Analysis of Appropriate Marketing Strategies for Catfish Farming in Duren Mekar, Depok, West Java as a Contribution to Achieving SDGs for Poverty Alleviation and Increasing Welfare

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1. INTRODUCTION

The term sustainability was developed by Malthus in 1798. SDGs are a refinement of the Millennium Development Goals (MDGs). The MDGs agenda, which has not been achieved, will be continued in the form of achieving the SDGs until 2030. Seven
development agendas consist of (1) quality, fair, and sustainable economic growth, (2) reducing disparities by means of regional development, (3) quality human resources, (4) building revolutionary cultivation, (5) infrastructure in the economy, (6) environment, disaster resilience, and climate change, (7) stabilize political law and security (Bappenas, 2020).

Depok City is ranked 3rd on the Human Development Index of 81.37 and Depok City's GRDP growth rate in 2022 is 5.24% (BPS, 2023). This shows that the economic growth rate of Depok City is very high. Poverty in the 2020-2021 period due to the impact of COVID-19 is something that needs to be addressed by the government and the people of Depok City. Covid-19 increased from 0.38% to 2.45% in 2020 and increased again in 2021 from 0.13% to 2.58% (BPS, 2022). The COVID-19 pandemic has had an impact on the fisheries sector, resulting in the number of employees being reduced and working hours being limited (Arzaman et al., 2023). In West Java Province, poor people working in the agricultural sector are still quite large (15.82%) (BPS, 2022).

One way to overcome the problem of unemployment in Depok City is to implement effective steps that can create new opportunities for small businesses and increase household economic income (Doni et al. 2022). One way of reducing unemployment and increasing social welfare can be realized by supporting Micro, Small, and Medium Enterprises (MSMEs) (Faisal, 2021). There are several sectors in MSMEs, one of which is MSMEs in the agricultural sector. The agricultural sector, one of which is the fishing industry in Indonesia, has long been considered an industry that supports the national economy (Arida, 2019).

The business potential of Babakan Sebrang Village generally lies in cultivating fish seeds, where Ciseeng Regency is a center for fish cultivation (Suharna, 2023). Exports in the fisheries and marine sector require strategies such as optimizing marine resources for export activities, increasing cooperation, improving national fisheries management, empowering infrastructure, optimizing the national fish logistics system, and increasing the role of government (Mursit et al., 2022). Department of Food Security, Agriculture and Fisheries (DKP3) must contribute to making policies based on natural identification at the national level, increasing human resources training, the need for collaboration with the private sector to increase technological innovation (Setiyowati et al., 2022). In rural areas, the poverty rate is still considered relatively high (Abror et al., 2021).

The abundant harvest of catfish from every catfish cultivation farming group supported by the government and the private sector in the Duren Mekar Subdistrict has become a benefit for the local community. The production value of inland fisheries cultivation in Depok City in 2022 for still water ponds is 37.49 million, hatchery ponds are 10,247.25 million, and in Bojongsari sub-district it contributes to the number of still water pond fish of 9,732,410 million, hatchery ponds are 2,604. 853,700 million (BPS, 2023), catfish cultivation can also be done easily, simply, everyone can develop the business and earn income (Abror et al., 2021).

Aquaculture is a subsector that is directly related to the country's foreign exchange, food security and empowerment of small communities (Pramono et al., 2022). Communities starting to cultivate fish are a factor in increasing the role of the fisheries sector (Ajmalad et al.,
The local government's contribution to regional economic growth with training policies and assistance to fish cultivators has had an influence on increasing the ability of the local workforce thereby reducing the unemployment rate (Hasan & Azis, 2018). Marketing to increase income must be carried out effectively and efficiently so that the welfare of catfish farmers can increase (Latiffah, 2020).

Based on the identification of the phenomenon above, the researcher formulated the problem as follows: (1). How does catfish cultivation contribute to achieving the SDGs? (2). What are the external and internal conditions of catfish cultivation in Duren Mekar Village, Bojongsari District, Depok City? and (3). How is the marketing strategy analysis for catfish cultivation in Duren Mekar Village, Bojongsari District, Depok City?

