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Fish Farming Business Management Strategy Using the Business Model Canvas Method: An Islamic Economics Perspective

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ABSTRACT

This study aims to analyze the management strategy of a fish farming business using the Business Model Canvas (BMC) approach and to review its practices from an Islamic economic perspective in Tanjung Rejo Village, Percut Sei Tuan District. The research employs a descriptive qualitative method, with data collected through interviews, observation, and documentation. As a novel contribution, this study integrates BMC and Islamic economics to provide a comprehensive analytical framework that connects business efficiency with ethical values. The findings indicate that while the existing BMC management is functional, there are significant weaknesses in the customer segments and distribution channels, leading to a strong dependence on middlemen (tengkulak). From an Islamic economics perspective, principles of justice, honesty, and social solidarity (tafakul ijtimāʿī) have been applied, but the primary challenge lies in the financing practices, which have the potential for riba. In conclusion, this research suggests that optimizing the business model and transitioning to equitable sharia financing are key to the sustainable development of the fish farming business. The practical implications of this study recommend diversifying products and markets, strengthening local partnerships like cooperatives, and providing access to sharia-compliant capital to support the independence of the fish farmers.

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Introduction

Business management strategy is a fundamental foundation for achieving long-term goals and ensuring efficiency, effectiveness, and sustainability of organizational operations [1] [2] [3]. Strategies are designed to create competitive advantages through approaches that align with the structure and systems of each business actor [4] [5]. In Islam, business activities are not only oriented toward material profit but also emphasize ethical values and blessings [6]. This is in line with the prohibition of unjust trade [7][8], which serves as the basis for business management that upholds honesty, justice, and social responsibility [9]. As a country with a Muslim-majority population, the application of Islamic economic principles is highly relevant, including in the fisheries sector in Tanjung Rejo Village, Percut Sei Tuan District, Deli Serdang Regency. This area has great potential for the development of brackish water aquaculture, with more than 40 active pond owners managing land ranging from 0.5 to 5 hectares. Data from the Fisheries Office of Deli Serdang Regency [10] in 2023 recorded that brackish water aquaculture production in Percut Sei Tuan District reached 1,944.54 tons for traditional ponds and 15.07 tons for semi-intensive ponds. These figures indicate significant economic potential in the area.

Despite this potential, field observations reveal various obstacles that hinder the stability and growth of fish farming businesses. Based on observations and interviews, farmers often face problems affecting yields and income, such as poor water quality, pest and disease outbreaks, the impacts of climate change such as flooding, and limited diversification of marketing channels. The main limiting factor is dependency on middlemen (capital providers). Findings show that most farmers still rely on loans from middlemen for operational capital. This practice is burdensome because the selling price of harvests is entirely determined by the middlemen. Furthermore, farmers' income is unstable

since, in each harvest period, on average 30% of yields are deducted due to seed mortality risk and 20% for harvesting costs, significantly reducing net income. A previous study by Gultom et al., [11] on farmers in the same area showed that capital contributed the largest share, 48.5%, to their income. This situation creates a gap between the high economic potential and the reality of unfair and suboptimal business management.

To address these issues, a structured and adaptive approach is required. This study employs the Business Model Canvas (BMC) as an analytical framework, which has been proven effective in mapping key business elements [12] [13]. Anggraini [14] explained that BMC functions as a tool to identify and describe existing business strategies, serving as a basis for developing new strategies. The application of BMC has also contributed to improving operational efficiency, as well as encouraging innovation and competitiveness in businesses [15] [16]. Although the Business Model Canvas (BMC) has been widely applied in various studies, comprehensive integration between BMC and Islamic economic perspectives in the fisheries sector remains scarce. Previous studies tended to focus only on one aspect. For example, studies on catfish farming by Nababan et al. [17], fish canning businesses by Annisa et al. [18] and the KNM Fish Farm case study by Solihah et al. [19] mainly emphasized business efficiency, marketing strategies, and operations. These studies did not address the alignment of business models with Islamic principles or explore sharia-based financing solutions.

