Analysis of Exchange Rate And Welfare of Patin Fish (*Pangasius Hypophthalmus*) Business Actors In The Minapolitan Area of Banjar Regency South Kalimantan Province

Hasanul Basri[1]*, Idiannor Mahyudin[2], Leila Ariyani Sofia[3]

[1,2,3]Master of Fisheries Science, Lambung Mangkurat University, Banjarbaru, South Kalimantan, Indonesia
* Corresponding author:
Email: hasanulbas81@gmail.com

Abstract.
Patin fish products in South Kalimantan are predominantly sold live or fresh, for consumption purposes, with marketing areas in South Kalimantan, Central Kalimantan and East Kalimantan, processed Patin fish products are very few so they have not been able to provide added value to Patin fish production, so that the price of fish commodities is greatly influenced by the level of consumption and availability (supply). The purpose of this study was to analyze the Exchange Rate of Fish Cultivators and to categorize the level of household welfare of Patin fish farming business actors in the Minapolitan Area, Banjar Regency, South Kalimantan. The location of this research was conducted at the Minapolitan Area of Banjar Regency, South Kalimantan Province which includes 6 villages namely Sungai Sipai, Tungkaran, Cindai Alus (Martapura District), Sungai Batang, Panggalaman and Sungai Rangas Hambuku (West Martapura District). Data analysis used the Quantitative Descriptive method. The quantitative descriptive method is a research approach to describe phenomena, situations, or variables systematically and objectively using numerical data (numbers). The level of welfare of Patin fish farming business actors in the Minapolitan Area of Banjar Regency, South Kalimantan Province, is generally in the high category. This is demonstrated by the fact that 77 respondents, or 93.5%, had a Fish Farmer Exchange Rate of >100, meaning that the income earned from the Patin fish farming business was sufficient to cover or even exceed household expenses and production costs. Meanwhile, only 3 respondents, or 3.9%, were in the low welfare category with a Fish Farmer Exchange Rate of <100, and 2 respondents, or 2.6%, were in the medium welfare category with a Fish Farmer Exchange Rate of =100.
Keywords: *Patin Fish, Minapolitan, Exchange Rate and Banjar.*

I. INTRODUCTION

Pangasius hypophthalmus is a strategically important commodity in Indonesia's freshwater aquaculture sector. Its contribution to national freshwater fish production reached a significant figure, accounting for 36.63% of total production in 2024 (Kholidin and Effendi, 2024). This increase in production is driven by high market demand, both domestically and internationally, as pangasius is known as a source of animal protein that is easy to cultivate and has a distinctive flavor. National pangasius production continues to show a positive trend, with production volume reaching 437,111 tons in 2024. Macroeconomically, expanding the pangasius export market is considered a key strategy to increase the overall export value of Indonesian fishery products.

Patin fish production from cultivation in South Kalimantan in 2024, amounted to 50,010 tons, or 33% of the total production of South Kalimantan Aquaculture, from the total production of South Kalimantan Patin fish cultivation in 2024 Banjar Regency contributed 29,619 tons or around 59% of the total production of South Kalimantan Patin fish, while Patin Cultivation production in West Martapura District amounted to 14,901 tons or almost 30% of the total production of South Kalimantan Patin Cultivation, all of which use still water pond cultivation media. (South Kalimantan Provincial Maritime Affairs and Fisheries Service, 2025). In 2023, the production of cultivated Patin fish in South Kalimantan experienced a slight decrease compared to the production in 2022 by 0.2% or as much as 108 tons, this was likely due to the increase in feed prices while the price of Patin fish stagnated which resulted in the erosion of the margins of cultivation business actors, so that business actors reduced business volume, while production in 2024 again experienced a fairly large increase (rebound) of around 16.9% or around 7,219 tons compared to 2023, this was greatly influenced by the increase in demand and the recovery from the impact of the Covid-19 pandemic.

