develop fish farming businesses, both pond, cage, and pond cultivation. (Zulkarnain et al., 2015). Kampar River is one of the four major rivers in Riau Province. It has its headwaters in Bukit Barisan and empties into the east coast of Sumatra (Fauzi, 2004). The Kampar River has good fisheries resources that have been utilized by the people of Riau both in terms of capture fisheries and aquaculture activities (Harjoyudanto et al., 2020).

The Kampar River passes through several regencies in Riau, one of which is the Pelalawan Regency. Divided by the eastern Sumatra crossing road through the Pangkalan Kerinci Bridge resulted in the area around the bridge became a fairly crowded community residence. The Kampar River in Pangkalan Kerinci District, Pelalawan Regency is one of the Kampar River bodies where many community activities are directly or indirectly, the area around the bridge has a small harbor, restaurants, and aquaculture businesses using Floating Net Cages (KJA). Asian redtail Catfish farming business in floating net cages has become a supporting business for the welfare of the people of Pangkalan Kerinci Timur Village, the fish farming business carried out by the people of Kerinci Timur village is a fish farming business in cages, the types of fish cultivated such as Tapah (*Wallago* sp), and Asian redtail catfish (*Hemibagrus nemurus*) and seeds imported from the Kampar River. Baung is a freshwater fish that can live in the waters at the mouth of the river upstream. In addition, it is also commonly found in places located in flood areas. In general, the Asian redtail catfish is categorized as a fish that lives in public waters such as rivers, swamps, lakes, and reservoirs.

Asian redtail catfish farming business is located in Pangkalan Kerinci Timur Village, Pangkalan Kerinci Sub-district, Pelalawan Regency, Riau Province, using floating net cages in a square cage made of wood. Fish are cultivated in the form of Asian redtail catfish, Tapah, and striped catfish with feed in the form of pellets,

small fish, and dead chicken meat. Asian redtail catfish farming is carried out by buying Asian redtail catfish seeds in Rantau Baru village, Kuala Terusan village, or from the Kampar River, but if it is flooded. Farmers catch Asian redtail catfish seeds themselves in the Kampar River by spreading nets. Production is the total amount of cultured fish obtained by farmers in one fish farming harvest (kg/harvest).

The yield of fish cultivation per harvest is approximately 0.5 - 1 tonnes/year. In one year, fish farmers conduct fish farming once. Asian redtail catfish is one of the local catfish species that is very popular and relatively expensive, 2-3 times the price of striped catfish or Catfish. It has a high percentage of meat; white, savory, and with few spines, it is highly preferred by consumers whether consumed fresh or processed into smoked fish. Naturally, this fish is caught in rivers, lakes, and reservoirs in Sumatra, especially in the Riau area; however, the availability of this fish in nature has been greatly reduced due to overfishing and environmental damage so that the future supply of this fish is highly dependent on aquaculture.

The objectives of this study were: 1) To calculate the amount of investment, revenue, profit, and feasibility of the Asian redtail catfish farming floating net cage system (KJA) in Pangkalan Kerinci Timur Village.

2. Material and Method

2.1. Time and Place of Research

This research was conducted from 28 March 2022 to 27 April 2022 in Pangkalan Kerinci Timur Village, Pangkalan Kerinci District, Pelalawan Regency, Riau Province. This location was chosen purposively with the consideration that the majority of the population works as floating net cage farmers (cultivators) of Asian redtail catfish (*H.nemurus*).

2.2. Methods

The method used in this research is to use a survey method, namely by conducting field observations and by conducting interviews with respondents by taking a descriptive-quantitative approach. Ali (2014) suggests that survey design is a procedure in which researchers conduct a survey or give a questionnaire or scale to a sample to describe the attitudes, opinions, behavior, or characteristics of respondents. From the results of this survey, researchers make claims about trends in the population.

2.3. Determination of Respondents

The population in this study were fish farmers in Pangkalan Kerinci Timur Village, Pangkalan Kerinci District, Pelalawan Regency, Riau Province. While determining the respondents by using the census technique by direct observation where the population taken is all fish farmers in Pangkalan Kerinci Timur Village, where the cultivators are 10 people. Ali (2014) states that a census is a way of collecting data when all elements of the population are investigated one by one.