Several studies have integrated BMC with Islamic economics, but they generally focused on other sectors, such as screen-printing businesses by Saputro [20] or hijab businesses by Mufti Afif et al. [21], which face different challenges and financing models compared to aquaculture businesses. Therefore, the novelty of this research lies in the comprehensive integration of the Business Model Canvas (BMC) and Islamic economic perspectives in analyzing and formulating aquaculture business management strategies. This study is unique not only in terms of methodological approach but also in its specific case study of Tanjung Rejo Village, which faces distinct challenges related to financing and distribution. The research is expected to make a significant contribution by formulating development strategies that are not only economically effective but also aligned with the

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principles of justice and blessings in Islam, thereby providing a fair and sustainable business model for fish farmers.

Method

This study employed a qualitative method with a case study approach, aiming to analyze fish farming business management strategies from an Islamic economic perspective using the Business Model Canvas (BMC) framework in Tanjung Rejo Village. The case study approach was chosen because it allows researchers to conduct an in-depth, holistic, and contextual investigation of specific and complex contemporary phenomena [22]. This method is highly relevant to the study, as the objective is not to generalize but to thoroughly understand the unique fish farming management practices in Tanjung Rejo Village. According to Sugiyono [23], the qualitative method is used to examine natural conditions of research objects, where the researcher acts as the key instrument, seeks to build rapport with informants to obtain in-depth and authentic data, applies triangulation (combined) data collection techniques, conducts inductive data analysis, and produces descriptive and interpretive findings.

The research site was Tanjung Rejo Village, Percut Sei Tuan District, Deli Serdang Regency, North Sumatra Province. The research subjects consisted of fish pond owners or managers in the area, selected through purposive sampling based on criteria of representative business scale and experience in fish pond management. Subjects were chosen until data saturation was reached, resulting in a total of 11 informants. These 11 informants included: Mr. Slamet, the Village Head; eight fish pond entrepreneurs, namely Mr. Prayetno, Mr. Hermawan, Mr. Mahmud, Mr. Purba, Mr. Mimin, Mr. Tambunan (a retired military officer), Mr. Mulyanto, and Mr. Awi; as well as two pond workers/employees, namely Mr. Yono and Mr. Wan.

Data collection techniques included semi-structured in-depth interviews, covering questions related to the nine BMC elements as well as the understanding and application of

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Islamic economic principles in fish farming management. The BMC framework was operationalized as an interview guide to systematically explore information, where each element (e.g., Customer Segments, Value Propositions, Revenue Streams, and Key Partnerships) became the focus of questions to obtain a comprehensive overview of the business model. In addition, non-participant observations of fish farming operations and documentation related to the business were also conducted. Data analysis was carried out qualitatively through stages of data reduction, data presentation, and conclusion drawing [24]. The BMC framework and Islamic economic principles were used as analytical lenses, and source triangulation was applied to ensure data validity.

Results and Discussion

Fish Farming Management Process in Tanjung Rejo Village

Fish pond aquaculture is the primary activity supporting the economy of Tanjung Rejo Village, Percut Sei Tuan District. This activity involves a series of technical stages, from land preparation to marketing, with the aim of improving productivity and business sustainability.

Pond Land Preparation

The initial stage begins with preparing land with an average size of 20 × 30 meters and a depth of about 1.5 meters. After excavation, the land is dried for two weeks to eliminate harmful organisms [25]. If the soil remains moist, farmers use Samponen poison to eradicate pests and diseases. Liming with agricultural lime is then applied to stabilize soil pH and kill pathogens such as viruses, bacteria, and fungi. This is followed by fertilization using manure and biofertilizers (GDM Black BOS) to stimulate plankton growth as natural feed. Once the soil is considered sterile and fertile, water is introduced into the pond up to a depth of 1-1.2 meters and left for one month to allow natural microorganisms to grow. Maintenance of land surrounding the pond is also crucial to maintain cleanliness and prevent weeds or predator nests. This is typically done at least once a year by hiring cleaning services at around IDR

1,000 per meter. Periodic dredging of the pond bottom is carried out every 3-4 years using heavy equipment, costing around IDR 20,000,000, to prevent sedimentation.