Patin fish products in South Kalimantan are predominantly sold live or fresh, for consumption purposes, with marketing areas in South Kalimantan, Central Kalimantan, and East Kalimantan. Processed Patin fish products are very limited, thus unable to provide added value to Patin fish production, so the price of fish commodities is strongly influenced by the level of consumption and availability (supply). Despite the large production potential and broad market demand, patin fish farmers often face serious challenges that threaten profitability and business sustainability. The main challenge lies in input cost pressures and selling price volatility. The price index paid by farmers (Ib) has soared sharply, mainly due to rising prices of commercial feed, which is the largest cost component in cultivation (Kholidin and Effendi, 2024). On the other hand, the selling price of patin fish at the farmer level (It) is often depressed, the combination of rising input costs and vulnerable income causing the Patin Fish Farmer Exchange Rate to be in a marginal condition. Data shows that the Fish Farmer Exchange Rate for the cultivation sector only reaches 99.72 (Hadie et al., 2018). This figure, which is near the break-even point (Fish Farmer Exchange Rate = 100), indicates that farmer welfare is highly vulnerable to cost shocks or falling selling prices. This structural challenge requires an in-depth analysis of the micro and macro factors that influence the exchange rate of patin fish.

Based on the Regulation of the Minister of Maritime Affairs and Fisheries Number 18 of 2025 concerning the Strategic Plan of the Ministry of Maritime Affairs and Fisheries for 2025-2019, the Policy Direction and Strategy of the Ministry of Maritime Affairs and Fisheries in line with the 2025-2029 RPJMN, marine and fisheries development is directed at the transformation of resource management based on the blue economy which is expected to become a source of new economic growth. In its implementation, the blue economy is carried out in a measured, sustainable, and adaptive manner to global dynamics. Development is no longer only pursuing increased production, but also placing marine protection and ecosystem sustainability as the basis of all policies.

The blue economy development framework is based on efforts to make the marine and fisheries sector a key national development system capable of driving economic growth, strengthening food security, stimulating regional economies, and improving public welfare equitably. In this context, ecology is placed at the forefront, so that economic development is oriented not only toward increasing production and income, but also toward maintaining the balance of marine, coastal, and aquatic resource ecosystems for sustainability. Furthermore, the blue economy is market-oriented, emphasizing increasing the competitiveness of marine and fisheries products to meet the needs of domestic and global consumers. The role of technology, innovation, and digitalization is crucial in increasing productivity, efficiency, effectiveness, access to information, and the added value of marine and fisheries businesses. The implementation of the blue economy is also supported by a thematic, holistic, integrative, and spatial approach so that development can adapt to regional advantages, connect upstream and downstream industries, synergize cross-sectoral programs, and ensure equitable and sustainable resource utilization.

The patin fish farming business is part of sustainable aquaculture development. The Minapolitan area of Banjar Regency has the potential to be developed as a center for fisheries-based economic growth, so analyzing the exchange rate of business actors is important to determine the ability of farmers' income to meet production and household needs. The better the exchange rate received by business actors, the greater the opportunity to improve their welfare. This research is in line with the direction of the blue economy policy, especially on the development of sustainable aquaculture, strengthening the regional economy, utilizing technology and business innovation, and achieving a balance between economic, social, and environmental aspects in the development of the marine and fisheries sector. The purpose of this research is to analyze the Exchange Rate of Fish Cultivators and categorize the level of household welfare of Patin fish farming business actors in the Minapolitan Area, Banjar Regency, South Kalimantan.

II. METHODS

Research Location and Time

This research was conducted in the Minapolitan area of Banjar Regency, South Kalimantan Province, encompassing six villages: Sungai Sipai, Tungkaran, and Cindai Alus (Martapura District), Sungai Batang,

Panggalaman, and Sungai Rangas Hambuku (West Martapura District).

The sampling method used purposive sampling. The sample size was determined using the Slovin formula with a 10% margin of error, resulting in a total of 77 sample units.

Data Analysis

This research design is predominantly based on microeconomics, specifically measuring the welfare of patin fish farmers using the Micro Fish Farmer Exchange Rate (MFR) calculation. This calculation directly compares income and expenses using a simple business margin approach for household fisheries financial balance sheets, focusing on the ratio of actual income and expenses for fish farmers over a specific period (monthly).

This concept adapts the principles of household economics or the smallest business unit, with the following steps:

1. Gross Revenue Data: Total value of fishery products sold during a month (quantity of patin fish produced multiplied by the selling price).
2. Gross Expenditure Data: Total costs incurred by farmers during that month, including production costs and household expenses.
3. Calculation of the Fish Farmer Exchange Rate (Fish Farmer Exchange Rate) for household fisheries.

