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Developing Strategies for a Seafood-Based Food Stall Using BMC, SWOT, and AHP Approaches

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ABSTRACT

Indonesia holds vast marine potential that remains underutilized, particularly in downstream processing within the micro-scale seafood culinary sector. Seafood-based eateries play a critical role in strengthening local economies and supporting the implementation of the blue economy. However, these businesses still face structural challenges, including limited technological adoption, market access barriers, and unstructured business models. This study aims to formulate and prioritize development strategies for seafood-based microenterprises using a combination of the Business Model Canvas (BMC), SWOT analysis, and the Analytic Hierarchy Process (AHP). A mixed-method approach was employed, incorporating interviews, field observations, and expert surveys. The BMC analysis showed that the business had some major strengths, such as a wide range of menu items, the use of fresh ingredients every day, and a high level of customer loyalty. At the same time, weaknesses included limited visibility in locations, limited digital integration, and conventional operational systems. The SWOT analysis generated five strategic alternatives, which were evaluated using AHP based on five criteria: sustainability, technical feasibility, local economic impact, business competitiveness, and implementation cost. The findings indicate that the internal strengthening strategy—comprising staff training, business expansion, and supplier selection—is the most feasible and prioritized approach. However, this strategy does not fully embody the core principles of the blue economy. Therefore, policy interventions and cross-sector collaboration are essential to integrate micro-scale seafood businesses into a sustainable and inclusive maritime ecosystem.

1. Introduction

Indonesia, as the world's largest maritime nation, has waters with abundant marine and fisheries resource potential. These geographical conditions and the potential of natural resources make the marine and fisheries sector a strategic sector in national economic development [1]. Capture fisheries and aquaculture production have increased significantly through the implementation of the aquaculture village program and capacity building for small-scale fishermen [2]. However, the majority of fisheries are still traded in raw form, with limited involvement from the local processing and distribution sectors. This phenomenon indicates the need for micro, small, and medium enterprises (MSMEs) in filling value chain gaps by integrating catch and aquaculture products into the end-consumer market [3]. Seafood stalls play a role in the fisheries industry value chain, as business entities, job creators, and bridges between communities and quality fishery products, including micro-scale restaurants and home businesses, which have a significant impact on the local economy and the development of community-based food systems [4] .

The development of seafood-based micro, small, and medium enterprises (MSMEs) in the culinary sector is an integral component in implementing the national blue economy strategy. The blue economy, as a sustainable development paradigm focused on optimizing marine resources, emphasizes three fundamental aspects: efficient resource utilization, the development of local added value, and integration of environmental and social dimensions into economic activities [5]. MSMEs make a real contribution

to achieving various SDG goals by applying blue economy principles, which create positive impacts at the local level across economic, social, and environmental dimensions [6]. Seafood culinary MSMEs occupy a strategic position in the blue economy value chain because they function as primary consumers of seafood raw materials and culinary service providers for communities that need a structured business planning approach, responsive to change, and in accordance with the local context. MSMEs play an important role in the national economy because they can absorb 97% of the workforce and contribute more than 60% to Indonesia's GDP [7]. Seafood Processed Food Stalls are included in the micro-business category because they are generally managed independently by individuals or families with small production scales that rely on the supply of fish, squid, and shrimp from local fishermen or cultivators [4], [8]. Seafood-based food stalls are a crucial part of the downstream fisheries industry chain, playing a key role in processing and providing of ready-to-eat food [8]. Within the blue economy, seafood-based stalls support sustainability principles and strengthen local economies by relying on renewable natural resources [8]. Per capita fish consumption in Indonesia is increasing annually, driving demand for fresh, affordable seafood products and opening significant opportunities for seafood-based MSMEs to continue growing and innovating. Strengthening the seafood-based food stall business model is a crucial strategy for sustainable maritime development [8].

The SWOT method was used to analyze the business development strategy of Sultan Milkfish MSMEs, leading to its application to enhance the effectiveness of Sultan Milkfish MSME development. Steps included optimizing digital marketing, expanding markets, innovating products, increasing distribution, and effective financial and HR management to encourage sustainable growth [9]. Using IFAS-EFAS and SWOT methods to analyze the marketing of Seafood-based food stalls, with the results indicating the need to intensify promotions, apply competitive pricing, have innovate, and establish communication with the government [10]. Analyzed the development strategy of fish processing businesses using descriptive and quantitative methods with a SWOT approach, with important things that need to be implemented, including Human Resource Empowerment, Improving product quality, Expanding market reach, and Increasing Collaboration [11]. Developed a seaside food stall culinary business by analyzing factors influencing business development, both internal and external, inhibiting and driving factors, including strategic business locations, varied menu choices, affordable prices, and high-quality service [12]. Developing a strategy for food houses in coastal areas based on geo-tourism can be initiated by promoting them online or through social media and providing supporting facilities to mark the food stall locations clearly [13].