Fish Stocking

The main fish species stocked include tilapia, milkfish, carp, and pomfret, with tilapia as the primary commodity due to strong market demand and relatively stable selling prices. Milkfish is also preferred for its economic value and its active swimming behavior, which helps oxygenate the pond. Crabs and shrimp are cultivated in smaller quantities. Seed sizes range from 0.6-1 inch and are placed in adaptation ponds for 3-4 weeks to adjust to pond temperature and water conditions. A standard pond can accommodate 3,000-4,800 fish seeds, depending on the species and cultivation system. Seeds are sourced from outside the region. Prices range from IDR 50-100 per tilapia or milkfish seed, carp and pomfret seeds at around IDR 200 each, crab seeds at IDR 1,000–1,200 each, and shrimp at IDR 30-50 each. High quality seeds uniform in size/color, agile, and free of wounds or defects are crucial for survival. As emphasized by Hutauruk et al. [26], the selection of superior seeds is a key determinant of aquaculture success. Selling prices are around IDR 18,000/kg for tilapia and milkfish when sold to middlemen, or IDR 20,000/kg for fishing activities. Carp sell for IDR 40,000/kg, pomfret for IDR 50,000/kg, crabs for IDR 60,000-80,000/kg, and shrimp for IDR 40,000-60,000/kg.

Feeding

The main feed consists of pellets, given 2–3 times daily during the first two months. Feeding frequency is then reduced as natural feed such as plankton and algae become available. Some farmers use sugar and yeast fermentation mixtures to accelerate algae growth before stocking, aiming to reduce operational costs. Retail pellet prices range from IDR 10,000–12,000/kg, though farmers usually purchase in bulk (20–30 kg sacks) at slightly lower prices. Alternative feed such as rice bran is also used, being more affordable at IDR

2,000–3,000/kg, though of lower quality. Rising pellet costs remain a challenge. Feed efficiency is critical to profitability and can be achieved through various strategies. According to Hermawan [27], one approach is reducing production costs by utilizing local and alternative feeds. Meanwhile, Gilang Rhamadhan [28] highlighted that high-quality feed significantly improves yields and productivity.

Water Quality Management

Water management is vital for fish health. Water flow is maintained to improve oxygen levels [29]. As noted by Mr. Hermawan (fish farmer, 2025), "milkfish are often cultivated together because their active swimming creates splashes that help oxygenate pond surfaces naturally". However, river pollution from household and industrial waste poses a major challenge, often requiring farmers to close water gates or completely replace pond water. Water quality monitoring is rarely conducted due to limited equipment. Nurussalam et al. [30] argue that water quality monitoring and technological innovations, such as sensors and natural biofilters, can improve aquaculture efficiency.

Pest and Disease Control

Common pests include birds, snakes, and insects. Prevention is carried out early through poisoning and visual monitoring. However, not all farmers apply integrated pest control systems such as protective nets or automated repellents, which could enhance efficiency and reduce losses. Diseases such as Aeromonas infections and fungal outbreaks have been found, but medical treatment is limited due to lack of knowledge. Cahyani & Irawan [31] demonstrated that technology-based pest control systems can significantly reduce pest populations and harvest losses.

Harvesting

Harvesting takes place after 3-4 months of cultivation. Tilapia are harvested at 200–300 grams each, while milkfish can be harvested at larger sizes for higher selling value.

Harvesting methods include netting or draining ponds naturally. Timing is often aligned with festive seasons such as Eid or Christmas, when demand and prices are higher. Nevertheless, price fluctuations remain a difficult to control risk. Similar findings were reported by Ovan Krisadelman Zebua et al. [32] and Burhan et al. [33], showing that price fluctuations in food commodities are influenced by seasonal demand, production, and supply availability.