The calculation of the fish farmer exchange rate using this method uses the following formula:

$$\text{Fish Farmer Exchange Rate} = \frac{\text{Income}}{\text{Expenses}} \times 100$$

Fish Farmer Exchange Rate: The micro-level exchange rate for household fish farmers

- Income: Total income before deducting costs
- Expenditure: Total household expenditure of fish farmers, consisting of production expenditures and household expenses

Interpretation of Results

- Fish Farmer Exchange Rate > 100: Indicates a level of welfare where the farmer's income is greater than their total expenses. The farmer experiences an economic surplus.
- Fish Farmer Exchange Rate = 100: Indicates a break-even point, where the farmer's income is just enough to cover all living costs and expenses.
- Fish Farmer Exchange Rate < 100: Indicates an economic deficit. Income is insufficient to cover all expenses.

Data analysis using the quantitative descriptive method. The quantitative descriptive method is a research approach to systematically and objectively describe phenomena, situations, or variables using numerical data (numbers). This method focuses on the current situation without testing hypotheses or causal relationships.

III. RESULT AND DISCUSSION

Fisheries Household Expenditure

Fisheries Household Expenditure (RTP) is the total cost incurred by fishing families or fish farmers to meet daily living needs (food and non-food items), often referred to as household consumption.

Consumption can be defined as the portion of household income used to finance the purchase of various services and other necessities. The amount of consumption always fluctuates according to fluctuations in income. If income increases, consumption will increase. Conversely, if income decreases, consumption will decrease (Partadireja, 1990). The behavior of people spending a portion of their income on purchases is called consumption expenditure. Consumption is a function of disposable income. In other words, the consumption function shows the relationship between the level of consumption expenditure and the level of disposable income (Prasetyo, 2011). According to Gregory Mankiw (2007), consumption is defined as the spending on goods and services by households. Goods include durable household goods, including equipment, vehicles, and non-durable goods, such as food and clothing. The service expenditure referred to is goods that are not concrete intangible, for example education, (Takahindangen, et al. 2021, in

the journal analysis of differences in consumption expenditure of online motorcycle taxi drivers Grab before and after becoming online motorcycle taxi drivers in Manado city).

The amount of consumption spent by each person is influenced by the diversity of their needs. The diversity of needs that must be met drives individuals to make primary and secondary consumption choices.

Human consumption behavior tends to align with income. When income rises, the income elasticity of demand for food is low, while the opposite is true for clothing, housing, and industrial consumer goods.

Consumption patterns are highly dependent on income levels because they reflect the extent of a person's ability and purchasing power. Each family manages to meet their household needs, which depends on the level of income they receive. Each household has its own way of organizing consumption patterns, but in general, households prioritize food consumption over non-food items. Therefore, differences in the proportions of consumption patterns can reflect differences in the level of well-being of each family.

The structure of household consumption expenditure can be used to characterize households by providing an overview of food and non-food expenditures. The urgency of these two types of expenditures is fundamentally different. If the price of basic necessities increases, purchasing power decreases in almost all households. (Sofia et al. 2013)

The average monthly expenditure of household fisheries operators operating in the Minapolitan area of Banjar Regency, South Kalimantan Province, is IDR 3,705,383 (three million seven hundred five thousand three hundred eighty-three rupiah), with the following distributions:

Table 1. Types of household expenditures for patin fish farming in the Minapolitan area of Banjar Regency, South Kalimantan per month

No	Type of Expenditure	Average Cost (Rp)	Percentage (%)
1.	Food/Consumption	2.361.039	66,17
2.	Clothing/Apparel	169.026	5,03
3.	Education	545.455	10,03
4.	Electricity and Gas	244.610	7,18
5.	Cleaning Tools and Materials	81,994	2,44
6.	Transportation	190.922	5,81
7.	Communication	112.338	3,34
Total		3.806.942	100,0

From the table above, only 26 respondents reported spending on education out of 77 respondents. The average education expenditure for these 26 respondents is Rp 1,613,385, or approximately 29.7% of total household expenditure.

The average family size is between 3 and 4 people, with an average age of 54 years. Families with more dependents have higher incomes (expenditure approach) than families with fewer dependents. This is because families with more dependents spend their money on food. Household expenditures, in this case, consist of food consumption expenditures, non-food consumption expenditures, and education and health expenditures. Households typically prioritize spending on food, clothing, housing, education, and health for their families, which are naturally larger than families with fewer dependents. (Sofia et al. 2013), normally the more family members there are, the greater the household expenditure will be, however, from the results of data collection from respondents, the average household expenditure with a family of 4 people is slightly greater than a household with a family of 5 people, this anomie is caused by the fact that only 33% of RTPs with a family of 5 people still finance education, while 54% of RTPs with a family of 4 people still finance education for their family members, from the results of the identification, the following table shows the household expenditure of Patin fish farming business actors in the Minapolitan area based on the number of family members.