BMC is a method that aims to analyze important elements of a business, and this model has been widely used in business contexts, including MSMEs [14], [15]. SWOT analysis is a strategic tool used to identify strengths, weaknesses, opportunities, and threats in a business, ,enabling it to develop alternative strategies based on the actual conditions it faces [16], [17]. In the context of culinary MSMEs, this analysis helps business actors understand their market position and formulate appropriate strategies for business development [18]. Analytic Hierarchy Process (AHP) is a measurement technique through pairwise comparisons involving experts to determine priority scales, with an effective inference technique to determine the relative value of a group of objects, which is a process in the pairwise comparison method [19], [20]. A well-known approach for ranking is comparing alternatives in pairs [21]. This study develops a strategy for seafood-based food stall development by integrating the BMC, SWOT, and AHP methods yield more comprehensive results for the culinary MSME business model.

However, previous studies generally applied the BMC, SWOT, or AHP methods separately, resulting in fragmented strategic recommendations that do not fully capture the complexity of seafood-based MSME development within a blue economy context. To address this gap, this study explicitly integrates the BMC, SWOT, and AHP approaches into a single analytical framework. The BMC is first used to map the existing business model and identify operational realities; SWOT is then applied to formulate alternative strategies based on internal–external conditions; and AHP is finally employed to

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determine strategy priorities using expert-based pairwise comparisons. This sequential integration represents the novelty of this study, as it produces a more comprehensive, structured, and evidence-based strategic formulation specifically tailored for seafood-based food stalls. Furthermore, the integration is positioned within a blue economy framework, offering a methodological contribution that has not been explicitly presented in previous research on seafood MSMEs.

2. Methods

This research was conducted through several systematic stages. The study began with problem identification based on a literature review of scientific journals, articles, regulations concerning MSMEs, and references related to maritime business and the blue economy. The first stage involved analysing the business model of the seafood-based food stall using the Business Model Canvas (BMC). The BMC results were then used as the basis for identifying internal strengths and weaknesses, as well as external opportunities and threats, which formed the foundation of the SWOT analysis.

After completing the SWOT analysis, the alternative business development strategies were formulated using the SWOT matrix. To prioritise the strategies, the Analytic Hierarchy Process (AHP) was applied. In this stage, a pairwise-comparison questionnaire was developed and distributed to three experts—consisting of the seafood-based food stall owner and two workers who have direct knowledge of daily operations. Their judgments were used to determine the relative importance of each strategic alternative. The research flowchart is shown in Figure 1.