Post Harvest and Marketing

The harvested fish are marketed through two main channels. First, before being sold to middlemen, fish farmers open the ponds for a public fishing system, allowing the community to directly catch fish on site. This fishing system is divided into two types. The first is the weight-based system. In this scheme, the fish caught by anglers are purchased based on weight, at approximately IDR 20,000 per kilogram. There are no restrictions on fishing time, number of anglers, or the type of fishing rods used, since the primary objective of the farmers is to sell as many fish as possible to the anglers. The more fish caught, the closer the pond owners are to achieving their sales targets.

The second is the daily rental system. In this arrangement, anglers are given a fixed time, usually between 10 to 12 hours, after paying an upfront fee of around IDR 150,000. Regardless of the quantity of fish caught, no additional payment is required. However, certain rules must be followed: anglers may not use more than three rods, may not employ the “santet” method (a single rod with two or more hooks), and are prohibited from using net-based fishing tools. This system provides added value, as the fish are essentially sold at a higher unit price. In practice, pond owners generally adopt one of these fishing systems. Second, farmers sell harvests directly to middlemen. Although the selling price is lower, at around IDR 18,000 per kilogram, this method is chosen for its practicality and speed. This marketing strategy reflects farmers’ efforts to secure sales despite price variability. Similar findings were reported by Rahmah Rahmah et al. [34] in Sei Ijum Raya Village, showing that marketing strategies through collectors and local markets still generate profits for farmers.

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Overall, although fish farming management in Tanjung Rejo Village has been practiced for generations, several fundamental weaknesses have been identified that affect productivity and business sustainability. Dependence on traditional methods, limited use of technology, and lack of systematic quality control in farming processes (such as water quality monitoring and pest/disease management) make these businesses vulnerable to external risks and losses.

Discussion

Identification of the Current Business Model (Business Model Canvas Analysis) in Tanjung Rejo Village

The initial business model of fish farming in Tanjung Rejo Village in 2025 can be analyzed using the Business Model Canvas (BMC) framework developed by Osterwalder and Pigneur. The BMC consists of nine key elements that explain how a business creates, delivers, and captures value [12]. Applying the BMC to fish farming allows for an understanding of the interconnections between customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. The use of the BMC is highly relevant for fish farming in Tanjung Rejo Village, as it facilitates a comprehensive understanding of business operations and helps identify potential areas for improvement [35].

From the perspective of customer segments, fish farming businesses in Tanjung Rejo Village serve two main groups with distinct characteristics. The first is middlemen, who purchase fish in bulk and subsequently distribute them to traditional markets or end consumers. The second segment includes local anglers and tourists who visit the ponds for recreational fishing activities. The value propositions offered by the farmers differ across segments. For middlemen, the main value lies in the provision of fresh fish, especially tilapia and milkfish, in large quantities at relatively competitive prices. For anglers, the value offered is not only the fish they catch but also the recreational experience of fishing in a natural environment at an affordable cost with easy access. As stated by Mr. Prayetno (farmer informant, 2025), “Customer trust is built on the quality of the fish, which are raised

without preservatives and fed naturally. Moreover, the direct fishing experience at the ponds provides a unique enjoyment, especially during holidays or weekends." Some farmers also adopt semi-intensive aquaculture systems, which support the availability of high quality fish.

To deliver these values, farmers employ different distribution channels. For middlemen, distribution is carried out through direct sales at the pond site, with communication typically conducted via WhatsApp to provide information about harvest schedules. For anglers, distribution channels are more informal, with information on fishing availability shared through notice boards near the ponds or by word of mouth among community members. Customer relationships also vary across segments. With middlemen, relationships are more professional and transactional, built on trust, supply continuity, and price stability. With anglers, relationships are more personal and friendly, established through direct service and transparency about fishing systems and fees. In terms of revenue streams, the primary source comes from fish sales to middlemen. Additional income is generated from paid fishing activities, either through weight-based payments or daily rental fees. Further revenue is obtained from food and beverage stalls around the ponds, small scale livestock such as chickens or goats, and the sale of organic fertilizer made from pond waste.

