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| RESEARCH ARTICLE

Profitability of Conventional Tilapia Farming Business: A Case Study of Fisheries Business Environment of Pondok Mekar Dimembe, North Minahasa Regency-Indonesia

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| ABSTRACT
The agricultural sector is one of the pillars supporting the development of the Indonesian nation. The participation of the agricultural sector encompasses food crops, plantations, livestock, fisheries, and forestry. One aspect of fisheries to support the development of the Indonesian nation is through fish farming efforts and the income of fish farmers. Tilapia fish farming is a common freshwater fish production practised in the North Minahasa Regency, North Sulawesi Province, Indonesia. In production activities, the primary goal of cultivation is to maximize business profits. This research aims to determine the profitability of tilapia fish farming at Pondok Mekar in the Dimembe Village, Dimembe District, North Minahasa Regency, focusing on the feeding method using hands. The research results indicate that tilapia fish farming at Pondok Mekar generates a profit of IDR 55,640,337.66 per production period (four months) per hectare, with a Return Cost Ratio (R/C Ratio) of 1.37.

| KEYWORDS

Fish farming, Profitability, Income, and R/C Ratio.

| ARTICLE INFORMATION

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1. Introduction

Aquaculture in Indonesia is one of the important components of the fisheries sector. The need for freshwater fish is quite high, judging from the level of demand as a staple food to complement rice. One of the freshwater fish that is in great demand is tilapia. The tilapia farming business is very supportive of fulfilling community nutrition (Effendy, I. 2004; Gufran & Kordi, 2008). In line with the increasing public awareness of the benefits of fish, meat needs are also increasing.

North Sulawesi is commonly known as a producer of freshwater-farmed fish. The types of cultivation developed are also very diverse, such as carp (*Cyrpinus carpio*), tilapia fish (Tilapia *mossambica*), and tilapia (*Oreochromis niloticus*). It is unsurprising that North Sulawesi is a portrait of aquaculture in eastern Indonesia. Starting from pond cultivation and floating net cages, any cultivation is well developed in this province (Directorate General of Aquaculture, 2017).

Dimembe Village is one of the villages in North Minahasa Regency that has the potential land for a large pond. Mujair fish farming business is a freshwater production fish that is generally cultivated in this village. In production activities, the main purpose of cultivation is to maximize business profits (Firdaus, M. 2009). The maximum profit is closely related to the good and proper management of freshwater aquaculture businesses (Khatunar, J. 2020). Therefore, knowledge and skills, especially in terms of freshwater aquaculture business management, are very important to be mastered by freshwater fish farmers in order to achieve maximum results by reducing risks that can affect the level of profit (Sutojo, M.D. 1995; Beveridge, M. 1996; Firdaus, M. 2009).

One of the important technical aspects of managing aquaculture business is feeding (Susanto, H. 2004). The results of the initial survey provide information that feed is the largest cost component of the overall production cost. Apart from that, the right way of feeding is very influential in the process of fish development and productivity (Sutojo, M.D. 1995; Rahim & Hastuti, 2007). In Dimembe Village, especially the tilapia farming business in Pondok Mekar, two feeding methods are known, namely the method of feeding by hand and using *a self-feeder*. However, the feeding method used today is the method of feeding using hands because this method is still considered more effective than the method of feeding using *a self-feeder*. The method of feeding using self-feeders began to be abandoned due to the uneven feeding process. For that fact, the author wants to conduct a study on the profitability of the tilapia fish farming business in terms of how to feed using hands, in other words, conventional fish farming methods. The purpose of this study is to determine the profitability of the Pondok Mekar tilapia farming business in Dimembe Village, Dimembe District, North Minahasa Regency, in terms of the method of feeding by hand, and with such income, whether it is still feasible to develop.

2. Research Methods

Field research was conducted in Dimembe District, North Minahasa Regency, North Sulawesi Province in the Pondok Mekar. The study was conducted using a purposive sampling method in this area and was chosen deliberately by researchers because Dimembe District is one of the tilapia production centers in North Sulawesi. The study was carried out for one cultivation period in July-September 2016 (Mingga, A. et al. 2016), then with the same method and the same place, it was repeated to see its profitability in July-September 2021.

2.1 Research Design

The population in this study is the tilapia farming business in Pondok Mekar. The study was conducted on five observation pools selected from 26 existing pools. The ponds were chosen because they have the latest and complete data according to the needs of this study harvested in the last three months or one last cultivation period.