Fishery Production Expenditures

Based on field data collection, the average monthly production costs for patin fish growers in the Minapolitan Area of Banjar Regency, South Kalimantan Province are IDR 37,346,799 with the following breakdown:

Table 2. Average Monthly Production Costs for Patin fish Growers in the Minapolitan Area of Banjar Regency, South Kalimantan

No	Type of Expenditure	Average Cost (Rp)	Percentage (%)
1.	Feed	33.390.474	89,41
2.	Seed	12.424.026	3,80
3.	Labor	1.108.766	2,97
4.	Harvesting Labor	665.694	1,78
5.	Equipment Depreciation	298,078	0,80
6.	Pond Maintenance	449.932	1,20
7.	Lime	24.039	0,08
Total		37.346.799	100,00

Source: Processed primary data

The average unit price of the main production factors is Rp. 9,211/kg of feed and Rp. 531 per fry. The stocking density is 8 per square meter, with an average pond area of 3,644 square meters. The number of fry stocked per household in a patin fish farming business is approximately 23,519 per unit. The feed conversion ratio (FCR) is 1.65, meaning 1.65 kg of fish feed is required to produce 1 kg of patin fish. The estimated production costs per kilogram of patin fish are as follows:

Table 3. Average Cost of Production of Patin fish in the Minapolitan Area of Banjar Regency, South Kalimantan per kilogram

No	Type of Expenditure	Total (Rp)	Percentage (%)
1.	Feed	15.517	89,41
2.	Seed	660	3,80
3.	Labor	515	2,97
4.	Harvesting Labor	310	1,78
5.	Equipment Depreciation	139	0,80
6.	Pond Maintenance	200	1,20
7.	Lime	15	0,08
Total		**17.356**	**100**

Source: Processed primary data

Fishery Production Revenue

Patin fish farming businesses in the Minapolitan area of Banjar Regency, South Kalimantan Province, based on data collected from a number of samples, maintained a 9-month rearing period with an average harvest weight of 1 kg per fish, with a survival rate of approximately 80.94%. In one fisheries household (RTP), the Patin fish farming yielded a total harvest weight of 19.028 tons per rearing period, with an average selling price of IDR 22,883/kg. This represents a 4% increase in the price range for Patin fish during this study compared to the 2025 price range of IDR 22,000/kg.

The following is the calculation of the average production revenue of the Patin fish (Pangasius hypophthalmus) farming business, calculated overall from all samples collected. Revenue is the amount of fish produced (kg) multiplied by the selling price (IDR/kg), or using the formula

TR = P x Q

TR = Total revenue

P = Price per unit (Rp/kg)

Q = Quantity / number of units sold ((Kg)

$$\text{Average TR per month} = \frac{\text{Rp. 22.857/kg x 19.006 kg}}{\text{9 Month}}$$

$$= \text{Rp. 49.136.452 / Month}$$

Meanwhile, the total cost is calculated as:

TC = TFC + TVC

TC = Total Cost

TFC = Total Fixed Cost

TVC = Total Variable Cost

Average total cost per month = Rp. 1,839,247/month + Rp. 35,507,552/month

= Rp. 37,346,799/month

Revenue Formula (Profit/Net Income)

$\pi = TR - TC$

π = Profit

TR = Total revenue

TC = Total Cost

Average monthly profit = Rp. 49,136,452/month - Rp. 37,346,799/month

= Rp. 11,789,653/month

The average calculation of profit (income) if reduced by the average household expenditure of Rp. 3,705,383,-/month then the estimated monthly income of the Patin fish farming business in the Minapolitan Area of Banjar Regency, South Kalimantan Province every month is Rp. 8,084,269,- the income of Fishery Households in the Minapolitan Area is still higher than workers with a standard salary of the South Kalimantan Provincial Minimum Wage of Rp. 3,725,000,-/month according to the Decree of the Governor of South Kalimantan Number: 100.3.3.1 / 01101 / KUM / 2025, 2025 concerning the Determination of the provincial minimum wage and sectoral minimum wage of South Kalimantan Province in 2026, even when compared with the sectoral minimum wage in districts / cities in South Kalimantan the income of Patin fish farmers for the period of the month during the study remains higher,