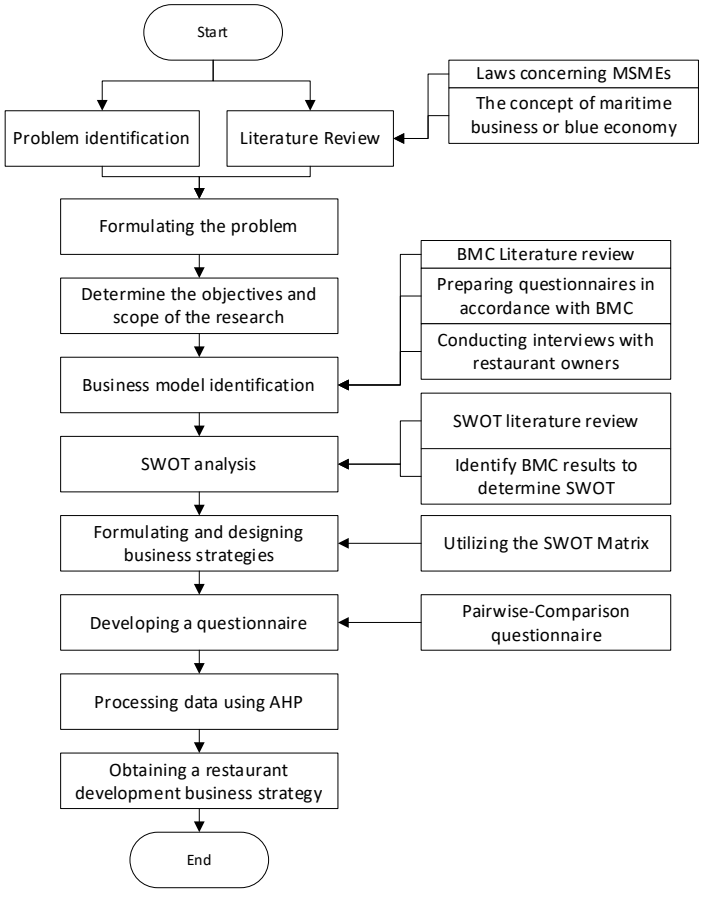

Figure 1. Research Flow Diagram

Data for this study were obtained through direct observation, semi-structured interviews, and a structured AHP questionnaire. Field observations were conducted in the seafood-based food stall to document operational processes, customer flow, and resource use. In-depth interviews were carried out with three key informants consisting of the owner and two workers, representing internal stakeholders who understand daily operations and strategic challenges. The same three informants also participated

as expert respondents in the AHP pairwise comparison questionnaire, as they possess practical and managerial knowledge relevant to evaluating strategic priorities. The combination of observational data, qualitative insights, and expert judgments ensures the robustness of the BMC mapping, SWOT formulation, and AHP-based strategy prioritization.

3. Results and Discussions

3.1. Seafood Food-based Stall Business Model Result

The first result of this study is the small-scale seafood-based food stall business model using the Business Model Canvas (BMC). The results of this business model were obtained through interviews with the stall owner and direct observation. At this stage, the authors identified nine key elements of the BMC: customer segments, value proposition, distribution channels, customer relationships, revenue streams, key resources, key activities, key partners, and the BMC cost structure of the seafood-based food stall. The resulting BMC is shown in Figure 2.

Figure 2. BMC Analysis

3.2. SWOT Analysis Results

A SWOT analysis was conducted through interviews with the business owner and by drawing on information from the previous Business Model Analysis (BMC). The SWOT analysis helped identify the seafood-based food stall's internal and external strengths and weaknesses. The BMC contains information that supports the determination of internal strengths and weaknesses, as well as external opportunities and threats. After obtaining the SWOT analysis, the author formulated a business strategy for the seafood-based food stall using the SWOT matrix. The results of the SWOT analysis are shown in Table 1.

The findings of this study demonstrate that the strategic formulation for seafood-based MSMEs must be interpreted not only from a business management perspective but also through the principles of the blue economy. Previous studies have highlighted that seafood MSMEs contribute to local value creation, resource efficiency, and community empowerment, yet the strategic frameworks used whether BMC, SWOT, or AHP tend to treat these aspects separately and do not explicitly embed blue economy thinking [5],[6],[8]. By contrast, this study shows that integrating BMC–SWOT–AHP provides a more holistic understanding of how micro-scale seafood-based food stalls interact with the maritime value

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chain. The strategies identified digitalization of services, strengthened supplier partnerships, product diversification, seasonal operational efficiency, and internal capacity building align with core blue economy principles such as renewable resource utilization, reduced supply-chain inefficiency, and enhancement of local economic resilience. These results reinforce findings from earlier literature that emphasize the need for MSME business models to shift from isolated operational improvements toward ecosystem-based integration within coastal and fisheries economies. Thus, this study contributes to bridging the methodological and conceptual gap in previous research by linking micro-enterprise strategy with sustainable maritime development.

Table 1. SWOT Analysis

Strength	**Weakness**
• A diverse seafood menu with a homey feel. • Using fresh ingredients daily. • Affordable prices that cater to all groups. • High personal relationships and customer loyalty. • Our raw materials are sourced from sustainable local suppliers. • Environmentally friendly practices (waste management and raw material efficiency). • Seafood culinary products that promote the consumption of local and healthy fish. • Contributing directly to strengthening the coastal economy and the wellbeing of local fishermen. • Supplier selection	• Limited location access (located in an alley), hindering the stall's visibility as a maritime downstream player. • The payment system is still cash-based (QRIS or bank transfers are not yet available). • Minimal integration with the maritime digital ecosystem (no online logistics collaboration, online promotions, etc.). • Reliance on conventional systems: cash transactions, offline promotions, and manual management.
Opportunities	**Threats**
• Increased consumer interest in seafood and local products. • Tourists visiting Tuban have the potential to become new customers. • Potential market expansion through digitalization (social media, online delivery services). • Increased public awareness of healthy and sustainable seafood. • Government support for the development of maritime MSMEs within the blue economy framework. • Trends in local seafood-based culinary tourism. • • Expansion of distribution channels through collaboration with digital logistics, seafood marketplaces, and MSME communities.	• The emergence of similar culinary competitors in strategic areas. • Dependence on local supplies (seasonal, bad weather). • Changes in environmental policies and food regulations. • Extreme weather changes that affect the stability of seafood supplies from fishermen. • Competition from large food stalls or franchises entering the seafood sector. • Lack of consumer education about the value of sustainability and the importance of supporting local culinary businesses. • Fluctuating prices of seafood due to dependence on seasons and catch volume.

