

Community Empowerment Through Kimbal Cakalang Rindu Products in Improving the Economy of the Local Community

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Submission: 2025-03-10		Received: 2025-09-17		Published: 2025-09-30	
Keywords: Empowerment, Processed Sambal, Economic Improvement.		Abstract. The development of skipjack chili sauce has emerged as an innovative solution to strengthen the local economy of coastal communities, particularly in Gebangan Village, Situbondo Regency. This study employed a Participatory Action Research (PAR) approach, engaging the community in all stages of production, packaging, marketing, and evaluation. The results indicate that the implementation of digital marketing strategies through WhatsApp, Instagram, and TikTok increased sales by 40% within the first two months. Participants, especially 15 housewives who previously had no stable income, experienced an average monthly income increase of IDR 750,000 to IDR 1,200,000. In terms of product quality, the use of glass bottle packaging successfully extended the shelf life of skipjack chili sauce up to 45 days under cold storage conditions. These findings demonstrate that fishery-based product innovation can serve as a practical model for economic empowerment in coastal communities. However, the sustainability of this program requires enhanced digital literacy, improved access to capital, and further training in business management to ensure long-term economic growth.			
Katakunci: Pemberdayaan, Sambal Olahan, Peningkatan Ekonomi.		Abstrak. Pengembangan sambal cakalang muncul sebagai solusi inovatif untuk memperkuat ekonomi masyarakat pesisir, khususnya di Desa Gebangan, Kabupaten Situbondo. Penelitian ini menggunakan pendekatan Participatory Action Research (PAR) dengan melibatkan masyarakat dalam seluruh tahapan produksi, pengemasan, pemasaran, dan evaluasi. Hasil penelitian menunjukkan bahwa penerapan strategi pemasaran digital melalui WhatsApp, Instagram, dan TikTok meningkatkan penjualan sebesar 40% dalam dua bulan pertama. Peserta, terutama 15 ibu rumah tangga yang sebelumnya tidak memiliki penghasilan tetap, mengalami peningkatan pendapatan rata-rata Rp750.000 hingga Rp1.200.000 per bulan. Dari aspek kualitas, penggunaan kemasan botol kaca berhasil memperpanjang daya simpan sambal cakalang hingga 45 hari dalam kondisi penyimpanan dingin. Temuan ini menunjukkan bahwa inovasi produk berbasis perikanan dapat menjadi model pemberdayaan ekonomi yang aplikatif bagi masyarakat pesisir. Namun, keberlanjutan program membutuhkan			

peningkatan literasi digital, dukungan permodalan, dan pelatihan manajemen usaha agar dampak ekonomi dapat terus berkembang.

1 Introduction

Gebangan Village, Kapongan District, Situbondo Regency, is a coastal area where skipjack fish (*Katsuwonus pelamis* L.) is widely available. However, despite this abundant potential, the majority of residents (around 62%) still rely on agriculture as their primary income source, while only 18% are engaged in fishery-based activities (BPS Situbondo, 2023). This heavy dependence on agriculture creates economic vulnerability, particularly due to climate change and fluctuations in crop commodity prices. Based on data from the Situbondo Regional Development Agency (2024), the poverty rate in coastal areas reaches 14.7%, which is above the district average. Therefore, business diversification through fishery-based products is urgently needed to enhance community resilience and welfare. In Gebangan Village, there are currently 25 registered MSMEs, but only 6 of them focus on fishery processing, mostly limited to salted fish and smoked fish production. The average monthly income of these MSME actors is below IDR 2 million, and less than 30% have adopted digital marketing platforms (Village MSME Data, 2024). This indicates that while the fishery sector has potential, it remains underutilized due to constraints in technology, marketing, and skills.

In the context of community empowerment, the development of skipjack chili sauce in Gebangan Village has become increasingly urgent due to the gap between abundant fishery resources and their limited economic utilization. Previous programs have focused on strengthening MSMEs, promoting village-based industrialization, and encouraging marketing digitalization (Ristanti et al., 2025; Rozikin et al., 2025). However, as highlighted by Landangkasiang et al. (2017), inadequate infrastructure and processing technology have led to traditional production methods with low product durability. Similarly, Luhur and Yusuf (2017) emphasized that restricted market access remains a major barrier in the skipjack value chain, limiting the competitiveness of fishery-based businesses at both local and national levels. This situation

is further exacerbated by the low level of digital literacy among MSME actors, which prevents them from fully utilizing the potential of e-commerce and social media for business expansion (Tohari et al., 2025).