The business is supported by several key resources. Physically, resources include pond land, river water access, fish seeds, feed, aquaculture equipment, and simple supporting facilities. Human resources consist of pond owners, family members, and daily laborers. Financial capital is crucial for purchasing seeds, feed, and covering operational expenses. Furthermore, knowledge and experience in aquaculture, passed down through generations, serve as valuable intellectual assets that not only provide practical skills but also preserve local traditions in fish farming. The key activities involve pond preparation, seed stocking, feeding, water quality management, pest and disease control, and harvesting. Post-harvest activities include marketing and distribution. Additionally, recreational fishing activities are part of the core business. To support these activities, farmers rely on key partnerships. Seed and feed suppliers, most of whom come from outside the village, play a crucial role as input availability directly affects farming success. Middlemen also act as vital distribution

partners, as without them the harvested fish would struggle to reach the market. All these elements are directly linked to the cost structure. Fixed costs include land rental and maintenance, wages for permanent and temporary workers, and pond maintenance. Variable costs consist of seed purchases, feed, medicines, and other daily necessities. Initial investments, such as pond construction and equipment purchases, also represent significant expenditures that must be considered for the long term.

Thus, the nine elements of the BMC in fish farming in Tanjung Rejo Village are interconnected. Diverse customer segments determine the value propositions, which are delivered through specific distribution channels. Customer relationships influence revenue streams, all of which are supported by key resources, core activities, and strategic partnerships, ultimately shaping the cost structure. A comprehensive understanding of the relationships among these elements provides a solid foundation for developing new strategies to enhance the competitiveness of fish farming businesses in the future.

Problem Analysis of Fish Farming Business in Tanjung Rejo Village Using the Business Model Canvas Approach

Based on the mapping of the Business Model Canvas (BMC) applied to fish farming businesses in Tanjung Rejo Village, several fundamental weaknesses were identified. The most critical weakness lies in the farmers' full dependency on middlemen, who hold dominant control over pricing and distribution channels. Such a partnership model creates a power imbalance, as although middlemen often serve as both financiers and guarantors of market absorption, the bargaining power of farmers remains weak. Prices are unilaterally determined, and a significant portion of harvest revenue is deducted on average, 30% for seed mortality risk and 20% for harvest labor costs thus reducing net income. This issue is further reinforced by the lack of diversification in both customer segments and distribution channels. Currently, customers are limited to middlemen and local anglers, making the business highly vulnerable to market price fluctuations and demand uncertainty. At the same time, distribution channels remain confined to direct sales at pond sites or informal communication among local residents, without the use of digital platforms or partnerships with potential consumers such as restaurants, hotels, or online buyers. This finding aligns

with Silalahi et al. [36], who emphasized that limited utilization of digital channels weakens the competitiveness of small and medium enterprises. Similarly, Susanti et al. [37], in their study of Siger Roemah Batik using the BMC approach, demonstrated that insufficient use of digital platforms constrains business competitiveness and growth.

Moreover, the value propositions and distribution channels of fish farming businesses remain limited to basic advantages, such as providing fresh fish, without stronger differentiation or more advanced distribution processes. In their study, Dhiya et al. [38] confirmed that the strategic use of social media has proven effective for SMEs in overcoming the limitations of traditional promotion. Core activities also remain confined to conventional aquaculture practices, from seed stocking to harvesting, without additional value-added development such as fish product processing or integration with educational tourism. These limitations create a significant gap between the vast potential of Tanjung Rejo Village and the reality of a business model that remains simple and dependent on a single primary income source. Overall, these conditions highlight the existence of a gap between the region's high economic potential and the vulnerable, less competitive business model of fish farming. Dependence on middlemen, limited customer diversification, weak value propositions, and underdeveloped distribution channels emerge as the key factors constraining business development.