After obtaining the SWOT Analysis Table, the next step is to formulate a strategy using the SWOT matrix. The SWOT matrix helps develop targeted strategies by simplifying the complexities of the business environment into more measurable strategic options. In the SWOT matrix, several strategies can be formulated, including SO (Strengths-Opportunities) strategies that leverage internal strengths to seize external opportunities. WO (Weaknesses-Opportunities) strategies address internal weaknesses to take advantage of opportunities. ST (Strengths-Threats) strategies leverage strengths to address or neutralize threats. WT (Weaknesses-Threats) strategies reduce weaknesses and avoid threats simultaneously. The SWOT matrix is shown in Table 2.

Table 2. SWOT Matrix

	Opportunities (O)	**Threats (T)**
Strengths (S)	• Promote fresh and healthy seafood dishes through digital campaigns (Instagram, Tik-Tok). • Use local fish consumption narratives to reach tourists and nutrition-conscious communities. • Collaborate with fishing cooperatives to access supplies and promote sustainability. • Be active in MSME development programs. • • Develop a "sea-friendly food stall" brand with local certification.	• Establish ongoing partnerships with marine farmers to maintain supply during extreme weather. • Create a pre-order system to avoid overstocking seasonal ingredients. • Use a local and authentic image to compete with large food stalls. • Maintain affordable prices to ward off franchise competition. • Educate customers about the importance of supporting sustainable local businesses.
Weaknesses (W)	• Join an online motorcycle taxi platform to increase accessibility for stalls located in alleys. • Digitized payment systems (QRIS, e-wallet). • Expand reach through seafood marketplaces. • Create educational content about healthy seafood and local seafood businesses. • • Train staff in the use of simple digital applications for management.	• Create derivative products such as frozen seafood to anticipate supply fluctuations. • Efficiently menu items during times of high supply by focusing on local and affordable seafood. • Build alternative supply chains from other coastal communities. • Reduce reliance on cash transactions through digital incentive promotions. • • Develop adaptive SOPs for operations during lean seasons or raw material inflation.

3.3. Data Processing Results Using the AHP Method

The data were processed using the AHP method, with detailed criteria weighting and alternative business development strategies proposed by the business owner, an expert with competence, experience, and a background in the seafood-based food stall business. This was done to identify the best strategy that would be most likely to be implemented at the seafood-based food stall in the near future. Before formulating the business strategy, the author first determined the business development strategy criteria through a literature review and then validated them with the business owner. Table 3 shows the criteria for selecting a business strategy and Table 4 shows the Seafood-based food stall business development strategy.

Table 3. The Criteria for Selecting a Business Strategy

No.	**Criteria**	**Criteria Brief Description**	**Sources**
1.	Sustainability	Contribution to the environment, responsible consumption, sustainable supply	[8]
2.	Feasibility	Compatibility with internal resources (labor, equipment, experience)	[19]
3.	Local economic impact	Potential to increase revenue, empower local suppliers, and create added value	[1]
4.	Business competitiveness	Competitiveness, customer attraction, product differentiation, and loyalty	[14]
5.	Implementation costs	Total cost required to implement the strategy (start-up capital, additional human resources, digitalization, etc.)	[14]

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Table 4. Seafood-Based Food stall Business Development Strategy