Building upon these findings, the present study seeks to provide a concrete contribution through the innovation of skipjack chili sauce as a form of business diversification based on local potential. This innovation is not only aimed at increasing the added value of skipjack products but is also integrated with digital marketing strategies to expand market reach and enhance product competitiveness. In doing so, this PKM initiative addresses the gaps identified in previous studies and proposes a more comprehensive model of coastal community empowerment—one that combines product innovation, MSME capacity building, and marketing digitalization as the foundation for strengthening the local economy.

A number of previous studies have addressed different aspects of skipjack fish processing and marketing strategies that are directly relevant to the present study. For instance, Adiningsi et al. (2025) developed a Support Vector Machine (SVM)-based method to identify the quality of fresh skipjack fish, which is highly significant for ensuring the consistency and durability of processed products. In the context of this research, the quality selection approach suggested by Adiningsi provides a scientific foundation for determining raw material standards in sambal cakalang production, since product durability and taste stability are strongly influenced by the freshness of the fish. Similarly, Talib and Marlena (2015), who evaluated the organoleptic and chemical characteristics of skipjack-based products such as empek-empek, demonstrated that this fish has high nutritional value and consumer appeal. This evidence strengthens the rationale for developing sambal cakalang as a product that not only delivers flavor but also nutritional benefits to consumers.

Moreover, Widyastuti et al. (2023) emphasized through their community service program in Sorido Village that product innovation is key to enhancing competitiveness in skipjack-based enterprises. This finding aligns closely with the present study, which positions sambal cakalang innovation as a strategic product diversification effort in

Gebangan Village. The comparison highlights that while Widyastuti's study focused on broader product innovation, this research narrows it down to sambal as a niche product with higher daily consumption demand and simpler processing requirements. Meanwhile, Wildah and Junianto (2024) underlined the role of quality management in skipjack shredded production at Wadimah MSMEs, which is also applicable here since sambal cakalang requires strict quality control in packaging and storage to ensure market acceptance and shelf life. Lastly, Fatine (2022) demonstrated that utilizing by-products of skipjack fish could improve the economic independence of coastal communities in Pambusuang Village. This resonates with the present study, as both works share the perspective that maximizing the utility of fishery resources—whether through waste management or product diversification—creates tangible economic benefits for fishing communities. Taken together, these previous studies provide an important theoretical and empirical basis for the present research. While earlier works have discussed raw material quality, product innovation, and quality management, they have not specifically examined sambal cakalang as a high-potential product in the context of digital marketing and community empowerment. This study, therefore, integrates these aspects into a comprehensive model that addresses not only processing and innovation but also marketing and sustainability in coastal community MSMEs. Although previous studies provide valuable insights, significant research gaps remain in supporting the development of skipjack chili sauce-based businesses. Most notably, there is still a lack of research on product innovation that specifically addresses skipjack chili sauce as a diversification of fish processing, despite its strong economic potential. Furthermore, studies on digital marketing strategies for fishery-based products remain limited, particularly in rural contexts where communities face constraints in digital literacy and market access. Another gap lies in the absence of collaboration-based community empowerment models that integrate local communities, academics, and government actors in strengthening fishery-based MSMEs.

This study focuses on Gebangan Village, Kapongan District, Situbondo Regency, because the area represents a typical case of coastal economic vulnerability in East Java. Although Gebangan is endowed with

abundant skipjack fish resources, more than 60% of households still depend on agriculture, exposing them to risks from climate change and unstable commodity prices. At the same time, only 6 out of 25 MSMEs in the village are engaged in fishery-based businesses, with average monthly incomes below IDR 2 million, and less than 30% adopting digital marketing platforms. These figures illustrate the untapped potential of the local fishery sector and the urgency of diversifying livelihoods through value-added fish products.