2.4. Data Collection

The data used in this research are primary data and secondary data. Primary data was obtained through direct interviews and field documentation. Interviews were conducted by asking questionnaires in the form of direct questions to respondents. Primary data collected in this study include fixed capital, working capital, income, and fixed costs. Fixed capital such as the cost of making floating net cages, buying seeds, and others. Working capital such as the cost of Asian redtail catfish feed, and others. Revenue such as the selling price of Asian redtail catfish when ready to harvest. Fixed costs such as the cost of depreciation of equipment, repairs, and maintenance of floating net cages. Secondary data was obtained by searching literature studies and browsing the internet. Secondary data was obtained from relevant agencies, namely the Pangkalan Kerinci Timur village head office.

2.5. Data Analysis

To answer the first objective the total investment spent on the Asian redtail catfish *(H. nemurus)* fish farming business, by doing descriptive analysis by calculating using the following formula.

2.5.1. Total Investment

Business capital or investment is all costs incurred by farmers in investing capital so that production can be carried out using the formula (Hendrik, 2013):

$$TI = MT + MK$$

Where:
TI = Total Investment
MT = Fixed Capital
MK = Working Capital

To answer the second objective of the study is how much revenue and profit is obtained from the Asian redtail catfish*)* fish farming business floating net cage system, by calculating using the following formula.

2.5.2. Total Cost, Revenue, and Profit

Total costs are calculated using the following formula (La Ola *in* Hotmauli, 2020):

$$TC = FC + VC$$

Where:
- TC   = Total cost (DR)
- FC   = Fixed cost (IDR)
- VC   = Variable cost

Total revenue (TR) can be calculated using the following formula (Soeharno, *in* Hotmauli, 2020)

$$TR = P \times Q$$

Where:
- TR   = Revenue (IDR)
- Q   = Total production of mackerel (kg)
- P   = Price of mackerel (IDR)

Profit is obtained from revenue minus total costs incurred for production with the following formula (Soekartawi *in* Nurmalina et al., 2018).

$$\pi = TR - TC$$

Where:
- TR = Total revenue (IDR/year)
- TC = Total cost (IDR/year)

To answer the third objective of the research is to analyze the feasibility of the business using descriptive-quantitative analysis.

2.5.3. Business Feasibility

Revenue cost of ratio (RCR), is the ratio between gross income and total costs incurred. RCR is used to see the feasibility of the business the greater the RCR value, the more feasible the business. The formula used is:

$$RCR = TR/TC$$

Description:
- TR = Total revenue
- TC = Total cost

With criteria: a) RCR > 1 then the business is profitable and worth continuing, b) RCR < 1 the business is loss-making and cannot be continued, and c) RCR = 1 then the business breaks even.

The financial rate of return (FRR) is the percentage comparison between profit (π) and the total investment (TI) invested. with the formula:

$$FRR = NI / I \times 100\%$$

Note:
- NI   =   Net Income
- I   =   Investment

With criteria: FRR> Bank loan interest rate applies then the business provides a return on investment and investment should be made, FRR < Bank loan interest rate applies then the business investment should be deposited with the Bank because it is more profitable (Hendrik, 2013). By knowing the FRR (financial rate of return), it can be determined whether capital should be invested in businesses or banks. If the FRR (financial rate of return) is greater than the interest rate then this indicates that capital should be invested in business rather than invested in banks.

The payback period of capital (PPC) is an analysis used to see the length of return on business capital (Hendrik, 2013). The payback period of capital (PPC), is used to measure how quickly the investment can return. The faster a business can return investment costs, the better the capital turnover for the business (Nurmalina et al., 2018). The following PPC formula is:

$$PPC = PPC = TI/Л \times period$$

Where:
- PPC   : Payback period of capital
- TI   : Total Investment
- Л   : Advantage
- Period : length of time to harvest

Decision criteria: If the value of the payback period > economic life then the investment is rejected. If the value of the payback period < economic life then the investment is accepted. So the assessment criteria in this payback period method are if the payback period is smaller than the maximum time required, the project is

accepted, and vice versa if the payback period is greater or longer than the time required, the investment is rejected (Nainggolan, 2018).

3. Result and Discussion

3.1. Geographical Conditions and Location

Pangkalan Kerinci Timur Sub-district is an expansion of Pangkalan Kerinci Village, Langgam Sub-district, Pelalawan Regency. On 12 October 1999, Pangkalan Kerinci became the Capital of the District and the Capital of Pelalawan Regency because the Pelalawan Regency Government divided Pangkalan Kerinci District into 3 (three), namely Pangkalan Kerinci Timur, Pangkalan Kerinci Kota, and Pangkalan Kerinci Barat.