Fish Farming Business Management Strategy in Tanjung Rejo Village Using the Business Model Canvas Approach

The strategies that can be applied to fish farming businesses in Tanjung Rejo Village encompass several essential aspects of business management. In the customer segment block, fish farmers need to expand their market by not only relying on middlemen but also targeting direct consumers, restaurants, and modern markets to increase sales value. Regarding value propositions, differentiation strategies may be implemented by emphasizing the freshness and safety of fish, for example through certification or product branding based on environmentally friendly practices. For distribution channels, the

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adoption of digital technology such as social media and e-commerce platforms becomes crucial, enabling products to reach a broader market without depending solely on middlemen or traditional distribution channels [39]. This aligns with findings from previous studies indicating that e-commerce adoption significantly supports small enterprises in expanding sales and marketing, thus strengthening competitiveness [40] [41]. In terms of customer relationships, fish farms are advised to build more intensive communication with customers through loyalty programs and maintain trust through consistent quality.

Furthermore, for revenue streams, diversification can be achieved by developing additional services such as aquaculture-based educational tourism or producing processed fish products, ensuring that income is not solely dependent on fresh fish sales. Regarding key resources, strategies include enhancing farmers' human resource capacity through training, optimizing land utilization, and adopting better water management technologies [42]. For key activities, modern and sustainable aquaculture practices such as biofloc or semi-intensive systems may be implemented to increase yields. In terms of key partnerships, collaborations with local government, Islamic financial institutions, as well as cooperatives or farmer groups will strengthen access to capital, technology, and marketing networks. Finally, regarding cost structure, efficiency strategies can be realized through more effective feed management and optimal resource utilization to reduce operational costs.

Based on the analysis of each BMC element in the fish farming business of Tanjung Rejo Village, the strategies can be mapped into the nine blocks of the Business Model Canvas, as presented in Table 1.

Table 1. Business Model Canvas Framework for Fish Farming in Tanjung Rejo Village

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer segments
Fish seed suppliers	Fish cultivation	Fresh fish with assured quality and large supply	Business relationship with middlemen	Middlemen (wholesale buyers)
Feed suppliers	Harvesting and distribution	Recreational fishing experience at the pond site	Friendly service with anglers	Local anglers/tourists

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Middlemen	Managing fishing ponds			
Strategic Recommendations:	**Strategic Recommendations:**	**Strategic Recommendations:**	**Strategic Recommendations:**	**Strategic Recommendations:**
Strategic collaboration with cooperatives/farmer groups, delivery services, local government, and Islamic financial institutions	Adoption of modern aquaculture systems (biofloc/semi-intensive)	Differentiated value through processed products (smoked fish, shredded fish)	Intensive communication (WhatsApp)	Expanding to direct consumers (restaurants, modern markets) and digital platforms
	Product development and digital marketing	Offering educational tourism	Customer loyalty programs	

	Key Resources	***Channels***
	Physical assets (ponds, equipment), fish seed, feed, labor, and financial capital	Direct sales at pond sites
	Traditional knowledge	Informal communication (WhatsApp, bulletin boards)
	Strategic Recommendations:	**Strategic Recommendations:**
	Capacity building through training	Adoption of digital technology (social media, e-commerce) to broaden market reach

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	Adoption of aquaculture and water management technology
Cost Structure	***Revenue Streams***
High operational costs	Fish sales to middlemen
Inefficient cost recording Fishing fees	Fishing fees
	Sales of food and beverages
Strategic Recommendations:	**Strategic Recommendations:**
Efficiency through feed management and structured financial recording	Revenue diversification through processed products and additional services (educational tourism)

Source: Author's elaboration, 2025

Fish Farming Business Management Strategy in Tanjung Rejo Village from an Islamic Economic Perspective