The types of data used are primary data and secondary data. Primary data includes data on freshwater fisheries farming, total fixed costs, total variable costs and selling prices of tilapia. Secondary data include data on the profile of the research site and information on tilapia farming.

Primary data sources were obtained through direct observation and interviews with farmers who own Pondok Mekar's tilapia fish farming business in Dimembe Village, while secondary data sources were obtained from trusted internet sites, literature books and the Dimembe Village government.

2.2 Research Variables

The variables used in this study are as follows:

1. Total Fixed Costs
   The things reviewed in total fixed costs are:
   a. Electricity Cost (Rp/production period).
   b. Land Tax Fee (Rp/production period).
   c. Equipment Depreciation Cost
      1) Hoe (Rp/production period).
      2) Spades (Rp/production period).
      3) Big knife (Rp/production period).
      4) Transport Cart (Rp/production period).
      5) *Tool box* (Rp/production period).
      6) Capture Net (Rp/production period).
      7) Dipper (Rp/production period).
      8) Bucket (Rp/production period).

2. Total Variable Costs
   The things reviewed in total variable costs are:
   a. Seed Cost (Rp/head/production period).
   b. Fertilizer costs
      a) Manure (Rp/sack/production period).
   c. Feed Cost
      a) Granulated Pellets (Rp/sack/production period).

b) Fine Bran (Rp/sack/production period).

d. Labor Cost (Rp/HKSP/production period).

3. Fish Selling Price

The selling price of the tilapia fish studied is adjusted to the selling price prevailing in the market. The unit of measurement of the selling price of fish is Rp/kg.

4. Income

Revenue is derived from the difference between total revenue and total production costs of Pondok Mekar's fishing business. If the income value shows a positive number, then tilapia farming is profitable *(profit);* Conversely, if the income value shows a negative number, then tilapia farming suffers a loss *(loss)*. The unit of measurement of income is Rp/production period.

2.3 Farm Data Analysis

The profitability analysis consists of revenue and the ratio of receipts to total production costs.

a. Revenue is derived from the difference between total receipts and total production costs.

$$\mathbf{P = PT - BPT}$$

Information:

P = Income *(Income)* on tilapia fish farming.
PT = Total Acceptance *(Total Revenue)* on tilapia fish farming.
CPM = Total Production Cost *(Total Cost of Production)* on tilapia fish farming.

b. The R/C *ratio* is derived from the quotient between total receipts and total production costs. The R /C Ratio value explains that if the total production costs incurred are Rp 1, the revenue obtained is equal to the R/C *Ratio* value.

$$r = \frac{\mathbf{PT}}{\mathbf{BPT}}$$

Information:

r = R/C ratio (*Return Cost Ratio)* on tilapia fish farming.
PT = Total Acceptance *(Total Revenue)* on tilapia fish farming.
CPM = Total Production Cost *(Total Cost of Production)* on tilapia fish farming.

3. Results of Research and Discussion

3.1 Description of Research Location

The research location is in the Dimembe Village area, precisely in the environment of the tilapia fish farming business called Pondok Mekar in Dimembe Village, Dimembe District, North Minahasa Regency-North Sulawesi Province-Indonesia. This village is located at an altitude of 350 – 500 m above sea level, which has an air temperature between 23 ° C and 29 ° C. The boundaries of Dimembe Village are:

1. The north is bordered by the Warukapas-Dimembe Village Police Line
2. To the south, it borders the Laikit-Dimembe Village Police Line
3. The east is bordered by the Klabat Mountain Forest-Klabat Village.
4. To the west, it is bordered by the Laikit Village Police Line and Tetey-Talawaan Village.

The total population of Dimembe Village is 2,461 people, consisting of 1,119 men and 1,342 women, with a total of 668 families. The area of Dimembe Village is ± 2,190 Ha. The village is predominantly Christian, consisting of Catholic Christians and Protestant Christians.

Based on data obtained from the Old Law Office of Dimembe Village, the average level of education in the community ranges from elementary school graduation to junior high school, high school, and college graduates, who are still lacking. The livelihood of Dimembe Village residents is mostly farmers (Dimembe Village Book, 2020).

Pondok Mekar's tilapia farming business is one of the large family businesses owned by the Wagiu-Karundeng Family. This cultivation business is a family business that has been cultivated for generations until now. The initial purpose of fish farming is for family consumption, recreation, and education, but over time, with enough ponds, the purpose of the cultivation business is to

make a profit (profit*)*. In this cultivation business, there are 26 ponds with 18,975 m^2 (1.89 Ha) cultivated on three hectares of land (Mingga A et al. 2016).