Pangkalan Kerinci Timur Village with an area of 54,000 Km² consists of 3 neighborhoods, 20 Community Associations (RW), and 120 Neighbourhood Associations (RT) with the boundaries of Pangkalan Kerinci Timur Urban Village: Northside boundaries Delik Village, Pelalawan Sub-district, South boundaries Sering Village, Pelalawan Sub-district, East boundaries Lalang Kabung Village, Sering Village, and West boundaries Pangkalan Kerinci Village. The geography of Pangkalan Kerinci Timur Sub-district is flat and not hilly. The dominant vegetation in Pangkalan Kerinci Timur is the abundance of fruits, vegetables, and other crops. There are two factories in Pangkalan Kerinci Timur, namely PT RAPP and the WINGS INDOFOOD factory.

3.2. Respondent Characteristics

Age is one of the factors that influence behavior, the way a person thinks and acts in making a decision. Age can affect the productivity of the work that a person is doing. Research conducted on the feasibility analysis of Asian redtail catfish farming in Pangkalan Kerinci Timur Village found that the number of respondents used consisted of 10 people. Education is an important component in obtaining a desired job because with education people can adjust the type of job to be chosen. Types of education include formal education and non-formal education. Formal education is education obtained by attending school in a formal educational institution such as elementary, junior high, and high school.

3.3. Asian Redtail Catfish (H.nemurus) Fish Farming Business

The business capital owned by 10 fish farmers in the floating net cage system in Pangkalan Kerinci Timur Village is their capital and the initial capital for this fish farming business is different for each farmer because not all farmers spend the same costs on making floating net cages. The capital they spend depends on how much equipment they make and how much they spend on floating net cages. The Asian redtail catfish farming business in Pangkalan Kerinci Timur Village is a business that is carried out by this cultivator as a side business, but some cultivators make the Asian redtail catfish farming business in Pangkalan Kerinci Timur Village their main business or livelihood.

Cultivators in Pangkalan Kerinci Timur Village grow bream in floating net cages with a size of 4×2×1.8 m³ in which approximately 600 fish are placed and a size of 4×4×1.8 m³ in which approximately 1200 fish are placed Asian redtail catfish reared in floating net cages are fed with pellets, small fish and chicken intestines until the fish are suitable for harvesting. The enlargement of Asian redtail catfish in the floating net cage system from seed size to harvestable fish takes one year, so each year the cultivator harvests once. Asian redtail catfish farmers in the floating net cage system in Pangkalan Kerinci Timur Village sell to traders who sell in the Kerinci market at IDR50,000/kg, and marketing transportation costs are borne by traders so that farmers do not think too much about the cost of transporting their production.

3.4. Investment in Asian Redtail Catfish Farming

Table 1. Fixed Capital of Asian redtail catfish farming business in Pangkalan Kerinci Timur Village

Cost Component	Physical Quantity, Viewed From Cage Size		Physical Units	Total Cost (Rp)	
	4×2×1,8 m³	4×4×1,8 m³		4×2×1,8 m³	4×4×1,8 m³
Wood	0,007	0,015	m³	2.373.997	5.090.000
Net	3	5	Kg	198.750	325.000
Drums	4	8	Drums	985.000	1.800.000
Rope	3	5	Kg	191.250	312.500
Bolts	5	7	Kg	125.000	175.000
Nails	5	10	Kg	75.000	150.000
Total (IDR)				3.948.997	7.852.500

Table 2. Working Capital of Asian redtail catfish farming business in Pangkalan Kerinci Timur Village

Cost Component	Physical Quantity, by Cage Size		Physical Units	Total Cost (IDR)	
	4×2×1,8 m³	4×4×1,8 m³		4×2×1,8 m³	4×4×1,8 m³
Fish Seeds	637,5	1.250	Fish	318.750	625.000
Pellets	1.937,50	3000	kg	17.500.000	24.000.000
Chicken Gut	46,25	100	kg	231.250	500.000
Harvest Wages				50.000	50.000
Amount (IDR)				18.100.000	25.175.000