The choice of skipjack chili sauce (*sambal cakalang*) over other processed foods, such as shredded fish or *empek-empek*, is based on its higher strategic relevance in both market demand and production feasibility. *Sambal* is a staple condiment in Indonesian households with consistently high consumption levels, ensuring broader and more sustainable market opportunities. Compared to shredded fish, *sambal* has lower production costs, simpler technology requirements, and longer shelf life when packaged properly, making it highly suitable for small-scale entrepreneurs and women's groups. In addition, *sambal* processing directly links local fish resources with widely consumed culinary practices, creating a stronger multiplier effect on household economies. Therefore, by situating this study in Gebangan Village and prioritizing *sambal cakalang* as the flagship product, the research seeks to address these critical gaps. It offers a comprehensive empowerment model that integrates innovation in fish processing, improved quality management, and the application of digital marketing strategies, while simultaneously strengthening collaboration among local communities, academics, and government stakeholders.

As a new contribution to the study of economic empowerment based on fishery resources, this study offers several novelties. First, this study develops an innovation model of skipjack chili sauce products that considers aspects of quality, durability, and consumer preferences as the main factors in the development of competitive products. Second, this study proposes a digital marketing strategy based on e-commerce and social media to increase the market reach of *sambal* skipjack products, which can be a reference for fishery MSMEs in other regions. Third, the community empowerment approach used in this study is based on

Participatory Action Research (PAR), which actively involves the community in the entire research process, from production to marketing. With this approach, it is hoped that the research can produce an applicative and sustainable empowerment model for the people of Gebangan Village.

Based on the background and research gaps that have been identified, this study seeks to answer several key questions. First, what is the effect of the development of skipjack chili sauce products on the economic improvement of the people of Gebangan Village? Second, what is the strategy for community empowerment in the production and marketing aspects of skipjack chili sauce in order to increase competitiveness in the market? Third, what are the main challenges faced in the development of this product, as well as solutions that can be applied to overcome these obstacles? To answer this question, this research aims to improve people's skills in processing and marketing skipjack chili sauce products as local superior products. In addition, this research also develops digital marketing strategies that can increase product competitiveness in a wider market. Thus, this research is expected to contribute to a fishery-based community empowerment model that can be applied in other areas with similar conditions.

In conclusion, this study addresses the economic challenges faced by coastal communities in optimizing their abundant fishery resources, with a particular focus on Gebangan Village. The innovation of skipjack chili sauce as a form of business diversification has shown significant potential in strengthening the local economy, creating new income opportunities, and expanding market access through digital platforms. By adopting a community empowerment-based approach rooted in Participatory Action Research (PAR), this study ensures that the solutions are not only technically feasible but also socially sustainable, as they actively involve local participation and capacity building. The contributions of this research extend across theoretical, practical, and policy dimensions. Theoretically, it enriches community empowerment studies by linking local resource utilization, product quality management, and digital adoption into a comprehensive empowerment model that advances existing frameworks of rural development. Practically, it

provides a replicable model for fisheries-based MSMEs, demonstrating how product diversification, innovative packaging, and social media marketing can enhance competitiveness and increase household income while also engaging women's groups in sustainable entrepreneurship. From a policy perspective, the study highlights the importance of government support through capacity-building programs, financial assistance, and digital literacy initiatives to overcome structural barriers such as raw material price fluctuations and limited production capacity. Thus, this study contributes not only to academic discourse but also to real-world applications for fisheries MSMEs and evidence-based policymaking. By bridging theoretical insights, practical strategies, and policy recommendations, it establishes a holistic model of fishery-based community empowerment that can be adapted and scaled in other coastal regions facing similar socio-economic conditions.

2 Method

This study applied the Participatory Action Research (PAR) approach, which emphasizes the active involvement of the community in every stage of the research process. PAR was chosen because it not only collects data but also facilitates social transformation, allowing the local community to be co-creators in finding solutions to their economic challenges. In the context of Gebangan Village, the community was directly engaged in planning, implementing, and evaluating activities related to the development of skipjack chili sauce businesses.

