Analysis of Eel (*Monopterus Albus*) Export Development Strategy in South Kalimantan Province

.

ABSTRACT

|  |
| --- |
| Eel is a freshwater fish that has not been fully explored optimally in the development of the national fisheries sector. The study aims to analyze the strategy for developing eel exports in South Kalimantan Province. This study was conducted in South Kalimantan Province covering the areas producing eel catches, collectors or suppliers and exporters, namely Hulu Sungai Utara Regency. Data analysis using SWOT analysis. The eel export strategy in South Kalimantan Province, especially Hulu Sungai Regency, is the largest eel producing area with CV. Tiga A as the sole active exporter that exports live eels to the Chinese market through a distribution chain involving catchers, collectors, suppliers, and exporters. SWOT analysis places CV. Tiga A in Quadrant I (S-O), which reflects the company's solid internal strengths and significant external opportunities. This condition is a strategic foundation for the company to implement an aggressive strategy in developing sustainable live eel exports, so that it has the potential to increase competitiveness and export market growth optimally. |

Keywords: Eel, Export, Economist, Strategy

1. INTRODUCTION

The fisheries sector is an important part of the national food system that has great potential in supporting food security, increasing people's income, and contributing to the national economy. Indonesia, as an archipelagic country with a sea area reaching two-thirds of its total area, has abundant fishery resources. The fisheries sub-sector is divided into two main groups, namely capture fisheries and aquaculture. In recent decades, aquaculture has continued to show significant development, including seawater, brackish water, and freshwater fish farming. One of the freshwater commodities that has the potential to be developed is eel, which although its consumption is still limited, has high economic value and nutritional content (Mugiarto et al., 2021).

Eel is a freshwater fish that has not been fully explored optimally in the development of the national fisheries sector. This commodity is rich in protein and energy, and can be consumed fresh or processed such as dried. Its high nutritional content makes eel one of the sources of nutritious food, which has the potential to support the fulfillment of community nutritional needs and prevent malnutrition (Suciati & Hasballah, 2015). Even the level of eel consumption is still low in the community due to cultural factors of consumption and lack of information about its nutritional benefits.

In the international market, eels are a promising export commodity. Countries such as Japan, South Korea, China, Hong Kong, and several European countries show high demand for eels. Trubus (2022), the demand for eels in Japan reaches 130,000–140,000 tons/year, mostly supplied from China. Demand from other countries such as Korea, Hong Kong, and Singapore shows quite large export opportunities for Indonesia. This shows that the global market for eels is still wide open, with significant growth potential if supported by consistent and sustainable production (Ahsan et al., 2020).

Indonesia's eel exports in recent years have shown a positive trend. On data from the Central Statistics Agency (BPS), the value of Indonesian eel exports in 2023 reached US$ 18.9 million, an increase from US$ 15.4 million in the previous year. China is the main destination country with absorption reaching 62% of total exports. The appeal of Indonesian eels lies in their superior quality, such as soft texture, distinctive taste, and balanced fat content. Even to maintain and increase competitiveness in the international market, Indonesia needs to meet strict quality standards and regulations from destination countries, as well as improve processing facilities and supply chains (Nova et al., 2020).

South Kalimantan, with its extensive wetland ecosystems such as swamps, rivers, and lakes, has great potential as a natural habitat for eels. Sitompul (2017), the area of ​​wetlands in South Kalimantan reaches ±1.4 million hectares. Hulu Sungai Utara Regency is one of the areas dominated by swamp waters and has long been known as a producer of swamp fish, including eels. Eel commodities in this area can be an important source of income for local communities. However, the decline in eel catches in recent years indicates the need for attention to ecological and anthropogenic factors that affect eel populations.

The export opportunities for eels from South Kalimantan have begun to open up significantly since direct exports to China were carried out by air in 2020. The first export of 1.55 tons of live eels from Syamsudin Noor International Airport marked a strategic initial step in introducing this commodity to the global market. The exported eels are wild catches from rice fields and swamps in the Hulu Sungai area. The high protein content and large demand from the Asian market make this commodity potentially suitable for further development through a cultivation approach and post-harvest quality improvement (Riani & Ernawati (2004).

