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Determining Core Business for Aquaculture in Indramayu District - West Java

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ABSTRACT

This research aims to identify problems and indicators as the foreground for arranging development pattern for aquaculture business, to recommend direction and target for regional government's policies in anticipating the development of aquaculture business as a potential that needs integrated management, and also to recommend possible core business to be expanded. Data are collected from general condition in the location, spatial utilization pattern (land/waters), human population, intraregional and interregional movement of goods and services, identification of aquacultural core business potentials, market identification and analysis, intraregional and interregional local market, investment opportunities, sociocultural condition including institutional, business pattern, consumption, income per capita, transportation system, number and distribution of facilities and infrastructures, as well as internal aquacultural facilities. The methods used for data collecting include surveys and interviews related to the core business planning for aquaculture in Indramayu. The data are then analyzed using Space Factor application intended to map business optimization by identifying the condition, position, or problems in business (strengths, weaknesses, opportunities, threats) to formulate the next strategies. SWOT Analysis is used as the tool and results in catfish farming places in IFAS point (3.01) and EFAS (3.03) while vannamei shrimp farming places in IFAS (3.43) and EFAS (2.80) indicating that those farmings may be potentials in overcoming weaknesses and obstacles in the future. Core business strategy planning is composed using matrix space. Though vulnerable to various threats, aquaculture businesses still have strengths in internal scope. The suggested strategy for this is to use strength in using long-term opportunities by implementing diversification (for products or markets). Vannamei shrimp farming falls into this category. It is also suggested for the business to minimize company's internal problems in order to seize better marketing opportunities. Catfish farming falls into this category.

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INTRODUCTION

Fisheries is one of the significant sectors contributing to a region's Regional Gross Domestic Product (RGDP), particularly in the areas close to the maritime due to their activities in aquacultural businesses. The Indramayu Regency in West Java is known for its productivity in fisheries and aquaculture. These have been highly contributed to the regional economy in accordance with its regional macro economic strategies: harnessing its potentials' comparative excellence and natural resources varieties in order to attract investments, reducing imbalance in interregional economic resources, harnessing the available infrastructures, advancing business relations to manage the economic structures, and preparing for free market. Based on the background, this paper, therefore, aims to identify the problems and indicators as the bases for

arranging aquaculture business pattern, giving recommendation of direction and goals in policies for the regional government in order to anticipate the development of aquaculture businesses as such potentials having to be handled in integrated fashion.

Methodology:

Types and Sources of Data:

For the purposes of this research, the related collected data include the general condition of the location, spatial utilization patterns (land/water), population, intraregional and interregional distribution system, identification for core business potentials in aquaculture and farming, marketing identification and analysis, intraregional and interregional marketing map, investment opportunities, socio-cultural tendencies, including local institutions, business patterns, social consumption, income per capita, transportation

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system, number and distribution of facilities and infrastructures in its internal position. Those data are collected through the methods of survey and interview, as well as gathering additional information from the documents at various institutions, such as Department of Fisheries and Marine, Sub-national Development Planning Agency, Regional Central Bureau of Statistics, and Department of Industries and Trades.

All collected data and information are analyzed with the Space Factor Analysis application in order to arrange mapping for business optimalization for the identification of condition, position, and business problems (strengths, weaknesses, opportunities, and threats). This would lead to the next strategic formulas. The SWOT Analysis is used as the analysis tool which includes matrixes such as internal strategy factor, external strategy factor, internal-external/external-internal.

Data Analysis:

Table 1: Parameter of internal strength and external influence

		Total Score for Internal Strategy Factor		
		Strong	Medium	Weak
		1. GROWTH	2. GROWTH	3. RETRENCHMENT
Total Score	high	Concentration through vertical integration	Concentration through horizontal integration	Turn around
		4. STABILITY	5. GROWTH	6. RETRENCHMENT
		concentric diversification	conglomerate diversification	bankruptcy or liquidation
Industrial Appeal Factor	medium	7. GROWTH	8. GROWTH	9. RETRENCHMENT
	low	concentric diversification	conglomerate diversification	bankruptcy or liquidation

Tabel 2: Dimensi Internal dan Eksternal

Internal Strategic Position	Eksternal Strategic Position
Financial Strength (FS) - Return on Investment - Leverage - Liquidity - Working Capital - Cash flow	Environmental Stability (ES) - Technological changes - Rate of inflation - Demand variability - Pricerange of competing product - Barriers to entry
Competitive advantage - Market share - Product quality - Product life cycle - Customer loyalty - Competition's capacity utilization - Technological know-how - Control over suppliers and distributors	Industry strength (IS) - Growth potential - Profit potential - Financial stability - Technological know-how - Resource utilization - Erase of entry into market - Productivity, capacity utilization

Quadrant Space Chart:

In addition to the IE matrix, business strategic planning can also use the quadrant chart. The matrix space for the business strategic planning is as follows.