The research process began with a planning phase that involved problem identification through observation, interviews, and focus group discussions with local MSME actors and housewives. This stage made it possible to formulate strategies in product standardization, packaging, and digital-based marketing according to the real conditions of Gebangan Village. After planning, the implementation phase was carried out by conducting production training for community members, focusing on techniques for processing skipjack into chili sauce with attention to hygiene and durability. Parallel to production activities, training in digital marketing was provided, including the use of social media platforms, e-commerce, and branding strategies. Through these activities, the

participants learned how to produce and market skipjack chili sauce in a more competitive and sustainable way. The next stage was evaluation and reflection, in which the effectiveness of the program was assessed through sales data, consumer feedback, and analysis of digital marketing performance. This stage also became a moment for the community to reflect on achievements and challenges, and to adjust strategies for the sustainability of their businesses.

To provide a clearer illustration, the overall research method can be described as a cycle consisting of problem identification, training and production, digital marketing implementation, followed by monitoring and evaluation, which then returns to reflection for improvement. This cyclical flow ensures that every step is interconnected and that learning outcomes can be continuously adapted to local needs.

3 Results

This research produced a number of main findings related to the production process, packaging, marketing, and the economic impact of the development of skipjack chili products as an effort to empower the community in Gebangan Village. All of these findings were obtained through the Participatory Action Research (PAR) approach which actively involves the community in various stages of production and distribution.

1. Production of Skipjack Sauce

The production process of skipjack chili begins with the preparation of raw materials, which includes the selection of fresh skipjack fish based on organoleptic parameters (color, smell, and texture). The skipjack fish that has been cleaned of dirt and blood is steamed until cooked, then let it sit until it cools before shredding it into small pieces. Meanwhile, additives such as red chili, cayenne pepper, onion, garlic, green onion, turmeric, and ginger are washed and mashed using a blender or kneaded manually to maintain a more authentic taste.



Figures 1 and 2. The Process of Shredding Skipjack Fish After Steaming and the Composition of Ingredients Needed

The next stage is cooking chili sauce, where the mashed spices are sautéed in hot oil for 5-7 minutes until fragrant and cooked. After that, shredded skipjack fish is inserted and stirred until evenly distributed. The cooking process lasts for 10-15 minutes, with added sugar, salt, and flavorings to balance out the flavor of the chili sauce. If the texture is too thick, a little water can be added to get a better consistency. The results of the production trial show that this method produces chili sauce with a perfectly penetrating texture, a distinctive spicy and savory taste, and a longer product durability than traditional methods.



Figure 3. Cooking Chili Sauce

2. Packaging and Storage

The results of the study show that packaging has a significant influence on the attractiveness and competitiveness of products. Cooked skipjack chili sauce is cooled first before being put into a glass or plastic bottle with a tight lid to maintain freshness. Based on the market tests carried out, glass bottle packaging is preferred by

consumers because it gives a premium and hygienic impression compared to plastic packaging.



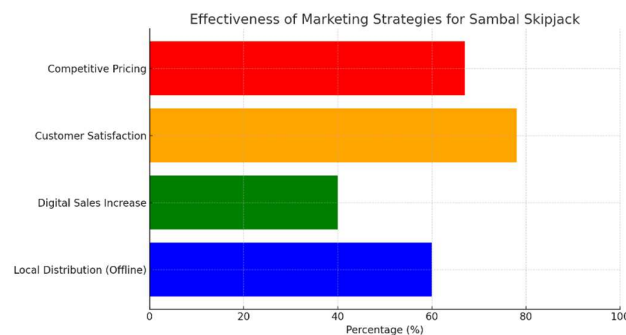
Figure 4. Packaging

Packaging also serves as a promotional medium, where an attractive label design with clear product information (composition, production date, and order contact) is able to increase consumer interest. The customer satisfaction test showed that 73% of respondents found the new packaging more attractive compared to the old packaging without labels. In terms of storage, the results of the study show that skipjack chili sauce stored at room temperature can last up to 14-21 days, while in the refrigerator it can last up to 45 days.