Eel Export Data from CV Tiga A Banjarmasin Company, which is the company that most frequently and consistently exports eels in South Kalimantan, shows that in 2020 the eel exports sent were 4,866 kg, in 2021 there were no eel exports, perhaps this was due to external factors such as market policies, importer demand, economic conditions or other conditions such as the increasing number of Covid-19 attacks at that time. This company started exporting eels again in 2022 with a total of 1,654 kg. The number of exports then increased rapidly in 2023 reaching 105,172 kg and continued to grow until 2024 with a total export of 196,811 kg. This data shows that CV Tiga A Banjarmasin plays an active role in the eel export industry and has experienced significant growth in the period 2022 to 2024. In 2025, CV. Three A returned to exporting eels in the period from January to February total score 24,219 kg

With the increasing interest in exports and the potential of available natural resources, South Kalimantan has a great opportunity to become one of the national eel production centers that is export-oriented. A comprehensive strategy is needed starting from swamp habitat management, fostering fishermen groups, strengthening institutions, to developing efficient eel cultivation technology. If managed optimally, eel commodities can not only improve the welfare of local communities, but also contribute to state revenues through exports and strengthen Indonesia's position in the global fisheries market. The study aims to analyze the eel export development strategy in South Kalimantan Province

2. material and methods

This research was conducted in South Kalimantan Province covering the areas of eel catch producers, collectors or suppliers and exporters. The determination of the research location was done intentionally, using the Purposive sampling method because it considered areas that have high eel production levels, areas that have a network of collectors or suppliers, and companies that export, where all three have a relationship or relationship with eel supplier locations in South Kalimantan Province, namely Hulu Sungai Utara Regency.

**Data Analysis**

SWOT analysis is used to answer the analysis of eel export business development strategies in South Kalimantan. SWOT analysis is an analysis of the internal and external conditions of an organization which will then be used as a basis for designing strategies and work programs. Internal analysis includes an assessment of strength and weakness factors. External analysis includes opportunity and threat factors. There are two approaches in SWOT analysis, namely the qualitative approach of the SWOT matrix and the quantitative approach of the SWOT matrix (Rangkuti, 2009).

The qualitative approach of the SWOT matrix as developed by Kearns displays eight boxes/cells, namely the top two cells are external factor cells (opportunities (O) and challenges (T)), while the left two cells are internal factor cells (strengths (S) and weaknesses (W)). The other four cells are strategic issue cells that arise as a result of the intersection between internal and external factors.

3. results and discussion

**Export Strategy Based on SWOT Analysis**

This SWOT analysis will help identify the strengths of CV. Tiga A in facing competition in the international market. The results of the identification and inventory are:

**1. Internal Factors**

**1) Strengths**

1. CV. Tiga A has complete export permits and supporting facilities that meet international standards.
2. The company has its own cargo business which supports the effectiveness of export shipments.
3. Establishing a strong network with collectors and suppliers in Hulu Sungai Utara Regency, the largest eel producing area in South Kalimantan.
4. Good business relations with overseas buyers and more than five years of export experience.

**2) Weaknesses**

1. Dependence on one airline with limited capacity and quota can hinder the increase in shipment volume and delivery schedules.
2. Export human resources have dual duties with other export commodities.
3. The availability of eels is highly dependent on the fishing season in nature.
4. Dependence on one export destination country (China).

**2. External Factors**

**1) Opportunities**

1. Global demand for live eels continues to increase, especially from Japan, Korea, and others.
2. The potential of eels from other districts in South Kalimantan has not been optimally utilized.
3. Fluctuations in the dollar index strengthen against the rupiah.
4. Opportunities for additional shipments from airlines on an incidental basis.

**2) Threats**

1. Domestic and international competition.
2. Changes in export regulations.
3. Fluctuations in the dollar index weakening against the rupiah.
4. Price fluctuations in foreign markets cause prices to plummet.