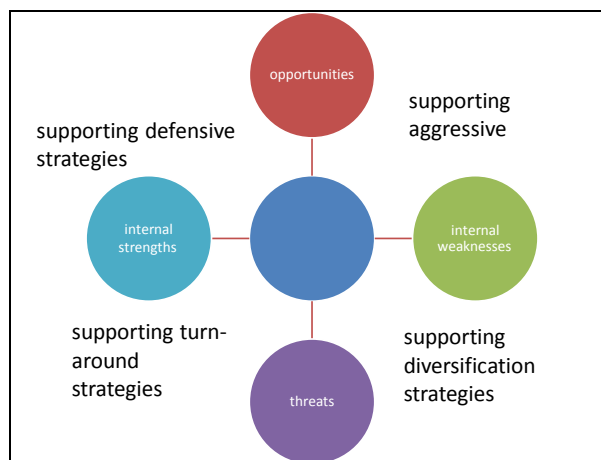


Fig. 1: Quadrant Analysis Chart

The chart is composed by calculating the cross difference (opportunities to threats) on EFE table and difference (strengths to weaknesses) on IFE table and marking the intersection vertically and horizontally, and then interpreting the intersection in one of the quadrants.

RESULTS AND DISCUSSIONS

3.1. Supporting Power of Aquaculture Farming:

Supporting power of aquaculture farming means the ability of the environment to support the farming activities. Indramayu has the ocean uptake ranging along the coastline for 147 kilometers and this is the sign for the potential quality of developing farming areas for particular types of fish, such as shrimp, milkfish, and others. The potential areas include

Gosong Island (525 ha) and Biawak Island (1,500 ha) for marine farming, and 11,939 ha of farming land. The potential production levels reach to 142,819 tons in embankment, 250,000 tons in fishpond, and 52,000 tons in minapadi. Such potentials have faced with the classical problems of inoptimal harnessing which prevents the opportunities of advanced development for the wealth of the community.

On the other hand, catfish farming in Indramayu has been considered sufficient for the capacity of supporting power. Catfish is one of the superior commodities recommended by the Department of Fisheries and Marine of Indramayu, along with carp, as the fish fits the spatial characteristics of Indramayu. Below is the table explaining the catfish production in Indramayu.

Table 3: Production and Production Value of Catsish in Indramayu

Year	Production Value (Rp X 000)	Production (in ton)	RTP (Person)
2010	453.506.808	46.061	8.574
2011	483.286.047	45.437	3.469
2012	617.104.610	55.654	3.469

Source: Department of Fisheries and Marine of Indramayu 2013

To support and enhance the production, there have been facilities and infrastructures provided for the activities. Those include Fish Breeding Center and Laboratory of Fish Health and Environment.

3.2. SWOT:

1. SWOT Analysis for Catfish Farming Business:

The aspects of strength and weakness, as well as opportunity and threat for the business in Indramayu are provided below. The results of the SWOT analysis show that the catfish farming is in the IFAS (3.01) and EFAS (3.03) meaning that the business possesses the strong chance to overcome weaknesses and obstacles in order to survive in the future.

Table 4: IFAS for Catfish Farming Business

Internal Factors	Quality	Rating	Score
Strengths (S)			
1. Distrubtion speed	0.05	4.0	0.20
2. On-time delivery	0.05	4.0	0.20
3. Special skills level	0.10	3.3	0.33
4. Working experiences	0.10	3.3	0.33
5. Accountancy	0.05	2.0	0.10
6. Production facilities	0.05	3.0	0.15
7. The implementation of modern technology	0.05	2.8	0.14
Weaknesses (W)			
1. Product variation	0.05	4.0	0.20
2. Additional features	0.10	4.0	0.40
3. Packaging and labelling	0.10	4.0	0.40
4. Marketing function	0.05	3.7	0.19
5. Product availability	0.05	2.8	0.14
6. Educated and experienced human resources	0.05	2.2	0.11
7. Accountancy			
8. Administration system	0.05	2.5	0.13
9. Modern equipments	0.05	2.2	0.11
	0.05	3.3	0.17
Total	1.00		3.01

Source: analysis findings

Table 5: EFAS for Catfish Farming Business

External Factors	Quality	Rating	Score
Opportunities (O)			
1. Competition for similar business	0.05	3.2	0.16
2. Competition for substitution production	0.15	2.7	0.41
3. Competition for imported products	0.15	3.3	0.50
4. Relation with financial institutions (for loans)	0.15	2.7	0.41
5. Licence and bureaucracy	0,05	4.0	0.20
6. Marketing demands	0.05	3.3	0.17
Threats (T)			
1. Facility of trading licence	0.05	3.3	0.17
2. Marketing access and information	0.05	3.0	0.15
3. Technological advancement	0.05	2.8	0.14
4. Fluctuation of raw material price	0.10	3.3	0.33
5. Raw material availability	0.10	2.7	0.27
6. Economic condition	0.05	2,8	0.14
Total	1,00		3.03

Source: analysis findings

2. SWOT Analysis for Vanamei-shrimp Farming Business:

The aspects of strength and weakness, as well as opportunity and threat for the business in Indramayu are provided below. The results of the SWOT

analysis show that the vanamei-shrimp farming is in the IFAS (3.43) and EFAS (2.80) meaning that the business possesses the strength to overcome weaknesses and obstacles in order to survive in the future.