2. LITERATURE REVIEW

2.1. Sustainable Development Goals (SDGs)

Sustainable Development Goals (SDGs) are a series of goals set by the United Nations (UN) to achieve sustainable development by 2030. SDGs aim to overcome various global challenges, including poverty, hunger, health, education, gender equality, clean water, sanitation, clean energy, economic growth, inequality, social justice, and environmental protection. In 2015, the UN adopted the 2030 Agenda for Sustainable Development, which consists of 17 Sustainable Development Goals and 169 specific targets that outline global efforts to achieve sustainable economic, social, and environmental development. The following is a list of 17 SDGs: (1) No more poverty; (2) Not hungry; (3) Healthy and prosperous life; (4) Quality of education; (5) gender equality; (6) Clean water and adequate sanitation; (7) Clean and affordable energy; (8) Employment and sustainable economic growth; (9) Industry, innovation and infrastructure; (10) Reducing inequality; (11) Sustainable cities and settlements; (12) Responsible consumption and production; (13) Climate change management; (14) Marine ecosystem; (15) Land ecosystem; (16) Peace, justice and strong institutions; and (17) Collaboration to achieve goals (Bappenas, 2020).

2.2. Marketing

According to David (2017), marketing is the process of identifying, anticipating, creating, and satisfying consumer needs for products and services. Marketing is carried out to increase sales profits, and provide maximum satisfaction to customers and the desire to dominate the market (Azzahra et al., 2020). Marketing strategy is the conceptual heart of the strategic marketing field which continues to change and a business must be able to respond to it so that the right marketing design is created (Firmansyah et al., 2023; Setiyowati et al., 2018).

2.3. Catfish Cultivation

Catfish cultivation is a type of business that is easy to run because it has a fairly low level of risk (Rahmawati et al., 2020). Business performance is supported by the entrepreneur himself. This performance is measured by several things, including age, farming experience, and education level (Latiffah, 2020).
3. RESEARCH METHOD

This research uses a qualitative method with a SWOT analysis approach and the AHP method. SWOT analysis is used to identify the strengths, weaknesses, opportunities, and threats of a business to analyze catfish farming marketing strategies. The AHP method is used to help analyze and describe the problem of determining priority decisions on marketing strategies for catfish cultivation. The informants chosen for this in-depth interview were 7 people and the data obtained. Namely, the Head of the Depok City Fish Seed Center (BBI) knows the condition of information both during the pandemic and post-pandemic regarding the general condition of government and private catfish businesses. Chairman of the Mainstay Farmer Fisherman Contact (KTNA) Depok City as a practitioner resource person who has an important role in agricultural development to improve the quality of human resources, increase production and income, as well as the welfare of farmers. Chairman of the Independent Marine and Fisheries Training Center (P2MKP) Depok City provides various training activities for developing human resources in the marine and fisheries sector. Chairman of the Pokdakan or Fish Cultivation Group and private catfish entrepreneurs as samples in the analysis of marketing strategies for catfish businesses.

3.1. Research Area

The research was conducted in Bojongsari District, Depok City, West Java Province, because this area is known as a center for cultivating food fish, especially catfish. Many agricultural business actors cultivate catfish as their main source of income to meet their basic needs.

3.2. Research Design

These interviews and observations were recorded using a digital voice recorder and then transcribed into a Microsoft Word document. Next, a SWOT analysis was used to identify the marketing of catfish in Duren Mekar Village, Bojongsari District, Depok City. The data obtained from the SWOT analysis was re-identified to represent appropriate alternative marketing strategies using the Analytical Hierarchy Process (AHP) method using Expert Choice 11 Software.
4. RESULTS AND DISCUSSION

4.1. Contribution to achieving SDGs

The basic principle of regional economic development is the development of the regional economy and the formulation of regional development management that is friendly to the business world. The amount of unused land can be utilized as a source of income and employment in rural areas (Hasan et al., 2018).

The fisheries sector has a role in improving the economy. Aquaculture is a subsector that is directly related to the country’s foreign exchange, food security and empowerment of small communities (Pramono et al., 2022). Communities starting to cultivate fish are a factor in increasing the role of the fisheries sector (Ajmala et al., 2023).

In 2022, the open unemployment rate in the city of Depok will be 7.82% of a total of 2.12 million people consisting of 50.45% men and 49.55% women (BPS, 2023). Catfish cultivation provides a solution to help reduce unemployment and improve the economy, especially in the Duren Mekar sub-district, Depok City. Every community can open a business with limited capital without having to think about large areas of land. People do not have to have higher education to be able to carry out catfish farming.

