BDJ Smart : Breakthrough Development Journal in Strategic Management & Marketing
Vol 1, Issue 1, (2025), 1-12

Business feasibility study analysis of fish processing industry in Gresik: Opportunities and challenges

Isnaini Hikmah Hidayah [1*] **Abdur Rohman** [2]

[1,2] Trunojoyo University of Madura, Bangkalan, 69162, East Java, Indonesia

Email

230721100155@student.trunojoyo.ac.id [*], abdur.rohman@trunojoyo.ac.id

Received: Month, Date, Year (Required) **Revised:** **Accepted:**

Abstract

This study aims to analyze the feasibility study of the fish processing industry business in Gresik: Opportunities and Challenges. This study uses a qualitative descriptive approach. The qualitative descriptive approach aims to understand the phenomenon contextually based on the perceptions of business actors, stakeholders, and other related parties. Meanwhile, the sources of research data used are secondary data, namely from books, theses, theses and scientific articles, as well as from the internet such as the Gresik Fisheries Service as a supporting reference in this study. The results of this study are that the Gresik Region has great potential for the development of a competitive fish processing industry. The availability of abundant fishery resources, especially milkfish, is determined by its strategic geographical position and government support in the form of downstream policies and infrastructure development such as Fish Processing Units (UPI). It can be concluded that the fish processing industry business opens up wide opportunities for business actors to increase the added value of fishery products.

Keywords: business feasibility, fish processing industry, opportunities, challenges

DOI :
p-ISSN :
e-ISSN :

1. Introduction

Gresik Regency, located on the northern coast of East Java, has significant potential in the fisheries sector, including both capture fisheries and aquaculture. Its strategic location, supported by infrastructure such as ports and the Java Integrated Industrial and Port Estate (JIIPE), makes it a key area for developing the fish processing industry. Aquaculture, which allows environmental control through methods like artificial feeding, faces challenges such as water quality degradation, fish diseases, and rising feed costs. In contrast, capture fisheries are more vulnerable to unpredictable natural factors, including fish migration and weather conditions (Partelow et al., 2023; Alam & Rohman, 2024; Amanda, 2024).

Efforts to utilize marine resources must prioritize environmental sustainability to avoid overfishing and ecological imbalance (Fuad et al., 2021). Furthermore, fisheries have cultural and social significance for coastal communities, requiring capacity building to ensure sustainable management (Noviantoro et al., 2024). Despite support from the local government through various programs, strategic collaboration is essential to increase productivity in both capture and aquaculture sectors.

The fish processing industry plays a critical role in enhancing product value, creating employment, and driving regional economic growth. Traditional products like fish crackers, shrimp paste, and pindang milkfish from areas such as Bawean Island and Sidayu District illustrate this potential (Maharani, Nosita, & Asruni, 2018). However, industry players still face key obstacles such as limited capital, legality issues,

and price fluctuations (Sururi & Rohman, 2024).

A business feasibility study is a vital tool to assess whether a proposed fish processing business can run efficiently and profitably. This study includes analysis of market potential, marketing strategy, technology, management, human resources, and legal and environmental impacts (Kasmir, 2003; Sudrjat, 2023; Aditama, 2023; Haribowo, 2024). The feasibility process involves stages such as idea implementation, research, evaluation, proposal selection, implementation planning, and execution, supported by continuous assessment for improvement (Hasan, 2022).

Fish processing includes methods such as chilling, freezing, drying, smoking, and canning—ranging from traditional to modern technologies. New innovations like automation and IoT are being adopted to improve food safety and efficiency (Diponegoro, n.d.; Nusaibah et al., 2024; Kompas, 2023). However, challenges persist, including raw material fluctuations, competition from technologically advanced countries, and increasingly stringent export requirements (Saharuddin et al., 2025).