No.	Strategy	Description	Benefit
1.	Digitalization of Market Access and Services	Integrating seafood-based food stalls with online motorcycle taxi platforms (Go Food/Grab Food), providing digital payments (QRIS/e-wallet), promoting through social media.	Improving customer access and creating a modern transaction experience.
2.	Direct Partnerships with Fishermen & Farmers	Establishing ongoing partnerships with local fishermen and farmers to ensure a sustainable and stable supply of seafood.	This reduces fluctuating costs and strengthens the contribution of small shops to the blue economy.
3.	Diversification of Processed Seafood Products	Providing derivative products such as frozen food, seafood chili sauce, or ready-to-eat seafood dishes to a broader market.	This increases revenue streams and expands competitiveness.
4.	Operational Efficiency and Seasonal Adaptation	Simplifying menus during the off-season and utilizing readily available local seafood.	Maintaining efficient and sustainable operations year-round.
5.	Internal Strengthening: Business Expansion, Human Resources Training, and Supplier Selection	Expanding business premises to increase service capacity, improving staff skills in seafood processing, and tightening supplier selection to ensure sustainability.	Strengthening the internal foundation of downstream businesses and ensuring consistent supply and quality of blue economy-based services.

The AHP results further validate the strategic direction by quantifying expert judgments from three internal stakeholders. All consistency ratio (CR) values were below 0.1, indicating a high reliability of expert comparisons. The Economic Impact criterion emerged as the most influential (30.21%), suggesting that strategies expected to enhance revenue generation, empower local suppliers, and create added value are perceived as the most relevant. This finding is aligned with previous studies that emphasize the importance of economic multiplier effects in small-scale seafood enterprises to strengthen local economies.

Table 4 shows the business development strategies formulated based on the results of the BMC, SWOT analysis, and SWOT matrix, representing the real conditions of the seafood-based food stall. These strategies focus on enhancing market access, operational efficiency, and sustainability through five integrated approaches. First, digitalizing services via online delivery platforms and e-wallet payments expands customer reach and convenience. Second, direct partnerships with local fishermen strengthen supply stability and promote sustainable sourcing aligned with the blue economy. Third, diversification through frozen or ready-to-eat seafood products broadens market opportunities. Fourth, operational efficiency and seasonal adaptation ensure consistent productivity by simplifying menus and utilizing local seafood. Lastly, internal strengthening through business expansion, staff training, and improved supplier selection enhances long-term competitiveness. Collectively, these strategies aim to improve profitability, maintain sustainability, and strengthen the eatery's contribution to local economic growth.

Table 5 shows the average value of model strategy based on sustainability criteria, Table 6 shows average value of model strategies based on feasibility criteria, Table 7 shows average strategy model score based on economic impact criteria, Table 8 shows average strategy weighting based on competitiveness criteria, Table 9 shows average strategy weighting based on implementation cost criteria, Table 10 shows global strategy weighting score and figure 3 shows total weighting of seafood-

based food stall development strategies. Based on Table 11 and Figure 3 the results of choosing strategy 5 with a score 0.3214 (32.14%).

Table 5. Average Value of Model Strategy Based on Sustainability Criteria

	S1	S2	S3	S4	S5	Average	Priority
S1	0.0953	0.0795	0.0731	0.1398	0.1000	0.0976	4
S2	0.3390	0.2829	0.3883	0.3631	0.2328	0.3212	2
S3	0.1013	0.0566	0.0777	0.1028	0.0844	0.0845	5
S4	0.0852	0.0974	0.0945	0.1250	0.1848	0.1174	3
S5	0.3792	0.4837	0.3664	0.2693	0.3981	0.3793	1

The calculation results in Table 5 indicate that, based on the experts' assessment considering sustainability factors, Strategy 5 holds the highest priority among the five alternative strategies, with a weight of 0.3793 (37.93%), followed by Strategy 2 with a weight of 0.3212 (32.12%), Strategy 4 with a weight of 0.1174 (11.74%), Strategy 1 with a weight of 0.0976 (9.76%), and finally Strategy 3 with a weight of 0.0845 (8.45%).

Table 6. Average Value of Model Strategies Based on Feasibility Criteria

	S1	S2	S3	S4	S5	Average	Priority
S1	0.1195	0.1037	0.0855	0.1052	0.1668	0.1161	4
S2	0.3908	0.3391	0.4033	0.2894	0.3191	0.3483	1
S3	0.1195	0.0719	0.0855	0.0729	0.0975	0.0895	5
S4	0.1417	0.1461	0.1462	0.1247	0.0975	0.1312	3
S5	0.2286	0.3391	0.2796	0.4079	0.3191	0.3148	2

The calculation results in Table 6 indicate that, based on the experts' assessment considering feasibility factors, Strategy 2 holds the highest priority among the five alternative strategies, with a weight of 0.3483 (34,83%), followed by Strategy 5 with a weight of 0.3148 (31.48%), Strategy 4 with a weight of 0.1312 (13.12%), Strategy 1 with a weight of 0.1161 (11.61%), and finally Strategy 3 with a weight of 0.0895 (8.95%).