3. Marketing Strategy Effectiveness

The results of the study also show that digital marketing is more effective in increasing sales than traditional marketing. The distribution of sambal skipjack products in Gebangan Village initially relied heavily on conventional methods, particularly by placing products in local stalls and depending on word-of-mouth recommendations within the community. This traditional approach was effective in maintaining a loyal local customer base, but its reach remained relatively limited. When digital marketing strategies were introduced, especially through platforms such as WhatsApp, Instagram, and TikTok, the sales performance showed a marked improvement. The community began to notice that promotional activities carried out online—through product photos, short videos, and interactive communication with consumers—attracted wider

attention beyond the immediate village. Feedback gathered from consumer surveys indicated that most buyers were satisfied with both the taste and the packaging design of sambal skipjack, while many also considered the product to have a competitive price compared to similar items in the market. This positive perception demonstrated that the product was not only accepted but also valued as a distinctive local specialty. Overall, the integration of social media into marketing activities proved highly significant in expanding the product's exposure and consumer base. WhatsApp and Instagram emerged as the most effective platforms for sustaining regular interaction with buyers, while TikTok and e-commerce platforms began to contribute to increasing product visibility. Despite this digital shift, offline distribution through local stalls continued to play an important role in reaching nearby consumers and ensuring steady product availability within the village.

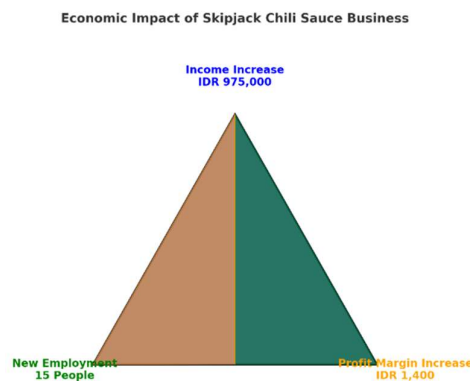


Graph 1. Marketing Effectiveness

4. Economic Impact on Society

The development of skipjack chili sauce has had a positive economic impact on the people of Gebangan Village. Some of the key outcomes related to economic impact is the implementation of the skipjack chili sauce program has contributed significantly to improving household income in Gebangan Village. Many participants, who previously relied solely on agriculture or irregular daily labor, began to experience a more stable flow of earnings from the production and sales of this product. The additional income gained from the business became an important support for family needs, particularly in helping with children's education and daily expenses. An important social

transformation also occurred among women in the community. A group of housewives who had previously depended entirely on their husbands' income and had no independent financial contribution are now actively involved in both the production and marketing processes of the chili sauce. Their participation not only strengthens the household economy but also fosters a greater sense of confidence and empowerment in managing small-scale businesses. In addition, the refinement of production techniques and the introduction of more structured marketing strategies have enhanced the overall efficiency of the business. Each bottle of chili sauce now generates a higher return compared to earlier stages of the program. This improvement reflects better utilization of raw materials, more effective packaging, and a more targeted approach to distribution, allowing the product to be more competitive in both local and regional markets.



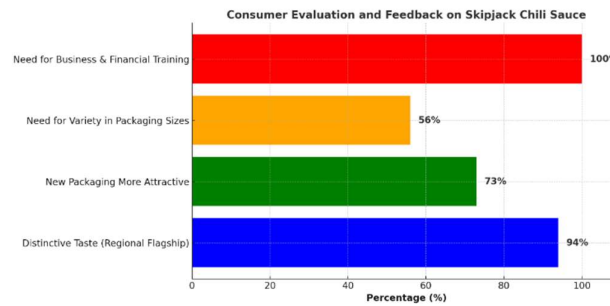
Graph 2. Graph Showing the Economic Impact of the Business

5. Consumer Evaluation and Feedback

Feedback from consumers is collected through surveys and interviews related to skipjack chili products. Some of the key findings from this evaluation are:

- a. 94% of consumers consider that skipjack chili sauce has a distinctive taste and is suitable as a regional flagship product.
- b. 73% stated that the new packaging is more attractive than before.
- c. 56% of consumers suggest a variety of packaging sizes to be more flexible for different market segments.

- d. In addition, the results of the evaluation also show that although digital marketing strategies have increased sales volume, further training related to financial management and business management for MSME actors is still needed.