Nonetheless, there are considerable opportunities. The domestic and export markets are growing, with tilapia consumption reaching 1.43 million tons per year and exports worth USD 81.7 million in 2023 (Kompasiana, 2025). Government programs supporting downstream fishery product development further enhance industry growth, particularly in high-potential areas like North Maluku.

To respond to these dynamics, appropriate strategies such as SWOT analysis, competency development, and innovation are essential (Noviantoro et al., 2024; UGM, 2024; Hasbi, 2023). This article, therefore, aims to analyze the business feasibility of the fish processing industry in Gresik, focusing on opportunities that can be leveraged and challenges that must be addressed—offering insights for entrepreneurs, investors, and policymakers alike.

2. Research Design and Method

This study applies a qualitative method by analyzing the feasibility study of the fish processing industry business in Gresik. The approach used is descriptive qualitative, which aims to gain an in-depth understanding of the phenomena that occur. Contextually based on the perceptions of business actors, stakeholders, and other related parties (Rusandi & Rusli, 2021). In addition, it is also supported by the library research method, which is a series of activities that involve collecting data from library sources, reading and recording relevant information, and processing research materials to gain a deeper understanding of the topic being studied. (Arifah et al., 2020). Meanwhile, the research data sources used are secondary data, namely from books, theses, scientific articles, and from the internet such as the Gresik Fisheries Service as a supporting reference in this study.

3. Results and Discussion

Potential of Fish Processing Industry in Gresik

The fish processing industry in Gresik Regency holds substantial potential for development, supported by the abundance of natural resources, improving infrastructure, and strong backing from both local and central governments. One of the key strengths lies in the abundant availability of raw materials. Gresik is recognized as one of Indonesia's main producers of milkfish. According to data from the East Java Provincial Marine and Fisheries Service, milkfish production in Gresik Regency reached 93,000 tons in 2023, showing an increase compared to the previous year. This aquaculture production is further supported by the presence of fishery product processing industries that help increase the added value of these commodities (Kompasiana, 2023).

In addition to raw material supply, infrastructure support and processing facilities have also been significantly improved. With assistance from the Ministry of Maritime Affairs and Fisheries (KKP), the Gresik Regency Government has established a value-added Fish Processing Unit (UPI) in Purwodadi

Village, Sidayu District. This facility, constructed with an investment of IDR 2.3 billion, includes various key features such as a raw material reception room, packaging area, waste processing system, and freezing unit—all designed to optimize product quality and competitiveness (Surabaya, 2024).

Furthermore, the government's support and downstream programs have created a favorable ecosystem for industry growth. Since 2021, Ujung Pangkah Village in Gresik has been designated as a "Milkfish Village" by the Ministry of Maritime Affairs and Fisheries, acknowledging its vast potential for fish farming. This initiative is part of a broader downstream program aimed at increasing the added value of fishery products through processing and diversification, while simultaneously expanding market opportunities for local entrepreneurs (Madinah & Sadik, 2022).

The market potential and added value of processed products are also highly promising. Milkfish, typically sold at around IDR 26,000 per kilogram in the market, can be processed into ready-to-eat products that fetch up to IDR 80,000 per portion in restaurants. This significant value increase illustrates the economic potential of processed fish products. Moreover, products from the UPI in Gresik are planned for distribution to institutions such as the Ibnu Sina Gresik Regional Hospital and various catering services in the region (Noviantoro et al., 2024).

Lastly, the development of the fish processing industry in Gresik contributes meaningfully to community empowerment and welfare improvement. The establishment of UPI not only aims to boost the added value of local fishery products but also to involve and uplift the surrounding community. In its initial phase, the facility has already employed 20 local residents, providing them with training and involvement in the milkfish processing operations. This initiative is expected to improve local living standards by creating job opportunities and increasing household income (Hasbi, 2023).

Opportunities for the fish processing industry in Gresik (Maharani, Nosita, and Asruni 2018)

Gresik Regency stands out as one of Indonesia's leading milkfish producers, with production reaching 93,000 tons in 2023, showing a notable increase from the previous year. This abundant availability of raw materials presents a significant opportunity for the growth of the fish processing industry in the region. The steady supply of milkfish supports the sustainability of processing operations and opens doors for further industrial development.