**3. Determining Factor Weights**

The next step in the SWOT analysis is to determine the factor weights, where the steps are as follows:

1. The weight of each factor is expressed in decimal form, with a total weight for internal factors of 1.00 and external factors also of 1.00. Weights are given based on the relative importance of each factor to the success of the business, while the rating reflects the level of influence of each factor.
2. Rating of strengths and opportunities: 4 = very strong; 3 = strong; 2 = quite strong; 1 = weak
3. Rating of weaknesses and threats: 1 = very weak; 2 = weak; 3 = quite weak; 4 = strong

Table 1. Internal factor matrix of eel export development strategy.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Code** | **SWOT Elements** | **Weight** | **Rating** | **Score** |
|  | **Internal** | | | |
| **Strength** |  |  |  |
| K1 | Have export permit and complete facilities | 0,15 | 4 | 0,60 |
| K2 | Own cargo business | 0,10 | 3 | 0,30 |
| K3 | Strong network with collectors | 0,10 | 4 | 0,40 |
| K4 | Buyer relationship and experience | 0,15 | 4 | 0,60 |
|  | **Weakness** |  |  |  |
| L1 | Only one airline is subscribed | 0,10 | 2 | 0,20 |
| L2 | Export HR dual task | 0,10 | 2 | 0,20 |
| L3 | Availability depends on season | 0,15 | 3 | 0,45 |
| L4 | Dependence on one destination country | 0,15 | 3 | 0,45 |
| Total | | 1,00 |  | 3,20 |

Table 2. External factor matrix of eel export development strategy.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Code** | **SWOT Elements** | **Weight** | **Rating** | | **Score** | |
|  | **Eksternal** | | | | | |
| **Opportunity** |  |  | |  | |
| P1 | Global demand is increasing | 0,15 | 4 | | 0,60 | |
| P2 | Eel stock from other areas | 0,10 | 3 | | 0,30 | |
| P3 | Dollar index fluctuations strengthen | 0,15 | 4 | | 0,60 | |
| P4 | Other airline opportunities are incidental | 0,10 | 3 | | 0,30 | |
|  | **Threat** |  |  | |  | |
| A1 | Domestic and international competition | 0,15 | 3 | | 0,45 | |
| A2 | Regulatory changes | 0,10 | 3 | | 0,30 | |
| A3 | Dollar index fluctuations weaken | 0,15 | 3 | | 0,45 | |
| A4 | Foreign market price fluctuations | 0,10 | 4 | | 0,40 | |
| Total | | 1,00 |  | 2,40 | |

In determining the eel export development policy strategy, the technique used is to find a cross strategy from the four factors, namely:

1) KP policy, a policy made by utilizing all strengths to take advantage of opportunities as much as possible;

2) KA Policy, a policy made by using existing strengths to overcome threats;

3) LP Policy, a policy made based on utilizing existing opportunities by minimizing existing weaknesses;

4) LA policy, a policy created based on defensive activities by trying to minimize existing weaknesses and avoid threats.

Next, scoring is carried out to determine the priority of fisheries development strategies. The priority strategies for fisheries development are as shown in Table 3.

Table 3. Determination of eel export development policy priorities

|  |  |  |  |
| --- | --- | --- | --- |
| **SWOT Elements** | **Relatedness** | **Score** | **Ranking** |
| Increasing export volume by utilizing own collection network and cargo facilities | K1, K2, K3, P1, P3 | 2,50 | 1 |
| Diversifying export markets to other countries (Japan, Korea, ASEAN) | K4, L4, A1, A4 | 1,90 | 2 |
| Participating in foreign trade promotion programs to expand the market | K4, P1, A2 | 1,50 | 3 |
| Expanding eel supply sources to other regions during the lean season | L3, P2, P4, K3 | 1,45 | 4 |
| Strengthening risk management in the face of price and regulatory fluctuations | A3, A4, L4 | 1,30 | 5 |
| Utilizing the strengthening dollar to increase export margins | K4, P3 | 1,20 | 6 |
| Using alternative airlines during peak export seasons | L1, P4 | 0,50 | 7 |
| Developing special export human resources so as not to have dual duties | L2, A2 | 0,50 | 8 |