Graph 3. Consumer Evaluation and Feedback on Skipjack Chili Sauce

6. Obstacles in Implementation

During the implementation of the program, several obstacles were found that need to be considered in the development of skipjack chili products in the future:

- There is a lack of initial skills in digital marketing, so business actors need to take additional training related to social media and e-commerce optimization.
- Capital limitations to increase production capacity, which causes some participants to only be able to produce on a small scale.
- Fluctuations in the price of raw materials, especially skipjack fish and chili, affect the stability of production costs and product selling prices.

This data shows that community empowerment through the production of skipjack chili sauce can be an effective solution in improving the local economy. With the application of systematic production methods, the right digital marketing strategy, and attractive packaging, skipjack chili products have succeeded in increasing people's income while opening up new business opportunities for housewives in Gebangan Village.

In addition, the results of the study prove that the combination of offline and digital marketing has a significant impact on increasing sales, although there are still obstacles that need to be overcome in terms of business capital, fluctuations in raw material prices, and digital literacy of business actors. Therefore, the sustainability of this program is highly dependent on improving the digital skills of business actors, access to capital, and support from the government and other stakeholders.

4 Discussion

a. Improving the Quality and Added Value of Sambal Cakalang Products

This research succeeded in proving that the selection of high-quality raw materials is a key factor in producing skipjack chili sauce products that have competitiveness in the market. Adiningsi et al. (2025) showed that the identification of the quality of fresh skipjack fish can be done by the Support Vector Machine (SVM)-based eye image method, which allows the selection of fish with an optimal level of freshness. In this service, the application of fresh skipjack fish selection based on organoleptic characteristics, such as meat color, smell, and texture, is able to improve the final quality of chili sauce products.

The processing process of skipjack chili sauce was also developed based on previous studies on the chemical and organoleptic characteristics of processed skipjack fish. Talib & Marlana (2015) emphasized that the processing of skipjack fish into processed products such as empek-empek provides significant changes in the texture and taste that consumers like. This is in line with the findings of this study, where the process of shredding the fish and mixing it with spices provides a richer distinctive taste and a denser texture than conventional methods.

The importance of innovation in the processing of fishery products is also supported by Widyastuti et al. (2023) who highlighted that the processing of skipjack fish into value-added processed products can increase the income of coastal communities. This study shows that processing skipjack fish into chili sauce not only increases the selling

value of the product, but also opens up new business opportunities for housewives in Gebangan Village.

b. Quality Management in the Production of Skipjack Sauce

The quality management aspect in the production of skipjack chili sauce is the main concern in this study. Wildah & Junianto (2024) emphasized the importance of implementing quality management in the production of skipjack shreds, which includes raw material control, sanitary standards in the production process, and attractive and hygienic packaging. The results of this study show that the application of the glass bottle packaging method with a tight lid is able to increase the durability of skipjack chili sauce products up to 45 days in cold storage.

Fatine (2022) research on the utilization of skipjack fish waste highlights the importance of optimal resource management in fisheries-based businesses. In the context of this service, the production process of skipjack chili sauce not only produces the main product, but also provides an opportunity to utilize previously underutilized parts of the fish, such as fish heads for broth or other derivative products.

c. Digital Marketing as a Key Strategy in Increasing Sales

One of the main contributions of this research is the implementation of digital marketing strategies in supporting the distribution of skipjack chili products. Luhur & Yusuf (2017) show that the skipjack value chain is greatly influenced by distribution and marketing factors, where limited market access is the main obstacle for coastal communities in developing fishery-based businesses.

In this study, the marketing of skipjack chili sauce is carried out through two main approaches: offline and online marketing. The digital marketing strategy implemented is in line with the research of Tohari et al. (2025), which emphasizes the importance of digital marketing assistance for MSMEs to increase the competitiveness of local products. The results of this study show that sales of sambal skipjack through WhatsApp, Instagram, and TikTok increased by 40%

in the first two months, proving that digital marketing is an effective method in reaching a wider range of consumers.