Over time and development, the number of pools, which initially only amounted to 15, gradually began to expand the business until there were 26 pools in 2017, and now pools have increased to 32 in 2020. There are three types of fish cultivated in this place, namely tilapia, carp, and tilapia. The type of fish that is most cultivated in this place is tilapia fish because consumer demand for this type of fish is very high compared to other types of fish. While the types of carp and tilapia are only a complement to tilapia based on the level of fulfillment of consumer demand.

3.2 Total Cost Analysis

This study conducted a total cost analysis on five tilapia ponds harvested in the last three months of 2017. The following table presents the profiles of these ponds, specifically regarding the size/area of the pond, the number of seeds, the amount of feed, the date of harvest and the amount of production.

Table 1 Profiles of Pools Studied

No	Pool	Size/ Pool Area	Sum Seed	Sum Feed	Date Harvest	Sum Production
1	Pool I	20 x 30 m/600 m^2	3,000 head	900 kg	Jul 29, 2021	600 kg
2	Pool II	20 x 50 m/1,000 m^2	5,000 head	1.350 kg	Jul 15, 2021	1,000 kg
3	Pool III	30 x 70 m/2,100 m^2	10,000 heads	2.100 kg	May 28, 2021	1,700 kg
4	Pool IV	20 x 25 m/500 m^2	2,000 head	690 Kg	11 May 2021	400 Kg
5	Pool V	15 x 25 m/375 m^2	1,500 head	600 Kg	5 Jan 2021	300 Kg

Based on the data from Table 1 above, the number of seeds per square meter and the amount of production per square meter of each pond can be calculated. The number of seeds per square meter of each pond is as follows: in the first pond, the number of seed sowing is 3,000 heads, and the number of seeds per square meter is five heads. The second pond has 5,000 seeds, five seeds per square meter. The third pond has 10,000 seeds; the number of seeds per square meter is four point seventy-six. The fourth pond has 2,000 seeds, which is four seeds per square meter. The fifth pond has 1,500 seeds, which is four seeds per square meter.

The amount of production per square meter of each pond is as follows: the first pond's total production is 600 kg of tilapia or one kilogram per square meter. The second pond produces 1,000 kg of tilapia, or one kilogram per square meter. The third pond's total production is 1,700 kg of tilapia, or 0.81 kilograms per square meter. The fourth pond produces 400 kg of tilapia, or 0.80 kilograms per square meter. The fifth pond produces 300 kg of tilapia, or 0.80 kilograms per square meter.

The total area of the five ponds studied was 4,575 m^2 while the average area of the five ponds was 915 m^2 (0.09 Ha). The profiles of the five ponds, such as the number of seed stockings, the amount of feed used, and the amount of production produced, are the results of one production period of Pondok Mekar's tilapia farming business, which is for four months.

3.3 Total Fixed Cost

Total fixed costs are the total fixed costs used in the tilapia farming business in Pondok Mekar, consisting of equipment depreciation costs, fixed labor costs, electricity costs and land tax costs.

1. Equipment Depreciation Cost

The depreciation costs of equipment used in Pondok Mekar's tilapia farming business can be seen in the following table.

Table 2 Equipment Depreciation Costs

Component	Physical (BH)	Purchase Price/unit (IDR)	Age of Econ-omic (Thn)	Value Residu/ Unit (IDR)	shrinkage/ unit /year (IDR)	shrinkage/ /Year (IDR)	shrinkage /production period (Rp)	shrinkage for 5 pools (IDR)	shrinkage to average area (IDR)
1. Tool									
a. Hoe	2	95.000	5	9.500	17.100	34.200	11.400	2.748,6	549,7
b. Goals	2	100.000	5	10.000	18.000	36.000	12.000	2.893,2	578,6
c. Foot hoe	4	50.000	5	5.000	9.000	36.000	12.000	2.893,2	578,6
d. Cart	1	400.000	5	40.000	72.000	72.000	24.000	5.786,5	1.157,3
e. Tool box	2	200.000	2	-	200.000	400.000	133.333,33	32.147,5	6.429,5
f. Capture net	1	250.000	5	-	250.000	250.000	83.333,33	20.092,2	4.018,4
g. Small basket	4	15.000	2	1.500	6.750	27.000	9.000	2.169,9	433,9
2. Building	1	251.000.000	30	25.100.000	7.530.000	7.530.000	2.510.000	605.177,8	121.035,5
3. Pool	5	1.300.000	2	130.000	585.000	2.925.000	975.000	235.079,0	47.015,81
Total Equipment Depreciation Cost								**908.988,3**	**181.797,6**

Table 2 presents depreciation costs calculated using the *straight-line method*. Depreciation of one unit of equipment per year is obtained by means of purchase cost per unit minus residual value, then divided by its economic life. For example, the cost of purchasing a hoe of Rp 95,000 minus the estimated residual value of Rp 9,500 and then dividing the estimated economic life of five years results in a depreciation per year of one hoe unit of Rp 17,100.