To enhance the value of this resource, the government—through the Ministry of Maritime Affairs and Fisheries (KKP)—has actively supported product down streaming efforts in Gresik. One of the key initiatives is the provision of a Fish Processing Unit (UPI) equipped to produce value-added milkfish products such as boneless milkfish and presto milkfish. This facility is part of a broader strategy to improve product quality, extend shelf life, and increase the economic benefits for local communities.

In terms of market potential, milkfish-based processed products from Gresik have demonstrated strong appeal, both domestically and internationally. Various innovative products such as meatballs, nuggets, shredded milkfish, crackers, siomay, dimsum, milkfish noodles, smoked milkfish, and presto milkfish are well-received by consumers and offer high market value. The ability to diversify product offerings not only meets different consumer preferences but also strengthens the competitiveness of the local fishery industry.

Moreover, with Gresik's rich aquaculture resources that have not yet been fully optimized, there exists a promising opportunity to establish an export-oriented fish processing factory integrated with educational tourism. This facility could serve dual functions: meeting international market demand for aquaculture products and providing educational experiences for visitors to learn about the fish processing industry. Such a concept combines economic development with community engagement and public awareness, further reinforcing Gresik's role as a hub for sustainable and innovative fishery development.

Challenges of the Fish Processing Industry in Gresik (Rahmi and Sudarmiatin 2022)

Despite its considerable potential, the development of the fish processing industry in Gresik Regency continues to face several infrastructure and technology limitations. In some areas, processing and storage facilities remain inadequate, hindering efforts to achieve efficient production and maintain high product quality. These limitations can affect both the scalability and competitiveness of the local fishery industry.

Another significant challenge is the conversion of fish pond land due to the development of large-scale infrastructure, such as the construction of an international port in the region. This transformation has led to the repurposing of aquaculture land for industrial and warehousing purposes, resulting in a decline in fish farming areas. The reduction in pond land not only impacts production capacity but also poses environmental risks, particularly for the sustainability of aquaculture development in Gresik.

In addition, the fish processing industry is also exposed to risks within the supply chain. The increasing volume of aquaculture production has encouraged many small and medium enterprises (SMEs) to process milkfish into various products. However, the involvement of numerous stakeholders in the supply chain increases the likelihood of inefficiencies and disruptions. To ensure smooth production and distribution, it is crucial to identify potential risks and implement effective management strategies across the supply chain.

Furthermore, there is a lack of innovation and local product identity, which hampers the wider recognition and market reach of Gresik's fish products. For example, *bonggolan*—a traditional processed fish product from Sidayu District—is known for its unique taste but is often sold without strong branding or identity. The absence of branding strategies and product development makes it difficult for such local products to compete with other processed fishery goods on a broader scale, both regionally and nationally.

Strategy to Face Challenges in Fish Processing Industry in Gresik (Aulia 2021)

To overcome infrastructure and technology limitations in Gresik's fish processing industry, several strategic efforts can be undertaken. One approach is to strengthen public-private partnerships (PPP), where local governments collaborate with private investors to develop essential infrastructure such as cold storage, freezing units, and packaging facilities. Additionally, the digitalization of production processes through technologies like blockchain or smart logistics can help ensure transparency, traceability, and improved quality control across the supply chain. Moreover, the success of Fish Processing Units (UPI), such as the one in Purwodadi, can serve as a model for scaling up similar facilities in other sub-districts that have comparable aquaculture potential.

To address the issue of pond land conversion, it is crucial to implement strict zoning regulations through the Regional Spatial Plan (RTRW) to designate and protect aquaculture zones from excessive industrial development. In parallel, the government and stakeholders can promote reclamation and revitalization of ponds using space-efficient technologies like biofloc systems or recirculating aquaculture systems (RAS), which allow for intensive and environmentally sustainable fish farming. Furthermore, compensation and relocation programs can be introduced to assist pond farmers affected by land conversion, offering them new cultivation areas with high potential and adequate support.