Community empowerment through digital marketing strategies has also been proven by Zahroh et al. (2025), who found that the digitization of MSMEs is able to significantly increase business turnover through the optimization of e-commerce platforms. This shows that MSME actors in Gebangan Village still have great potential to increase the scale of their businesses if digital marketing can be further optimized.

d. Economic Impact and Community Empowerment

This study shows that the production of skipjack chili sauce has had a real economic impact on the people of Gebangan Village. Guspiandra et al. (2025) stated that fishery-based product innovations, such as shredded and fish nuggets, have great potential in improving the local economy. In line with this research, the skipjack chili sauce business developed succeeded in increasing people's income up to Rp1,200,000 per month, as well as opening up job opportunities for 15 housewives who previously did not have a fixed source of income.

And the local potential-based community empowerment model has been proven effective in various studies, including those conducted by Ristanti et al. (2025) and Rozikin et al. (2025). Both studies show that with a community-based approach and sustainable mentoring, people can be more independent in managing their businesses. In the context of this devotion, the results of the study show that although digital marketing has helped increase sales volume, further training in financial management and marketing strategies is still needed to support business sustainability.

This study also shows that there is a correlation between the active involvement of the community in local potential-based businesses and the improvement of economic welfare. This is reinforced by the research of Arianto et al. (2025) which highlights that intensive training and mentoring in product development can increase the economic independence of village communities.

e. Obstacles and Challenges in Implementation

Although this service program has shown positive results, there are still several obstacles that need to be overcome to increase the effectiveness of economic empowerment based on skipjack chili sauce. One of the main obstacles is the lack of digital literacy among MSME actors, which causes the implementation of online marketing strategies to still face challenges. Wahyudi et al. (2025) highlighted that the lack of training in the use of digital technology is the main obstacle for village communities in marketing their products widely.

Limited capital is also one of the challenges in developing this business. Abidin et al. (2025) showed that access to microcredit programs can help increase the production capacity and expansion of MSME-based businesses. In this study, capital limitations caused some participants to only be able to produce on a small scale, so there is still a need for intervention from financial institutions or capital assistance programs to increase their production capacity.

Fluctuations in raw material prices are another challenge faced by skipjack chili sauce business actors. Landangkasiang et al. (2017) show that the unstable price of skipjack fish can have an impact on uncertainty in fishery-based businesses. Therefore, in the context of this research, more effective raw material management strategies are needed, such as partnerships with local fishermen to get more stable prices.

This discussion can be concluded that the development of the skipjack chili sauce business has had a positive impact on improving the economy of the people of Gebangan Village. Through a quality management approach in production, innovative digital marketing strategies, and community empowerment based on local potential, this business has succeeded in creating new job opportunities and increasing people's income.

However, in order for this business to develop sustainably, further training is needed in the aspects of digital marketing, access to capital, and raw material management. With the support of the government, academics, and the private sector, this business model based on

skipjack chili sauce can be an example of successful local economic empowerment based on fishery resources that can be replicated in other regions.

5 Conclusion

This study confirms that the development of skipjack chili sauce in Gebangan Village through a Participatory Action Research (PAR) approach has significantly empowered the local community by improving product quality, strengthening digital marketing strategies, and increasing household income—particularly by creating new job opportunities for 15 housewives who previously had no stable income. Nevertheless, several weaknesses remain, such as limited business capital, fluctuations in raw material prices, and low levels of digital literacy among MSME actors, which hinder the scalability of this initiative. Therefore, it is recommended that future programs focus on providing financial support schemes, continuous digital and business management training, as well as government–academia–community collaborations to ensure sustainability. By addressing these challenges, skipjack chili sauce innovation can become a replicable model of fishery-based community empowerment for other coastal areas.

6 Acknowledgment

We would like to express our gratitude to the Institute for Research and Community Service (LPPM) of the Nurul Huda Peleyan Islamic Religious College, Kapongan, Situbondo, the village community as well as the Gebangan village apparatus for their cooperation and guidance so that this Community Service Training (LPM) activity can be completed on time as planned, Thank you for the group's work, namely: for all 20 Gebangan posts, namely: Azisi, M.Pd, Fathor Rosi, M.Pd.I, Daifatus sofiya, Nurul nikmah dan Sari Ananda Putri.

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