Table 3.Total investment in Asian redtail catfish farming business in Pangkalan Kerinci Timur Village

No.	Description	Amount (IDR)	
		4×2×1,8 m³	4×4×1,8 m³
1	Fixed Capital	3.948.997	7.852.500
2	Working Capital	18.100.000	25.175.000
Total (Rp)		22.048.997	30.027.500

3.5. Revenue and Profit of Asian Redtail Catfish Farming Business

Table 4. Annual revenue of Asian redtail catfish farming business in Pangkalan Kerinci Timur Village

No.	Cage Size	Price (IDR)	Total Harvest (kg/Year)	Total Revenue (IDR/Year)
1	4×2×1,8 m³	50.000	568,75	28.437.500
2	4×4×1,8 m³	50.000	950	47.500.000

Table 5. Total fixed costs per year of Asian redtail catfish farming in Pangkalan Kerinci Timur Village

Cage Size	Depreciation Expenses (IDR/Year)	Maintenance Cost (IDR/Year)	Total Fixed Costs (IDR/Year)
4×2×1,8 m³	1.731.746	163.125	1.894.871
4×4×1,8 m³	3.050.831	207.500	3.258.331

Table 6. Total non-fixed costs per year of Asian redtail catfish farming in Pangkalan Kerinci Timur Village

Cost Component	Physical Quantity, by Cage Size		Physical Units	Total Cost (IDR)	
	4×2×1,8 m³	4×4×1,8 m³		4×2×1,8 m³	4×4×1,8 m³
Fish Seeds	637,5	1.250	Fish	318.750	625.000
Pellets	1.937,50	3000	kg	17.500.000	24.000.000
Chicken Gut	46,25	100	kg	231.250	500.000
Harvest Wages				50.000	50.000
Amount (IDR)				18.100.000	25.175.000

Table 7. The total annual cost of cultivating Asian redtail catfish in Pangkalan Kerinci Timur Village

Cage Size	Fixed Costs (IDR/Year)	Non-Fixed Costs (IDR/Year)	Total Cost (IDR/Year)
4×2×1,8 m³	1.894.871	18.100.000	19.994.871
4×4×1,8 m³	3.258.331	25.175.000	28.433.331

Table 8. Annual profitability of Asian redtail catfish farming in Pangkalan Kerinci Timur Village

Cage Size	Reception (IDR/Year)	Total Cost (IDR/Year)	Advantages (IDR/Year)
4×2×1,8 m³	28.437.500	19.994.871	8.442.629
4×4×1,8 m³	47.500.000	28.433.331	19.066.669

3.6. Business Feasibility of Asian Redtail Catfish (H.nemurus) Farming

RCR is the ratio between the annual income obtained and the total costs incurred in the Asian redtail catfish farming business. This RCR has three criteria for whether a business is feasible or not. First, if RCR> 1 then the business is profitable and worth continuing. Second, if RCR < 1, the business suffers losses and cannot be continued. Third, if RCR = 1, the business will break even. A clearer calculation of RCR in this Asian Redtail Catfish farming business can be seen in Table 9.

Table 9. Analysis results from revenue cost of ratio (RCR)

Cage Size	Reception (IDR/Year)	Total Cost (IDR/Year)	RCR
4×2×1,8 m³	28.437.500	19.994.871	1,42
4×4×1,8 m³	47.500.000	28.433.331	1,67

Based on Table 9, it is known that the results of the RCR calculation in this Asian redtail catfish farming business for cages of size 4×2×1.8 m³ are 1.42 and cages of size 4×4×1.8 m³ is 1.67. The results of this RCR indicate that this Asian Redtail Catfish farming business is profitable; this is in line with the theory above which

says if RCR> 1 then the business is profitable and worth continuing. In line with previous research conducted by Mayasari et al. (2017), her research showed that each cultivator obtained an RCR value> 1. This means that the striped catfish and gurami enlargement business is feasible.

The RCR results also show that the annual income obtained is still higher than the total costs incurred in this aquaculture business, where every Rp1 of costs incurred will generate a profit of Rp1.42 for cage size 4×2×1.8 m³ and IDR1.67 for cage size 4×4×1.8 m³ so that this business is classified as feasible. The 4×4×1.8 m³ size cage produces a value of IDR1.67 which is greater than the 4×2×1.8 m³ size cage which produces a value of 1.42.