Islamic economics is an economic system based on Sharia, derived from the Qur'an and Sunnah. This system emphasizes not only material profit but also upholds ethical values such as justice (ʿadl), balance (mīzān), responsible free will (ikhtiyār), and social solidarity (tafākul ijtimāʿī) [43]. Moreover, Islamic economics prohibits practices of riba, gharar, and maisir in business activities, which serve as ethical foundations for every transaction. The ultimate goal of all principles and practices in Islamic economics is the achievement of falah, namely true and comprehensive prosperity, encompassing happiness in both this world and the hereafter. Falah is not limited to material welfare but also includes spiritual, moral, and ethical dimensions [44]. The management of fish farming in Tanjung Rejo Village has, in practice, reflected several values of Islamic economics, although it has not fully implemented Sharia principles formally. In daily activities, there are various forms of profit-sharing cooperation, as well as transactions based on honesty, fairness, and concern for the surrounding community.

One form of cooperation applied between pond owners and workers is the wage system. Based on field observations, two common systems are used. First, monthly wages ranging from IDR 2,400,000 to IDR 3,600,000 for permanent workers and daily wages ranging from IDR 100,000 to IDR 150,000 for casual laborers. Second, a profit-sharing system with ratios of (25%:75% or 30%:70%), where workers receive a portion of the net harvest, while operational capital is borne by the pond owner. This model substantially resembles the mudharabah contract (profit-sharing between capital owners and managers) or musaqah (land cultivation partnership), reflecting the spirit of fair and proportional profit sharing in line with Sharia principles [45]. The principle of responsible free will (ikhtiyār) is also evident in how fish farmers exercise autonomy in making operational and strategic decisions, such as choosing fish species, determining farming systems (traditional/semi-intensive), and initial marketing strategies. This freedom allows them to innovate and adapt to market or environmental conditions, as long as it does not harm others and remains in accordance with local values [46]. This becomes an essential capital for business development.

However, observations also show that most fish farmers still rely on loans from middlemen (tengkulak) to finance their operations. In some cases, these loans are burdensome because the selling price of harvests is later determined by the lender (middleman). Such practices reveal elements of injustice and potential resemblance to riba, as they burden farmers with risks while eliminating their free will. A concrete example is when middlemen set purchase prices far below market value as compensation for providing capital, which represents passive and exploitative gains. From an Islamic perspective, the ideal economic system is one that supports entrepreneurs to grow without being burdened by interest or unjust practices, such as through Sharia based financing [47]. Therefore, access to fair financing, such as the provision of start-up capital, is crucial in building resilient entrepreneurs [48]. This need for fair and inclusive financing aligns with the study of Nurbaiti et al. [49] on the role of Sharia based fintech lending, which has proven effective in addressing MSME financing challenges and promoting financial inclusivity in Indonesia.

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Islamic financial institutions can offer various contracts as solutions, such as Murabahah (sale-based financing), Musyarakah (partnership-based financing), or Salam (forward purchase contracts), which can serve as alternatives to middlemen [50].

From the perspective of maqāṣid al-sharīʿah, fish farming practices in Tanjung Rejo demonstrate efforts to preserve wealth (ḥifẓ al-māl) by utilizing natural feed to reduce expenses, as well as minimizing elements of gharar (harmful uncertainty) and maisir (speculation/gambling). Pricing to middlemen or anglers is generally done transparently, based on agreed weights or rental systems, thus reducing harmful uncertainty for both parties. Information about fish quality is communicated clearly without manipulation, and consumers can directly observe pond conditions and farming processes before purchase, creating transparency. Measurements and scales are maintained accurately to avoid harming buyers. This practice is in line with Islamic teachings that prohibit fraud in trade, as stated in Surah Al-Muṭaffifīn verses 1-3.