E. S. Mahreda (2015), in a study analyzing the marketing efficiency of Patin fish (Pangasius sp.) in Cindai Alus, Banjar Regency, South Kalimantan Province, Cindai Alus Village is one of the villages within the Minapolitan Area of Banjar Regency, South Kalimantan Province, making it highly relevant to describe the Minapolitan Area. The study results showed that the price share for fish farmers, expressed as a percentage, was 87.26%, which is categorized as efficient because it is greater than 50%. The marketing channels for fresh Patin fish consist of four patterns:

- Producers (Farmers), consumers (15%)
- Producers (Farmers), retailers, consumers (20%)
- Producers (Farmers), traders, local collectors, retailers, consumers (40%)
- Producers (Farmers), collectors from outside the region, retailers, consumers (25%)

Fish Farmer Exchange Rate

The exchange rate for fish farmers engaged in micro-scale patin fish farming in the Minapolitan area of Banjar Regency, South Kalimantan Province, is calculated by dividing all nominal revenues by the total nominal expenditures, namely household expenses and fishery business expenses, over a single cultivation period. However, in this study, revenues and expenses are divided by the number of months of the business period (monthly).

Household expenditures are the prices of goods and services consumed by households, aggregating the prices of food, processed food, housing, clothing, healthcare, education, recreation, and sports. Meanwhile, production costs are the aggregate prices of fish seed, medicines and fertilizers, transportation and communication, land rent, additional capital goods and labor wages.

The production costs of aquaculture are the total expenditures or sacrifices of production factors (inputs) incurred by farmers to produce fishery commodities during a single production cycle.

Aquaculture business revenue is the total monetary value received by farmers from the sale of all harvested fish (fish/shrimp) during a single production period, before deducting operational costs. This revenue is calculated by multiplying the total production volume (or fish) by the selling price per unit. The micro-level flow of fish farmers' exchange rates in the Minapolitan Area of Banjar Regency, South Kalimantan Province is as follows:

From December 2025 to April 2026, the price of live/fresh patin fish increased relatively, from around IDR 22,000/kg in December 2025 to around IDR 22,857/kg, according to the average price of farmers surveyed. Meanwhile, feed prices for most respondents did not experience a significant increase compared to the period from December 2025 to April 2026. This has driven an increase in the fish farmers' exchange rates in the Minapolitan Area.

The improvement in the fish farmer exchange rate in the Minapolitan area in recent months has been consistent with the increase in the general macro-exchange rate for South Kalimantan farmers, as released by the South Kalimantan Central Statistics Agency (BPS), across almost all agricultural sub-sectors: food crops, horticulture, plantations, livestock, and fisheries (aquaculture and capture fisheries). The general farmer exchange rate for January was 121.10, February 124.74, March 126.53, and April 128.99.

BPS South Kalimantan 2026. In early 2026, the general farmer exchange rate showed an increase. Based on the monitoring results of the BPS of South Kalimantan Province in 5 districts/cities, in January 2026 there was y-on-y inflation of 4.66 percent, or an increase in the Consumer Price Index (CPI) from 106.33 in January 2025 to 111.28 in January 2026. "Y-on-y inflation occurred due to price increases indicated by the increase in most expenditure group indices, namely: the food, beverage and tobacco group by 2.80 percent, the clothing and footwear group by 1.65 percent; the housing, water, electricity and household fuel group by 10.65 percent, the household equipment, tools and routine maintenance group by 0.66 percent, the health group by 3.45 percent, the education group by 3.55 percent, the food and beverage/restaurant provision group by 2.04 percent, and the personal care and other services group by 23.47 percent. Meanwhile, the expenditure group that experienced a decrease in the index was the transportation group by 0.46 percent percent, the information, communication, and financial services group by 0.28 percent. Meanwhile, the recreation, sports, and culture group did not experience any change.