Depreciation cost per year is the result of multiplying depreciation per year by the number of units of equipment. For example, the number of hoes, as many as two units multiplied by the annual depreciation of Rp 17,100, results in an annual hoe depreciation cost of Rp 34,200. Depreciation cost per production period is the quotient between equipment depreciation costs per year and the production period, which is three times production in one year. For example, the annual hoe depreciation cost of Rp 34,200 divided by three production periods in one-year results in a depreciation cost per production period of Rp 11,400.

Depreciation costs for the area of five ponds are obtained by multiplying the depreciation cost of equipment per production period by the proportion of the area of five ponds to the total area of the pool (26 pools). This is done because all equipment is used in all owned pools (26 pools). The area for the five ponds studied is 4,575 m^2 while the area for the entire pool is 18,975 m^2. For example, hoe depreciation cost per production period of Rp 11,400 multiplied by the proportion of the area of five ponds to a total area of 26 ponds (area of five ponds 4,575 m^2 divided by a total area of 26 ponds of 18,975 m^2) results in hoe depreciation cost for an area of five ponds of Rp 2,748.62.

The depreciation cost for the average area is obtained from the quotient between depreciation costs for the area of five ponds and the five pools to be studied. For example, hoe depreciation expense for the area of five ponds of Rp 2,748.62 divided by five results in depreciation cost for an average area of Rp 549.72. The total equipment depreciation cost for the average area is the sum of the total depreciation costs for the average area of each equipment used, which is IDR 182,231.66.

2. Fixed Labor Costs

Fixed labor costs are meant to be costs incurred for monthly labor employed on a regular basis (Salvatore &; Diulio, 2003). This labor is included in fixed costs due to its invariable payments and activities for all cultivated ponds. These fixed labor costs can be seen in the following table.

Table 3 Fixed Labor Costs

Component	Cost (Rp)
Wages per month	1.500.000,00
Wages per production period	6.000.000,00
Cost for the area of five pools	1.446.640,32
Cost for average area	289.328,06

Fixed labor costs are meant to be the cost of feeding labor with the number of workers employed as much as one person. Table 3 above shows that labor wages per production period of Rp 6,000,000 are obtained from the product of labor wages per month of Rp 1,500,000 times 4 (tilapia production period for 4 months). Fixed labor costs for the area of five pools are obtained from the product between labor wages per production period of Rp 6,000,000 with the proportion of the area of five pools to the total area of 26 pools (the area of five pools 4,575 m^2 divided by the total area of 26 pools of 18,975 m^2). Fixed labor costs for the area of the five pools amounted to Rp 1,446,640.32. Fixed labor costs for the average area were obtained from the costs for the area of five pools of Rp 1,446,640.32 divided by 5 (the five pools studied), resulting in fixed labor costs for the average area of Rp 289,328.06.

3. Land Tax Fees

Land tax on Pondok Mekar's tilapia farming business is a land tax fee incurred by the owner of Pondok Mekar's aquaculture business in one year. The cost of land tax can be seen in the following table:

Table 4 Land Tax Fees

Component	Cost (Rp)
Taxes per year	150.000,00
Tax per production period	50.000,00
Tax on the area of five pools	12.055,33
Tax on average area	2.411,07

Table 4 shows that the tax imposed by the government is Rp 150,000 per year. The number of months in a year divided by the production period produces three production periods in a year. Therefore, the tax cost per year divided by the number of production periods in a year results in a tax cost per production period of Rp 50,000.

The land tax fee for the area of five ponds is the product of the tax cost per production period of Rp 50,000, with the proportion of the area of five ponds to a total area of 26 ponds (the area of five ponds is 4,575 m^2 divided by the total area of 26 ponds of 18,975 m^2). The land tax fee for the area of five ponds is IDR 12,055.33. The land tax fee for an average area of Rp 2,411.07 is the quotient of the land tax cost for the area of five ponds with the number of pools studied, which is as many as five ponds.