In managing supply chain risks, a comprehensive approach is needed. This begins with value chain mapping to identify all key actors involved and detect potential vulnerabilities, such as distribution delays or raw material spoilage. Establishing cooperatives for producers and processors can also strengthen the position of small business actors, facilitating collective quality control, streamlined logistics, and access to wider markets. Lastly, the adoption of integrated risk management frameworks, such as Failure Mode and Effect Analysis (FMEA) or the House of Risk model, can provide systematic strategies for risk identification, assessment, and mitigation throughout the supply chain.

4. Conclusions

Based on the results of the analysis of the feasibility study of the fish processing industry business in Gresik Regency, it can be concluded that this area has great potential for the development of a competitive fish processing industry. The availability of abundant fishery resources, especially milkfish, supported by a strategic geographical position and government support in the form of downstream policies and infrastructure development such as Fish Processing Units (UPI), opens up wide opportunities for business actors to increase the added value of fishery products.

In addition, the market opportunities that continue to grow, both locally and export, as well as the public's tendency towards ready-to-eat processed products provide promising business expansion space. Products such as presto milkfish, fish nuggets, shredded meat, and frozen food have bright economic prospects, especially if supported by innovation and the right digital marketing strategy.

However, significant challenges remain, such as limited infrastructure and technology, conversion of ponds into industrial areas, weak supply chain systems, and lack of innovation and local product identity. Without appropriate intervention, these challenges could hamper the sustainability and growth of the fish processing industry in Gresik.

By implementing integrated strategies, such as increasing human resource capacity, strengthening small business institutions, developing processing and storage technology, and protecting cultivation areas, this industry can develop inclusively and sustainably. Therefore, this study concludes that the fish processing industry business in Gresik is generally feasible to be developed, both from market, technical, environmental, and economic aspects, as long as the main challenges can be managed effectively.

Reference

Serial/journal article (online with DOI):

Adnyana, I. M. (2020). *Book: Business feasibility study*.

Aditama, R. (2023). *Business feasibility study: Theory, practice, and evaluation*. Malang: AE Publis hing.

Alam, M. M., & Rohman, A. (2024). Analysis of financial aspects in business feasibility study on s hrimp petis business in Bungah Gresik. *IQTISODINA: Journal of Islamic Economics and Islam ic Law, 59*(2), 58–66.

Amanda, Y. R. (2024). Optimizing fisheries production in Gresik Regency, Gresik Regency Govern ment continues to improve local economy.

Aulia, E. N. (2021). Milkfish pond business development strategy in Mengare Village, Watuagung, Gresik. *Journal of Business Administration, 15*(1), 112–119.

Diponegoro University. (n.d.). *Literature review: Fish processing industry*. Retrieved from https://e prints.undip.ac.id/64208/3/BAB_II.pdf

Fuad, M. A. Z., et al. (2021). Mentoring and feasibility analysis of the "Abizar" fish cracker busines s in Pangkahkulon Village. *IJCSL, 5*(3).

Haribowo, R. (2024). *Business feasibility study*. Bekasi: PT Kimshafi Alung Cipta and Author.

Hasan, S. (2022). *Business feasibility study*. Banyumas: CV. Pena Persada.

Hasbi. (2023). Opportunities and challenges of the fisheries industry in Indonesia. *Jurnalpost.com*. Retrieved from https://jurnalpost.com/peluang-dan-tantangan-industri-hasil-perikanan-di-indon esia/49385/

Kasmir. (2003). *Business feasibility study* (2nd ed.). Jakarta: Kencana Prenada Media Group.