Table 7. Comparison of Strategic Priorities Based on Competitiveness Criteria

	S1	S2	S3	S4	S5	Average	Priority
S1	0.4652	0.5664	0.5087	0.2680	0.5127	0.4642	1
S2	0.0765	0.0931	0.1206	0.1969	0.1216	0.1218	4
S3	0.1886	0.1592	0.2063	0.2203	0.1216	0.1792	3
S4	0.0811	0.0221	0.0437	0.0467	0.0362	0.0460	5
S5	0.1886	0.1592	0.1206	0.2680	0.2079	0.1889	2

The calculation results in Table 7 indicate that, based on the experts' assessment considering sustainability factors, Strategy 1 holds the highest priority among the five alternative strategies, with a weight of 0.4642 (46.42%), followed by Strategy 5 with a weight of 0.1889 (18.89%), Strategy 3 with a weight of 0.1792 (17.92%), Strategy 2 with a weight of 0.1218 (12.18%), and finally Strategy 4 with a weight of 0.0460 (4.6%).

Table 8. Average Strategy Weighting Based on Competitiveness Criteria

	S1	S2	S3	S4	S5	Average	Priority
S1	0.2023	0.5014	0.0610	0.3674	0.3714	0.3007	1
S2	0.0394	0.0977	0.0647	0.1411	0.2575	0.1201	4
S3	0.5915	0.2697	0.1785	0.1411	0.0724	0.2506	3
S4	0.0266	0.0334	0.0610	0.0483	0.0412	0.0421	5
S5	0.1403	0.0977	0.6348	0.3020	0.2575	0.2865	2

The calculation results in Table 8 indicate that, based on the experts' assessment considering sustainability factors, Strategy 1 holds the highest priority among the five alternative strategies, with a

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weight of 0.3007 (30%), followed by Strategy 5 with a weight of 0.2865 (28.65%), Strategy 3 with a weight of 0.2506 (25.06%), Strategy 2 with a weight of 0.1201 (12.01%), and finally Strategy 4 with a weight of 0.0421 (4.21%).

Table 9. Average Strategy Weighting Based on Implementation Cost Criteria

	S1	S2	S3	S4	S5	Average	Priority
S1	0.1988	0.1392	0.2906	0.3444	0.2993	0.2545	2
S2	0.5812	0.4071	0.2141	0.3249	0.4074	0.3869	1
S3	0.0680	0.1890	0.0994	0.0478	0.0728	0.0954	5
S4	0.0540	0.1171	0.1945	0.0935	0.0728	0.1064	4
S5	0.0980	0.1476	0.2015	0.1895	0.1476	0.1568	3

The calculation results in Table 9 indicate that, based on the experts' assessment considering sustainability factors, Strategy 2 holds the highest priority among the five alternative strategies, with a weight of 0.3896 (38.96%), followed by Strategy 1 with a weight of 0.2545 (25.45%), Strategy 5 with a weight of 0.1568 (15.68%), Strategy 4 with a weight of 0.1064 (10.64%), and finally Strategy 3 with a weight of 0.0954 (9.54%).

Table 10. Global Strategy Weighting Score

Strategy	Sustainability	Feasibility	Economic Impact	Competitiveness	Cost	Global Score
S1	0.0207	0.0247	0.0986	0.0639	0.0540	0.2618
S2	0.0461	0.0500	0.0175	0.0172	0.0555	0.1863
S3	0.0255	0.0270	0.0541	0.0757	0.0288	0.2112
S4	0.0117	0.0131	0.0046	0.0042	0.0106	0.0442
S5	0.0919	0.0763	0.0458	0.0694	0.0380	0.3214

The calculation results in Table 10 indicate that overall weight of global strategi, Strategy 5 holds the highest priority among the five alternative strategies, with a weight of 0.3214 (32.14%), followed by Strategy 1 with a weight of 0.2618 (26.18%), Strategy 3 with a weight of 0.2112 (21.12%), Strategy 2 with a weight of 0.1863 (18.63%), and finally Strategy 4 with a weight of 0.0442 (4.42%).