FRR is the ratio between the annual profit obtained and the total investment spent in this bream farming business. FRR is a guide to how much profit is obtained with a certain capital in a mackerel fish farming business compared to the capital deposited by the bank. A clearer calculation of FRR in this Asian Redtail Catfish farming business can be seen in Table 10.

Table 10. Analysis results from financial rate of return (FRR)

Cage Size	Advantages (IDR/Year)	Total Investment (IDR/Year)	FRR
4×2×1,8 m³	8.442.629	22.048.997	38,29
4×4×1,8 m³	19.066.669	30.027.500	63,49

Based on Table 10, it is known that the results of the calculation of FRR in the Asian redtail catfish farming business for cages of size 4×2×1.8 m³ are 38.29%, and cages of size 4×4×1.8 m³ are 63.49%, where the FRR value is greater than the deposit interest rate at Bank BRI of 6.4%, which means that the business is better invested in the Asian redtail catfish farming business in Pangkalan Kerinci Timur Village. The 4×4×1.8 m³ cage size produces a value of 63.49% which is greater than the 4×2×1.8 m³ cage size which produces a value of 38.29%. This is in line with research conducted by Tamba et al. (2013) which states that if the FRR value> bank deposit interest rate, then it is better to invest in the business, and if the FRR value < bank interest rate, then it is better if the investment owned is saved in the bank because it will be more profitable.

PPC is the ratio between the total annual investment spent and the annual profit obtained from the Asian redtail catfish farming business. The results of this PPC calculation aim to see the length of return on invested business capital. The PPC category is the greater the PPC value, the longer the return on business investment. The smaller the PPC value, the faster the return on business investment. A clearer calculation of PPC in this Asian Redtail Catfish farming business can be seen in Table 11.

Table 11. Analysis results from the payback period of capital (PPC)

Cage Size	Total Investment (IDR/Year)	Advantages (Rp/Year)	PPC
4×2×1,8 m³	22.048.997	8.442.629	2,61
4×4×1,8 m³	30.027.500	19.066.669	1,57

Based on Table 11, it is known that the PPC value obtained for cage size 4 × 2 × 1.8 m³ is 2.61, which means that this Asian Redtail Catfish farming business can return investment capital when the business has been running for about 2 years and 6 months and cage size 4 × 4 × 1.8 m³ is 1.57, which means that this Asian redtail catfish farming business can return investment capital when the business has been running for about 1 year and 6 months, in line with previous research conducted by Nainggolan (2018) If the value of the payback period > economic life then the investment is rejected. If the value of the payback period < economic life then the investment is accepted. So the assessment criteria in this payback period method are if the payback period is smaller than the maximum time required, the project is accepted, and vice versa if the payback period is greater or longer than the time required, the investment is rejected. While the economic life of the equipment used for the Asian redtail catfish farming business is 3 years, this means that the 4×2×1.8 m³ cage is feasible to run and the 4×4×1.8 m³ cage is feasible to run.

4. Conclusions

From the research, results show that: a) The total investment spent in the Asian redtail catfish farming business in this floating net cage system for cages of size 4×2×1.8 m³ is IDR22,048,997 and cages of size 4×4×1.8 m³ is IDR30,027,500. b) The annual revenue obtained in the Asian Redtail Catfish farming business in this floating net cage system for cage size 4×2×1.8 m³ is IDR28,437,500 and cage size 4×4×1.8 m³ is IDR47,500,000, and the annual profit for cage size 4×2×1.8 m³ is IDR8,442,629 and cage size 4×4×1.8 m³ is IDR19,066,669. c) The feasibility of the business is seen from the RCR value obtained, namely for cages of size 4×2×1.8 m³ of 1.42 and cages of size 4×4×1.8 m³ of 1.67. The FRR value obtained is for cage size 4×2×1.8 m³ at 38.29% and cage size 4×4×1.8 m³ at 63.49%. The PPC value obtained is for cage size 4×2×1.8 m³ of 2.61 or 2 years and 6 months and cage size 4×4×1.8 m³ of 1.57 or 1 year and 6 months, while the economic life of the equipment used for Asian redtail catfish farming business for 3 years and based on the RCR, FRR, and PPC

analysis, the Asian redtail catfish farming business in the floating net cage system in Pangkalan Kerinci Timur Village can be said to be feasible, but the income level farmers are in a low category.

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