وَيْلٌ لِّلْمُطَفِّفِيْنَۙ الَّذِيْنَ اِذَا اكْتَالُوْا عَلَى النَّاسِ يَسْتَوْفُوْنَۖ وَاِذَا كَالُوْهُمْ اَوْ وَّزَنُوْهُمْ يُخْسِرُوْنَۗ ٣

Meaning: *"Woe to those who give less [than due], (1) those who, when they take a measure from others, demand it in full (2). But when they measure or weigh for others, they reduce [the amount] (3)."*

The management strategy also demonstrates the spirit of ukhuwah (brotherhood) and ta'awun (mutual help), where fish farmers assist each other in operations and marketing. They do not engage in harmful competition but cooperate when a farmer faces difficulties, reflecting the value of social solidarity (tafākul ijtimāʿī) that is highly emphasized in Islamic economics. Fish farming also provides social benefits for the surrounding community, consistent with the objective of welfare (maṣlaḥah). During harvest, farmers employ local laborers and sometimes share part of their harvest with neighbors as a form of gratitude and a symbol of success. Furthermore, this business contributes to local food security by supplying affordable animal protein. It opens additional employment opportunities for the community and reflects the principle of distributive justice, whereby wealth is not

concentrated among capital owners but is also distributed to empower society through wages and employment.

In this regard, the development of human resources (HR) for workers, through the enhancement of skills and capacity, is crucial to maintaining sustainable productivity and ultimately improving operational performance [51]. Human resource development, which in the Islamic perspective emphasizes intellectual growth as well as moral and spiritual depth, is a key strategy for improving MSME performance, including in Sharia based food and fisheries sectors [52][53]. Moreover, efforts to develop the local economy through resource optimization and product innovation, such as diversifying fishery products into culinary processing, align with Islamic economic principles that encourage optimal resource utilization and innovation for sustainable community welfare [54].

In terms of sustainability, some farmers have shown environmental awareness by maintaining pond cleanliness, managing water use, and treating waste to avoid pollution. This reflects the principles of amānah (trust) and responsibility as stewards (khalīfah) of the earth, which includes the objective of preserving the environment (ḥifẓ al-bīʾah) as part of maqāṣid al-sharīʿah. Overall, the management of fish farming in Tanjung Rejo Village demonstrates a strong connection with the core values of Islamic economics, such as justice, honesty, transparency, social solidarity, welfare, and environmental responsibility. However, dependence on middlemen, which creates economic imbalance, remains the main challenge. Therefore, enhancing Islamic economic literacy and strengthening local Sharia financial institutions are essential so that fish farmers can access fairer capital and become more empowered.

Conclusion

Based on the analysis, this study finds that the fish farming business management strategy in Tanjung Rejo Village reflects two fundamental aspects. Operationally, the business model functions adequately; however, it remains highly vulnerable due to its heavy dependence on middlemen and the lack of market and product diversification. These

weaknesses reduce efficiency and suppress farmers' profit margins. On the other hand, from an Islamic economic perspective, practices such as profit-sharing with workers and honesty in transactions already embody sharia values. Nevertheless, the most critical issue lies in financing, where existing loan practices potentially involve elements of riba and injustice, contradicting Islamic ethical principles, since loans from middlemen often burden farmers through unfair pricing mechanisms. Therefore, the key finding of this study highlights the urgent need to transition from a vulnerable business model toward one that is more modern, diversified, and grounded in just and empowering Islamic economic principles.

These findings carry theoretical implications by presenting an integrated dual-analytical framework, where the Business Model Canvas (BMC) and Islamic economics complement each other in evaluating a business holistically. In terms of practical implications, it is recommended that fish farmers focus on diversifying markets and products by utilizing digital marketing, as well as strengthening local partnerships such as cooperatives to procure seeds and feed more efficiently, thereby minimizing dependence on middlemen. For local governments and related institutions, it is crucial to facilitate access to fair sharia-based financing and provide continuous training in Islamic financial literacy and modern business management. For future research, this study also opens avenues for further studies that may quantitatively assess the success of the suggested strategies or develop business models based on productive waqf to empower communities.

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