Comparison of the Exchange Rate for Fish Farmers in the Patin Fish Farming Business in the Minapolitan Area of Banjar Regency, South Kalimantan Province, based on the size of the cultivation pond. This land area grouping refers to Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number 05 of 2009 concerning Business Scale in the Fish Farming Sector. The grouping of land areas for freshwater fish farming businesses is divided into three scales:

1. Micro-Scale, with a land area of less than 1,000 m²
2. Small-Scale, with a land area of less than 1,000 m² to 5,000 m²
3. Medium-Scale, with a land area of more than 5,000 m² to 10,000 m²

Theoretically, the larger the cultivation area used for Patin fish farming, the greater the profits earned, which indirectly increases the fish farmer's exchange rate. However, from the sample separated into three business scales based on land area, the average Exchange Rate for Fish Farmers based on the scale is as follows:

1. Micro-scale fish farmer average exchange rate 127.
2. Small-scale fish farmer average exchange rate 119.
3. Medium-scale fish farmer average exchange rate 124.

The average fish farmer exchange rate above shows no significant difference between the three business scale categories. This is because the number of ponds is not optimized simultaneously, as the patin fish farming business requires high capital, particularly for fish feed and a long maintenance period, coupled with the potential for fluctuations in harvest prices.

In simple calculations, the wider the pond, the more seeds are spread so that the production volume increases, but the wider the production area will also increase operational costs, especially fish feed and labor, this situation can make production costs more efficient, in addition to the potential for increased profits, the potential for risk will also increase because with a very large pond area it is more difficult to control the water quality, the potential for pest and disease attacks increases and the risk of mass death increases. Hidayatullah, and Muhimah, (2014), in the journal Allocative Use of Production Factors for Patin Fish Farming Business in Ponds (Case Study in Banua Lawas Village, Banua Lawas District, Tabalong Regency) it is concluded that partially the variable of pond area in patin fish farming has no real and insignificant effect on patin fish production with an average area of the research pond of 1,032 M² (the largest is 20,000 M² and the smallest is 63 M²).

Hamzah (2025), simultaneously, the variables of business capital, labor, and pond area have a significant effect on the income of the carp business in Lawe Pangkat, showing that these three variables are able to explain 56.2% of the variation in business income, while the remaining 43.8% is explained by other variables not studied, such as experience, managerial ability, market access, and other external factors. This

finding shows that these three factors complement each other and contribute to increasing income. When capital is adequate, labor is sufficient, and the pond area is optimal, then business actors can manage cultivation activities more productively and efficiently. These results align with the principle of production economics, which states that maximum output is achieved with the optimal combination of all production inputs. The following table shows the exchange rate.

The increase in the farmer's exchange rate at a macro level in recent months has seen an average increase in the farmer's income index exceeding the increase in the farmer's payment index. This is supported by higher commodity price increases compared to consumer price increases caused by inflation. South Kalimantan's monthly inflation rate (month-to-month) compared to the previous months: January 0.20%, February 0.86%, March 0.50%, and April -0.04% (deflation 0.04%).

General consumption pattern indicators in societies experiencing increasing prosperity, particularly the decreasing portion of food expenditure compared to other expenditures, reflect a crucial aspect of human life. Daily needs are inextricably linked to consumption activities. Consumption expenditure can be an indicator of an individual's or household's economic well-being.

One economic theory closely linked between expenditure and well-being is the theory proposed by Ernst Engel in 1857. Engel's theory states that, if tastes are consistent, the percentage of expenditure on food decreases with increasing income. Households that spend a higher proportion on food are typically those still at the subsistence level. Meanwhile, households that spend more on luxury goods and secondary needs are more prosperous. (Wuryandari, 2015).

The increasing proportion of non-food expenditures indicates increasing income, and those with low incomes will allocate a greater portion of their income to food compared to non-food items, such as education, healthcare, and entertainment. (Nina, and Rustaruyuni, 2018).

One factor influencing household consumption expenditure is savings. Household savings represent the portion of income received by a household that is not spent on consumption. According to the Keynesian hypothesis, the level of household savings depends on the amount of disposable income. People with sufficient wealth tend to use their income for consumption and reduce the proportion of their income allocated for savings. (Hamdi and Lubis, 2024).