4. Electricity Cost

Electricity costs incurred by the owner of the Pondok Mekar tilapia fish farming business can be seen in the following table.

Table 5 Electricity Costs

Component	Cost (Rp)
Electricity cost per month	150.000,00
Cost of electricity per production period	600.000,00
Electricity costs for the area of five pools	144.664,03
Electricity cost for average area	28.932,81

Table 5 shows the total cost of electricity used in the Pondok Mekar tilapia farming business obtained from the product of electricity costs per month of Rp 150,000 with a 4-month tilapia production period resulting in a total electricity cost per production period of Rp 600,000.

The electricity cost for the area of five ponds is the product of the electricity cost per production period of Rp 600,000 with the proportion of the area of five pools to a total area of 26 pools (the area of five pools is 4,575 m^2 divided by the total area of 26 pools of 18,975 m^2). The electricity cost for the area of five pools is IDR 144,664.03. The electricity cost for an average area of Rp 28,932.81 is the quotient of the electricity cost for the area of five pools of Rp 144,664.03 for 5 (five research pools).

5. Total Fixed Costs

The total fixed costs of Pondok Mekar's tilapia farming business can be seen in the following table:

Table 6 Total Fixed Costs

Component	Cost	
	Average pool area (Rp)	**Pool size 1 hectare (Rp)**
- Equipment depreciation per production period	182.231,66	2.024.796,22
- Fixed labor costs per production period	289.328,06	3.214.756,22
- Cost of electricity per production period	28.932,81	321.475,67
- Land tax cost per production period	2.411,07	26.789,67
Total Fixed Cost per Production Period (Rp)	**502.903.60**	**5.587.817.78**

Table 6 shows fixed costs by their components and total fixed costs by average area (0.09 Ha) and their conversion into one hectare. The total fixed cost for the average area is Rp 502,903.60, and the conversion into one hectare becomes Rp 5,587,817.78.

3.4 Total Variable Cost

The following presents variable costs by their components and total variable costs in the form of an average of five observation ponds (0.09 Ha) and their conversion into one hectare.

Table 7 shows that the costs incurred for feed ingredients (pellets and fine bran) are the largest cost component, which is 90% of the total variable costs. The method of feeding applied to the Pondok Mekar tilapia fish farming business is by hand, but the cost of feed used in this tilapia farming business is high because the method of feeding using hand is still not effective.

Table 7 Total Variable Costs

No	Component	Physical Amount (the average)	Unit price (IDR)	Cost	
				Average pool area (0.09 Ha) (IDR)	**Pool area 1 hectare (IDR)**
1	Fish Seeds	4,300 heads	225/tail	967.500	10.750.000,00
2	Ingridients :				
	a. Fine brans	9,8 Krg	310.000/krg	3.038.000	33.755.555,55
	b. Pellets	27.8 Krg	308,000/krg	8.562.400	95.137.777,78
	c. Pupuk	9 Krg	8.000/krg	72.000	800.000,00
3	Daily workforce:				
	a. Fertilization	1 org	125,000/org	125.000	1.388.888,89
	b. Harvest	1 org	125,000/org	125.000	1.388.888,89
Total Variable Costs				**12.889.900**	**143.221.111,11**

According to direct field observations, feeding is only focused in one place from each available pond. Feed is taken using a bucket and spread using a dipper. Stocking feed without using doses causes the cost of feed to be still high as for the use of other costs, such as the cost for purchasing fish fry by 7.50%, labor costs by 1.94% and fertilizer costs by 0.56% of total variable costs. The capacity of each feeding ingredient is Fine bran (30 Kg/sack), Pellets (30 Kg/sack), and Fertilizer (25 Kg/sack).

3.5 Total Production Cost

The total production cost per production period in the Pondok Mekar tilapia fish farming business can be seen in the following table:

Table 8 Total Production Costs

Component	Cost	
	Average Pool Size (Rp)	**Pool area one hectare (Rp)**
Total variable costs	12.889.900,00	143.221.111,11
Total fixed costs	502.903,60	5.587.817,78
Total Cost	**13.392.803,60**	**148.808.928,89**

Table 8 above shows total production costs based on average pond area and pond area converted to hectares, which is the sum of total variable costs and total fixed costs. Total variable costs account for 96.25% of total production costs. In one production period (four months), the tilapia fishery business must provide funds of around Rp 148,808,928.89 per hectare.

3.6 Total Receipt Analysis

The total revenue studied in this study is the quantity of tilapia production and the average price of tilapia sales prevailing in the market in one production period (Sartono, A. 2010).