**1. Strategy Calculation**

Total strategy score based on internal and external factor assessment results:

Strength (K): 0.60 + 0.30 + 0.40 + 0.60 = 1.90

Weakness (L): 0.20 + 0.20 + 0.45 + 0.45 = 1.30

Opportunity (P): 0.60 + 0.30 + 0.60 + 0.30 = 1.80

Threat (A): 0.45 + 0.30 + 0.45 + 0.40 = 1.60

Combined Strategy Score Calculation

1. S-O Strategy = Strength (1.90) + Opportunity (1.80) = 3.70
2. S-T Strategy = Strength (1.90) + Threat (1.60) = 3.50
3. Strategi W-O = Weakness (1,30) + Opportunity (1,80) = 3,10
4. Strategi W-T = Weakness (1,30) + Threat (1,60) = 2,90
5. The largest number is the S-O Strategy (3.70).
6. Determining Quadrants (SWOT Quadrant System)

Strengths – Weaknesses = 1.90 – 1.30 = + 0.60 (positive)

Opportunities – Threats = 1,80 – 1,60 = + 0,20 (positif)

Since the results are in a positive position for both, the company's strategy is in: Quadrant I (S-O): Aggressive Strategy

Opportunities

*W - O* (- , +) *S - O* (+ , +)

0,2***CV. Tiga A***

Kuadran III Kuadran I

WeaknessesStrengths

Kuadran IV Kuadran II 0,6

*W - T* (- , -) *S - T* (+ , -)

Threats

Figure 1. Quadrant of eel export development strategy

The results of the SWOT coordinate calculation, the position of CV. Tiga A is in Quadrant I (S-O) with a value of X = + 0.60 and Y = + 0.20. This position illustrates that the company's internal strengths are greater than its weaknesses, and the available market opportunities are greater than its threats. This position is ideal because it shows that the company has a strong internal foundation and a supportive external environment for growth. The strategy implemented is the Aggressive Strategy (S-O), namely by utilizing all strengths to achieve maximum opportunities. CV. Tiga A's Eel Export Business Development Strategy Because it is in Quadrant I, the company must use its strengths to the maximum to seize opportunities. Key Strategy Recommendations (Based on SWOT Score Ranking)

1. Increase export volume by utilizing supplier/collector network and own cargo facilities. It is expected that by strengthening cooperation with local suppliers/collectors, it can ensure continuity of supply, maximize the utilization of own cargo facilities for logistics efficiency, take advantage of high world demand and strengthening dollar exchange rate to boost profit margins.
2. Diversification of export markets to other countries with the hope of reducing export dependence on one country (for example China) by opening access to the Japanese, Korean and ASEAN markets, for example through international exhibitions or economic diplomatic channels, as well as preparing strategies to face price competition and global market fluctuations.
3. Promotion of foreign trade through programs from the Ministry or related institutions, utilizing the strength of relationships with buyers to expand networks, and anticipating regulatory changes by monitoring the latest export policies.
4. Expanding supply during the lean season by collaborating with collectors from other areas, preparing logistics for transportation from alternative areas when local eels are hard to come by and using alternative airlines if the opportunity arises.
5. Strengthening risk management by building a risk management system for price and exchange rate fluctuations, periodically evaluating market dependencies in order to respond quickly when conditions change, and using medium or long-term price contracts whenever possible.
6. Add human resources or workers to avoid duplicate tasks and take special training for export staff to be more professional and focused.

Research on the export strategy analysis approach conducted by Lilimantik (2024) in his study of dried seaweed marketing by PT. SELT Alga Indonesia. In this study, the marketing strategy was formulated through a SWOT approach that includes the strengths, weaknesses, opportunities, and threats faced by business actors in seaweed exports. The findings show that export success is highly dependent on the quality of raw materials, the sustainability of partnerships with farmers, and the company's ability to strategically utilize foreign market opportunities. This is relevant to the conditions of eel exports in South Kalimantan, which although it has great potential in terms of natural resource availability and international demand, still faces challenges in terms of marketing structure, limited post-harvest processing, and fluctuations in selling prices (Hidayah, 2024). By adopting a similar approach, namely through SWOT analysis and the preparation of marketing strategies based on internal and external conditions.