IV. CONCLUSION

The welfare level of Patin fish (Pangasius hypophthalmus) farming business actors in the Minapolitan area of Banjar Regency, South Kalimantan Province, is generally in the high category. This is indicated by 77 respondents or 93.5% having a Fish Farmer Exchange Rate value of >100, which means that the income obtained from the Patin fish farming business is able to meet or even exceed the needs of household expenses and production costs. Meanwhile, only 3 respondents or 3.9% are in the low welfare category with a Fish Farmer Exchange Rate <100, and 2 respondents or 2.6% are in the medium category with a Fish Farmer Exchange Rate =100. The Patin fish farming business in the Minapolitan area of Banjar Regency has a positive contribution to increasing the exchange rate and welfare of fish farmer households.

REFERENCES

[1]. Hadie, W., et al. 2018. Title incomplete/needs verification. This reference is mentioned in the discussion regarding the 99.72 rupiah exchange rate for fish farmers in the aquaculture sector, but complete data including title, ***journal***, volume, number, page number, and link are not yet available in the initial bibliography.

[2]. Hamdi and Lubis, R.P. 2024. Household Consumption Expenditure. Medan: Tahta Media Group.

[3]. Hamzah, R., Utama, M.A. and Aisyah, N. 2025. The Effect of Capital, Labor, and Pond Size on Income from Carp Farming in Lawe Pangkat Village, Deleng Pokhkisen District, Southeast Aceh Regency. Economics, ***Business and Management Science Journal***, 5(2): 301–309.

[4]. Hidayatullah, A. and Muhimah, S. 2014. Allocative Use of Production Factors in Pangasius Fish Farming in Ponds: A Case Study in Banua Lawas Village, Banua Lawas District, Tabalong Regency. Rawa Sains***: Jurnal Sains STIPER Amuntai***, 4(2): 76–87.

[5]. Kholidin, E.B. and Effendi, I. 2024. Evaluation of broodstock production systems and potential quality broodstock in government agencies. ***Salamata Journal***, 6(2): 53–58.

[6]. Mankiw, N.G. 2007. Principles of Economics. 4th ed. Mason: Thomson South-Western.

[7]. Maritime Affairs and Fisheries Agency of South Kalimantan Province. 2025. South Kalimantan Aquaculture Statistics Report 2025. Banjarmasin: Maritime Affairs and Fisheries Agency of South Kalimantan Province.
[8]. Ministry of Maritime Affairs and Fisheries, Republic of Indonesia. 2009. Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number PER.05/MEN/2009 concerning Business Scale in the Field of Fish Farming. Jakarta: Ministry of Maritime Affairs and Fisheries, Republic of Indonesia.
[9]. Ministry of Maritime Affairs and Fisheries, Republic of Indonesia. 2025. Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number 18 of 2025 concerning the Strategic Plan of the Ministry of Maritime Affairs and Fisheries for 2025–2029. Jakarta: Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia.
[10]. Nina, G.A. and Rustaruyuni, S.D. 2018. The Effect of the Gini Ratio, Non-Food Expenditures, and Capital Expenditures on Community Welfare in Bali Province. ***Journal of Economics and Development***, 18(2): page needs to be completed.
[11]. Partadireja, A. 1990. Book/article title incomplete/needs verification. This reference is cited in the discussion of household consumption theory, but complete bibliographic data is not yet available in the initial bibliography.
[12]. Prasetyo, 2011. The title of the book/article is incomplete/needs verification. This reference is cited in the discussion of consumption functions and disposable income, but complete bibliographic data is not yet available in the initial bibliography.
[13]. Sofia, L.A., Sahri, M., Hanani, N., and Fatah, L. 2013. Simulation model of household economy on production and welfare of patin fish (Pangasianodon hypophthalmus) farmers in Banjar Minapolitan, South Kalimantan. IOSR Journal of Environmental Science, Toxicology, and Food Technology, 7(6): 1–8.
[14]. Statistics Indonesia of South Kalimantan Province. 2026. Official Statistical News of South Kalimantan Province 2026. Banjarmasin: BPS, South Kalimantan Province. The BRS number, publication date, and statistical series title must be adjusted to the BPS document used.
[15]. Takahindangen, C.W., Rotinsulu, D.C., and Tumilaar, R.L. 2021. Analysis of differences in consumption expenditure of Grab online motorcycle taxi drivers before and after becoming online motorcycle taxi drivers in Manado City. Scientific Periodical Journal of Efficiency, 21(1): page needs to be completed.
[16]. Wuryandari, R.D. 2015. Factors influencing Indonesian household food, education, and health expenditure: analysis of 2011 Susenas data. ***Indonesian Journal of Population***, 10(1): 27–42.