Table 7: EFAS for Vanamei-shrimp Farming Business

External Factors	Quality	Rating	Score
Opportunities (O)			
1. Competition for similar businesses	0.05	3.25	0.16
2. Relation with financial institutions (banks)	0.15	2.25	0.34
3. Loan interest rates	0.15	2.0	0.30
4. Loan facilities	0.15	2.25	0.34
Threats (T)			
1. Imported products	0.05	3.5	0.18
2. Loan interest rates	0.15	3.0	0.45
3. Government policies	0.05	4.0	0.20
4. IT development	0.05	2.75	0.14
4. Raw material availability	0.20	3.5	0.70
Total	1.00		2.80

Source: analysis findings

3. SWOT Analysis for Seaweed Farming Business:

Besides fish and shrimp farmings, seaweed farming business is also developed in Indramayu and considered to be one of the top potential commodities. The aspects of strength and weakness, as well as opportunity and threat for the business in

Indramayu are provided below. The results of the SWOT analysis show that the seaweed farming is in the IFAS (3.41) and EFAS (2.93) meaning that the business may survive in the future though some aspects of weaknesses and obstacles are yet to come.

Table 8: IFAS for Seaweed Farming Business

Internal Factors	Quality	Rating	Score
Strengths (S)			
1. Selling price	0.15	3.0	0.45
2. Product quality	0.10	3.0	0.30
3. Distribution system	0.05	4.0	0.20
4. On-time delivery	0.05	4.0	0.20
5. Special skills level	0.05	3.3	0.17
6. Working experiences	0.05	3.3	0.17

7. Production waste management	0.08	4.0	0.32
Weaknesses (W)			
1. Product design and variation	0.10	3.0	0.30
2. Additional features	0.05	4.0	0.20
3. Packaging and labelling	0.10	4.0	0.40
4. Accountancy	0.05	3.7	0.19
5. Administration system	0.05	3.7	0.19
6. Marketing	0.10	2.7	0.27
7. IT development	0.02	3.3	0.07
Total	1.00		3.41

Source: analysis findings

Table 9: EFAS for Seaweed Farming Business

External Factors	Quality	Rating	Score
Opportunities (O)			
1. Competition for substitution products	0.05	4.0	0.20
2. Relation with financial institutions (banks)	0.10	2.7	0.27
3. Loan facilities	0.10	2.7	0.27
4. Government policies	0.05	3.7	0.19
5. Market demands	0.20	3.3	0.66
6. Human resources availability as needed	0.10	3.3	0.33
7. Fluctuation of raw material price	0.05	4.0	0.20
Threats (T)			
1. Licence and bureaucracy	0.05	3.3	0.17
2. Marketing access and information	0.10	2.0	0.20
3. Raw material quality	0.15	2.3	0.35
4. Economic and banking conditions (finance)	0.05	2.0	0.10
Total	1.00		2.93

Source: analysis findings

Quadrant Charts:

Quadrant analysis chart calculates cross difference of opportunities to threats on EFAS table and that of strengths to weaknesses on IFAS table and marks the intersection vertically and horizontally, and then interprets the intersection on one of the quadrants.

Quadrant 1 : This is a very rewarding situation. This fisheries and marine business possesses opportunities and strengths resulting in the ability to seize the opportunities. The strategy to be implemented in this condition is supporting aggressive growth policies (growth oriented strategy). Seaweed farming business falls into this category.

Quadrant 2 : Though facing threats in surviving in the business, this fisheries and marine business still possess strengths in internal. The strategy to be implemented is to use the strength in seizing the long-term opportunities by applying diversification strategy (product/market). Vanamei-shrimp farming business falls into this category.

Quadrant 3 : This fisheries and marine business faces an overwhelming marketing opportunities, but on the other hand it has to deal with internal obstacles or weaknesses. The strategic focus must rely on minimizing the company's internal problems in order to seize the better

marketing opportunities. Catfish farming business falls into this category.

Conclusion:

Based on the results of the analysis in this research, it can be concluded that:

- Though facing threats in surviving in the business, this fisheries and marine business still possess strengths in internal. The strategy to be implemented is to use the strength in seizing the long-term opportunities by applying diversification strategy (product/market). **Vanamei-shrimp farming business** falls into this category.

- This fisheries and marine business faces an overwhelming marketing opportunities, but on the other hand it has to deal with internal obstacles or weaknesses. The strategic focus must rely on minimizing the company's internal problems in order to seize the better marketing opportunities. **Catfish farming business** falls into this category.

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