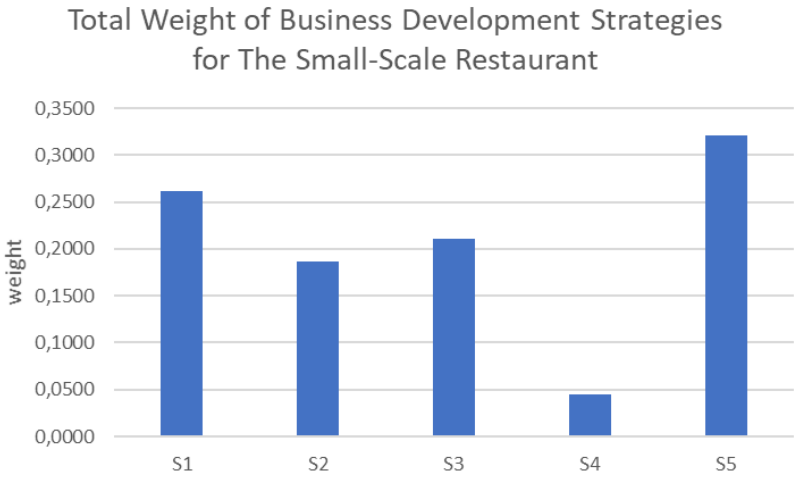

Figure 3. Total Weighting of Seafood-based Food Stall Development Strategies

Figure 3 shows the comparative priority levels of five proposed strategies based on Analytical Hierarchy Process (AHP) results. Among the five alternatives, Strategy 5 demonstrates the highest total weight, approximately 0.33, indicating it is the most preferred strategy for implementation. This suggests that internal strengthening—covering business expansion, human resource training, and supplier selection—is considered the most impactful in enhancing business sustainability and competitiveness. Strategy 1 follows with a weight of around 0.27, showing that digitalization of market access and services also plays a significant role in improving business performance. Strategies 2 and 3, with moderate weights of approximately 0.20–0.22, reflect their importance but secondary priority

compared to the top two. Meanwhile, Strategy 4 shows the lowest weight, below 0.05, indicating that operational efficiency and seasonal adaptation, while valuable, are not the immediate focus of development. Overall, these results highlight a strategic emphasis on strengthening internal capacity and leveraging digital platforms to ensure sustainable growth.

4. Conclusion

This study aims to formulate a development strategy for a seafood-based food stall within a blue economy framework using the Business Model Canvas (BMC) approach, SWOT analysis, and the Analytic Hierarchy Process (AHP) method. Based on the BMC analysis, the seafood-based food stall being studied has several internal strengths, including a diverse menu with a home-cooked flavor, the use of fresh ingredients daily, affordable prices, and high customer loyalty. Furthermore, relationships with local partners and concern for the environment indicate potential to support sustainability principles. However, significant weaknesses were also identified, including limited business location, the absence of a digital payment system, and minimal integration with online marketing and logistics technology. This weakens the business's competitiveness and connectivity with the maritime digital economy ecosystem. The SWOT analysis identifies external opportunities, including increased consumer interest in local seafood, government support for maritime MSMEs, and potential collaboration with the digital ecosystem. Strategies formulated through the SWOT matrix include: digitalization of services, supply partnerships, diversification of processed products, operational efficiency, and internal strengthening (business expansion and human resource training). These strategies, while quite diverse, primarily focus on technical aspects and increasing individual competitiveness, rather than on systemic integration within the blue economy.

Through AHP analysis of five strategic criteria: sustainability, technical feasibility, local economic impact, business competitiveness, and implementation costs—the internal strengthening strategy scored highest. This strategy includes expanding business space, increasing human resource capacity, and implementing stricter supplier selection criteria. While this strategy is important for strengthening a business's foundation, its results do not substantially reflect the key principles of the blue economy, particularly in terms of collaboration among maritime actors, ecosystem efficiency, and the added value of an inclusive maritime supply chain. Therefore, it can be concluded that internal strengthening as the chosen strategy does not fully represent a comprehensive blue economy approach. This indicates that while the strategy is operationally and economically feasible in the short term, further intervention and encouragement are needed to enable seafood culinary businesses to be more actively integrated into a sustainable maritime ecosystem. Further research is recommended to explore collaborative strategies more closely aligned with blue economy principles, including the use of supply chain digitalization, multi-stakeholder partnerships, and measurement of the ecological footprint of seafood culinary businesses.

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