Community empowerment is an important effort to empower a group that is vulnerable to poverty (Habib, 2021). The local government’s contribution to regional economic growth with training policies and assistance to fish cultivators has influenced increasing the ability of the local workforce (Hasan et al., 2018). So, this can be a benchmark for success in supporting SDGs 1 and 8 by reducing poverty rates, creating jobs, and sustainable economic growth, especially in Duren Mekar Village.

4.2. Internal and External Conditions in Catfish Farming Using SWOT Analysis

The following is a summary of the SWOT strategy based on the results of the interviews that have been conducted.

![Figure 2 SWOT Analysis Results](image)

Based on the results of interviews with informants, among others: (1) **Strengths** in cultivating catfish include, S1 which means the potential of the region and resources or workforce can come from non-academic circles, S2 meaning Catfish can be made into various kinds of preparations, S3 which means the capital for a catfish cultivation business is relatively small, S4 which means ease of cultivating catfish and obtaining quality feed. (2) **Weaknesses** in cultivating catfish include W1 which means not yet able to make sales via e-commerce, W2, which means there is no fish consumption...
cooperative, (3) **Opportunities** in catfish cultivation include, O1 which means fellow catfish farmers work together to provide catfish stocks, which means O2 the government provides training and assistance, O3 which means ease in obtaining business permits, O4 which means a large market for catfish, (4) **Threats** in catfish farming include, T1 which means the risk of the impact of the Covid-19 pandemic, T2 which means the weather is often unpredictable, T3 which means high feed prices.

### 4.3. Marketing Strategy Analysis in Catfish Cultivation Using AHP Analysis

The hierarchy is arranged into 4 priority levels of importance for focus, strategic alternatives, and sub-hierarchies. The AHP hierarchy process can be seen in:

![Figure 3 Process Hierarchy](image)

The following are the results of the analysis of strategic priorities for cultivating catfish using the AHP method:

![Figure 4 AHP Analysis Results](image)

Based on the picture above, the overall combined results reach a CR value of 0.02%. This means that the response from each source is consistent or saturated. Priority strategies that have the highest importance include:
ST2 which means maintaining quality and caring for catfish with a weight of 0.197. So, product development strategy is considered the most important in the marketing strategy of catfish cultivation farming businesses. Good quality in terms of color, taste, and shape, providing service to customer satisfaction. Product quality is a condition that is directly related to a product (Yanti et al., 2021). WT2 which means building a network with local agencies and residents with a weight of 0.159. Network factors create pressure and support that influence the marketing scope of a business (Dian et al., 2022; Febriarta, 2023; Mukhsin et al., 2018). So, market development strategy is also considered important. WT1 which means increasing the consumption of fish cooperative programs with a weight of 0.157. So backward integration strategy has an important role. A backward integration strategy is implemented when the catfish feed supplier is too expensive or cannot be trusted and when stable catfish price profits are important. The total number of cooperatives in Bojongsari District, Depok City is 10, but there are no consumer fish cooperatives yet (BPS, 2023). SO3 which means building cooperation with Poklasar and food businesses with a weight result of 0.095. So the market development strategy influences the marketing of catfish. Catfish farming practitioners can collaborate with fish collectors and wholesalers to increase market reach (Suharyati et al., 2022). Processing marketing groups can increase business income by catching or cultivating fish through reprocessing (Jubaedah et al., 2022). WO3 which means making innovations in semi-finished catfish products that are sold via e-commerce with a weight of 0.081. This means a diversification strategy by adding new related products is expected to increase sales figures (David, 2017). Not only sell unprocessed catfish, but you can innovate new products such as catfish fillets to increase selling prices. ST3 which means making brochures at the point of sale with a weight of 0.083. This means that market development strategy also plays a role in marketing catfish. Brochures are very effective for clear and accurate marketing media (Hadi et al., 2021; Nashihuddin et al., 2021; Sidantara et al., 2023). WO1 which means optimizing promotions through placing banners at locations or social media with a weight of 0.060. Market development strategy also plays a role in marketing catfish. Through social media, you can reach markets that are not yet used or not yet full. The proliferation of social media has become a good and relatively cheap marketing opportunity that can increase sales revenue (Aisyah et al., 2022; Mubarokah et al., 2022). SO2 which means innovating finished product processing to increase selling prices with a weight of 0.059. A diversification strategy can be used as a marketing strategy to add the selling value of a product. The problems faced by catfish farmers, both government and private, include the relatively low price of catfish, but the production costs or feed costs for catfish are high (Masrufah et al., 2021). WT3 which means opening an ornamental fish business in order to increase income with a weight of 0.047. Unrelated strategies in marketing catfish farming have a less significant impact on the income of catfish farming practitioners. During the Covid-19 pandemic, catfish can still develop and even become a business opportunity. Cultivating catfish in buckets is considered to provide economic value, not just filling free time because you are staying at home due to the impact of the COVID-19 pandemic (Harahap et al., 2022). The diversification of products means that fish commodities remain popular with local communities. SO1 which means optimizing training and assistance from the department for catfish cultivation with a weight result of 0.036. Product development strategy plays a role in marketing because of the ability of catfish farming to research and develop. So that training and assistance programs can improve the economy of local communities
Analysis of Appropriate Marketing Strategies for Catfish Farming in Duren Mekar, Depok, West Java as a Contribution to Achieving SDGs for Poverty Alleviation and Increasing Welfare (Pramono et al., 2022). WO2 which means optimizing marketing training through e-commerce for catfish products with a weight of 0.34. In this casemarket development strategy provides alternative marketing strategies to reach a wider market through e-commerce. The sale of animals that live in water can be carried out with the applicable provisions, such as using plastic bags and Styrofoam boxes on the outside of the package, using Instant or Same Day services, maximum water volume is 50% of the plastic bag capacity, animals sold are small in size and not dangerous (Shopee, 2022). ST1 which means using alternative feed, for example, worms with a weight of 0.12. In this case, a backward integration strategy is considered important when raw materials or catfish feed are too expensive. The average growth rate of fish fed natural feed in the form of silkworms was 1.4 grams, while the average growth rate of fish fed a combination of silkworms and artificial feed was 0.99 grams and 0.74 grams (Anugrah, 2020). Worm alternatives cannot cut overall operational costs considering the expensive price of worms. Mr. Jelani as the resource person in this research said:

"The use of alternative food with worms is considered ineffective because the price of worms is more expensive than the price of pelleted food, but in terms of the quality of the catfish produced, a combination of alternative food in the form of worms and pellets can produce better quality catfish."

The results of this research are in line with the results of research conducted by: 1). Amnah (2023), Mursit (2022), and Setiyowati (2022) regarding the analysis of SO1, WO2, WT2, and SO3. 2). Faradilla et al., (2022) and Wahyuningsih et al., (2022) regarding SO2 dan WO3. 3). Rahmaditya (2018) and Reza (2023) regarding WO1. 4). Irwanto et al., (2021) regarding ST1. 5). Suharna (2023) regarding ST2. (Hermawansyah (2023) and Saputri et al., (2023) regarding ST3. 6). (Latianingsih (2020) dan Yuniarti (2022) regarding WT1. 7). (Kurniawan (2021) regarding WT3 analysis.

5. CONCLUSION

5.1 Conclusion

The sustainability of the catfish cultivation business has a positive impact on improving the economy, reducing poverty, and creating jobs, in line with Sustainable Development Goals (SDGs) 1 and 8. There are strengths regarding the ease of cultivating catfish and supporting regional conditions. High market opportunities, low competition, and government policy support thus supporting economic sustainability. Meanwhile, the threat of catfish cultivation regarding high feed prices tends to be the focus so that operational activities can run smoothly. There are weaknesses regarding knowledge about online marketing. Alternative catfish marketing focuses on improving the quality of catfish, innovating and expanding marketing networks through social media supported by the existence of consumer fish cooperatives.

Due to the author's limitations, this research was only carried out in the Duren Mekar sub-district so there was still a lack of more objective decision-making. It is hoped that future researchers can continue and perfect this research, especially in SWOT analysis and marketing regarding catfish cultivation.
As for suggestions that can be given regarding this research, the government should provide funding assistance to catfish cultivation businesses, especially those supported by the government, either directly or with easy access to capital through banks or non-bank financial institutions, such as cooperatives to reduce 70% of the high cost of catfish feed.

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