Kompas. (2023). Methods of processing fishery products. *Kompas.com*. Retrieved from https://ww w.kompas.com/skola/read/2023/11/29/200000569/5-metode-pengolahan-hasil-perikanan

Kompasiana. (2023). Advancing together with Indonesian fisheries: Potential and challenges. *Komp asiana.com*. Retrieved from https://www.kompasiana.com/suchma1693/646a25aa4addee12793 8a0c5/maju-bersama-perikanan-indonesia-potensi-dan-tantangan?utm_source=chatgpt.com

Kompasiana. (2025). Opportunities for developing fisheries business in Indonesia. *Kompasiana.com*. Retrieved from https://www.kompasiana.com/hakimhuda/67f63de234777c210f15f8f3/peluang-pengembangan-usaha-perikanan-di-indonesia

Madinah, M., & Sadik, J. (2022). Analysis of potential and prospects for local economic development based on aquaculture products in Tanggulrejo Village, Manyar District, Gresik Regency. *Development Economics Bulletin, 3*(2), 361–372.

Maharani, I., Nosita, F., & Asruni. (2018). Feasibility analysis of fish processing business in the small Casheila industry in Banjarbaru. *Scientific Journal of Business Economics, 4*(3), 301–318.

Noviantoro, K. M., Firnanda, A., Sari, D. N., & Fajri, Y. T. (2024). Potential and opportunities for sustainable fisheries business development in improving the economy of the Bawean Island community, Gresik. *Social Dynamics: Journal of Social Science Education, 3*(3), 223–237.

Partelow, S., et al. (2023). Governance challenges for Indonesian pond aquaculture: A case study of milkfish production in Gresik. *Frontiers in Aquaculture*.

Rahmi, V. A., & Sudarmiatin. (2022). Business resilience of MSMEs processed fish products during the pandemic: Opportunities and constraints. *Journal of Business and Management Concepts, 8*(2), 178–190. https://doi.org/10.31289/jkbm.v8i2.7189

Saharuddin, A., Xyla, G., & Hidayatullah, M. (2025). Business feasibility analysis of processed fisheries MSMEs: Export opportunities and operational challenges. *Jurnal Ilrscentre, 5*(1), 8–21.

Sofian, S. E. (2024). *Business feasibility study*. Berkah Aksara Cipta Karya.

Sudrjat, Y. (2023). *Business feasibility study*. Sumedang: CV. Mega Press Nusantara.

Surabaya, Suara. (2024). Swallowing a budget of IDR 2.3 billion, Gresik Fish Processing Unit is projected to add value to milkfish sales. *Suarasurabaya.net*. Retrieved from https://www.suarasurabaya.net/ekonomibisnis/2024/telan-anggaran-rp23-miliar-unit-pengolahan-ikan-gresik-diproyeksi-tambah-nilai-jual-bandeng/

Sururi, A., & Rohman, A. (2024). Operational aspects of the culinary business of the Bawean grilled fish restaurant: Business feasibility study. *Academic Media Journal, 2*(6), 1–17.

UGM Chub Fisipol. (2024). How to take advantage of opportunities and face the challenges of social entrepreneurship. *Chub.fisipol.ac.id*. Retrieved from https://chub.fisipol.ugm.ac.id/how-to-take-advantage-of-opportunities-and-face-the-challenges-of-social-entrepreneurship/

East Java Marine and Fisheries Service. (2023). The role of Gresik Regency fisheries SMEs in industry. *Dkp.jatimprov.go.id*. Retrieved from https://dkp.jatimprov.go.id/unit/pmp2kp-surabaya//news/view/3246/

Widina Media Utama. (2024). *Modern fishery product processing technology*. Bandung: Widina Media Utama.

Thesis (online):

Amanda, Y. R. (2024). *Optimizing fisheries production in Gresik Regency, Gresik Regency Government continues to improve local economy* [Undergraduate thesis].

Aulia, E. N. (2021). *Milkfish pond business development strategy in Mengare Village, Watuagung, Gresik* [Undergraduate thesis].