3.6.1 Total Tilapia Production Quantity

The total quantity of tilapia fish in one production period can be seen in the following table:

Table 9 Quantity of tilapia fish production

Pool	Pool Size (m^2/Ha)	Production quantity (Kg)
Pool I	600/0.06	600
Pool II	1.000/0.1	1.000
Pool III	2.100/0.21	1.700
Pool IV	500/0.05	400
Pool V	375/0.04	300
Sum	**4.575/0.46**	**4.000**
Average Production Quantity	**0.09 Ha**	**800**
Production Quantity per Hectare		**8.888,87**

Table 9 above shows the average production quantity of five observation ponds (average area = 0.09 Ha), reaching 800 Kg of tilapia or 8,888.87 Kg per hectare.

3.6.2 Fish Selling Price

The selling price of tilapia fish produced from five observation ponds reached Rp. 23,000/Kg in 2017, the range is still the same if taken on the spot by consumers, namely Rp. 23,000-27,000 in 2020. This price is the strike price with buyers who are regular customers of Pondok Mekar's fishing business.

3.6.3 Total Acceptance

The total revenue in Pondok Mekar's tilapia farming business can be seen in the following table:

Table 10 Total Receipts

Acceptance	(IDR)
By average pool area	18.400.000,00
Based on pool area 1 Ha	204.444.444,44

Table 10 data shows total receipts based on the average pool area of five observation ponds (0.09 Ha), and receipts converted to one hectare pool area. Revenue based on an average pond area of Rp 18,400,000 obtained from the product between the average production quantity of 800 kg with the selling price of tilapia fish of Rp 23,000 and the revenue converted to a one-hectare pond area of Rp 204,444,444.44.

3.7 Profitability Analysis

3.7.1 Income

Income in Pondok Mekar's tilapia farming business can be seen in the following table:

Table 11 Pondok Mekar Mujair Fish Farming Business Income

	Value	
Component	**Average pool area (Rp)**	**Pool area one hectare (Rp)**
Total Acceptance	18.400.000,00	204.444.444,44
Total Production Cost	13.392.803,60	148.808.928,89
Income	**5.007.196,40**	**55.635.515,55**

Table 11 shows that total receipts are greater than total production costs. During one observed production period, Pondok Mekar's tilapia business made a profit of IDR 55,635,515.55 per hectare.

3.8 Return Cost Ratio (R/C Ratio) Analysis

Return Cost Ratio *analysis* is the ratio of return on the overall production costs incurred in a business run. This analysis is used to measure the amount of revenue compared to the total cost of production.

Return Cost Ratio in Pondok Mekar's tilapia farming business can be seen in the following table:

Table 12 Return *Cost Ratio Analysis* Based on One Hectare Pond Area of Pondok Mekar Mujair Fish Farming Business

Component	(IDR)
Acceptance	204.444.444,44
Total Production Cost	148.808.928,89
R/C *Ratio*	1,37

Table 12 above shows that *the Return Cost Ratio* is 1.37, meaning that each production cost expenditure of Rp 1 results in revenue of Rp 1.37. This shows that the business carried out generates profits for tilapia fish farmers in Pondok Mekar.

4. Conclusion

This study aims to determine the profitability of tilapia farming in Pondok Mekar, Dimembe Village, Dimembe Sub-district, North Minahasa Regency, with a focus on the hand feeding method. The results of the study showed that in tilapia farming at Pondok Mekar, the profit generated per production period (four months) per hectare reached Rp 55,640,337.66. In addition, the return cost ratio (R/C Ratio) measured by the ratio of profit to production costs showed a figure of 1.37. This indicates that the profit earned exceeds the cost of production by 1.37 times, indicating a relatively good potential for profitability in tilapia farming at the site. Although profitability appears high, it is important to consider aspects of production efficiency and management of tilapia farming. Aspects of production costs that have not been identified in detail or efficiency in aquaculture management need to be improved to maximize profits. This finding indicates the potential for the development of the fisheries sector using conventional tilapia farming methods. By recognizing high profitability, related parties or policymakers can provide further support to increase tilapia production, which can contribute to the availability of animal protein food. This study has limited resources, both time and financial, which may affect the scope and depth of the study. Broader and more in-depth research may not be possible due to these limitations, so the results obtained may not cover more comprehensive aspects. Future research could examine more in-depth risk studies related to tilapia farming, including environmental risks, fish health, or price fluctuations, which are also relevant to help farmers or investors anticipate and manage risks that may arise.

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