The eel export strategy as a fishery commodity requires a deep understanding of market potential, supply chain management, and technical and institutional readiness. Dekayanti et al. (2021) emphasized that although export efforts are faced with occupational safety risks and simple processing, export market demand remains high, especially from China, Vietnam, and Japan. This is an important lesson that commodities such as eels also have similar export opportunities, as long as they are able to meet international quality standards and global market needs. The eel export strategy should be directed at improving the quality of processing, quality certification, and strengthening international trade networks (Rahmayati, 2015).

4. Conclusion

Eel export strategy in South Kalimantan Province, especially Hulu Sungai Regency, is the largest eel producing area with CV. Tiga A as the sole active exporter that exports live eels to the Chinese market through a distribution chain involving catchers, collectors, suppliers, and exporters. SWOT analysis places CV. Tiga A in Quadrant I (S-O), which reflects the company's solid internal strengths and significant external opportunities. This condition provides a strategic foundation for the company to implement an aggressive strategy in developing sustainable live eel exports, thus potentially increasing competitiveness and optimal export market growth.

References

Ahsan Mardjudo, Wika Indah Pratiwi Djamal (2020), Strategy for Developing Dried Eel Fish Business in Tinombala Village, Ongka District, Perigi Moutong Regency, Central Sulawesi Province Lecturer in Fisheries Agribusiness Study Program, Faculty of Fisheries, Alkhairaat University, Jl. Diponegoro, No. 39, Palu 94221, Central Sulawesi Indonesia

Dekayanti, T., Agusliani, E., & Rahayu, A. (2021). Analysis of business and marketing prospects for sea cucumbers (Holothuria sp) in Muara Kintap Village, Kintap District, Tanah Laut Regency, South Kalimantan Province. Fish Scientiae Journal, 11(1).

Hidayah, N. (2024). Prevalence, intensity of Gnathostoma sp. parasites and health status of eels (Fluta alba) transported through the KIPM Banjarmasin Center, South Kalimantan Province. [Thesis]. Master Program in Fisheries Science, Faculty of Fisheries and Marine Sciences, Lambung Mangkurat University.

Lilimantik, E., & Husein, M. S. (2024). Dried seaweed marketing strategy of PT. Selt Alga Indonesia, DKI Jakarta Province, Indonesia. Russian Journal of Agricultural and Socio-Economic Sciences, 6(150): 133-140

Mugiarto, L., Elrifadah, & Mukhlisah. (2021). Identification and prevalence of endoparasites (Gnathostoma sp.) in rice field eels (Monopterus albus) of different sizes shipped outside South Kalimantan Province. ZIRAA’AH, 46(3), 352–362.

Nova, T.S.D., Indra G.Y., and Yudha T.A. 2020. Identification of Male and Female Candidate Broodstock of Field Eel Monopterus albus (Zuiew, 1793) for Seeding Using Truss Morphometrics. Fisheries Journal. 10(2): 167-174.

Rahmayati, H. M. (2015). SWOT analysis in determining the frozen shrimp marketing strategy of PT. Mustika Mina Nusa Aurora Tarakan, North Kalimantan. Galung Tropika Journal, 4(1), 60–67

Riani, E. & Y. Ernawati (2004). Relationship between sex changes and body size of rice field eel (Monopterus albus). Indonesian Journal of Aquatic Sciences and Fisheries 11: 139- 144.

Sitompul, E. (2017). The Effect of Relative Humidity and Polypropylene Thickness on the Shelf Life of Eel Chips (Monopterus Albus Z.) (Doctoral dissertation, Mercu Buana University Yogyakarta).

Suciati, & Hasballah. (2015). Promising business prospects for eel cultivation that yield big profits.

Trubus. (2022). Looking for eel supply. <https://trubus.id/dicari-pasokan-belut>.